

Trichrome Staining Kit

Version 5.0

Revision Date: 08-28-2024

Date of last issue: 08-28-2024 Date of first issue: 12-01-2015

Cover letter for product:

Trade name	:	Trichrome Staining Kit
Product code	:	06521908001

The product is sold as a kit, and contains the following components:

- Trichrome Red
- Trichrome Blue
- Bouin's Solution
- Clarifier
- Hematoxylin A
- Hematoxylin B
- Mordant

The following is an overview of the labeling elements of the kit:

GHS label elements	
Hazard pictograms	
Signal Word	: Danger
Hazard Statements	 H225 Highly flammable liquid and vapor. H302 + H332 Harmful if swallowed or if inhaled. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H341 Suspected of causing genetic defects. H350 May cause cancer. H371 May cause damage to organs (Eyes).
Precautionary Statements	 Prevention: P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P260 Do not breathe mist or vapors. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor. P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor. P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P363 Wash contaminated clothing before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

The product was evaluated per International Air Transport Association (IATA) specifications with the following outcome:

UN 3316 CHEMICAL KIT, 9, II



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SECTION 1. IDENTIFICATION

Product name	:	Trichrome Red	
Manufacturer or supplier's of Company name of supplier		ails Roche Diagnostics Deutschlar	nd GmbH
Address	:	116 Sandhoferstrasse Mannheim, 68305 Deutschland	
Telephone Telefax E-mail address Emergency telephone Im Notfall:		+496217590 +496217592890 info.dia-sds@roche.com Werkschutzzentrale Roche Diagnostics GmbH	+49(0)621-759-2203
Giftnotruf:	:	Mainz	+49(0)6131-19240

Recommended use of the chemical and restrictions on use

Recommended use	:	Laboratory chemicals
		Refer to product literature for further details.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a hazardous substance or mixture.

GHS label elements

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Acetic acid	64-19-7	>= 1 - < 5

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES





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General advice	: Do not le	ave the victim unattended.
If inhaled	advice.	iresh air. cious, place in recovery position and seek medical ms persist, call a physician.
In case of skin cont	act : If on skin	, rinse well with water.
In case of eye conta	Remove Protect u	ely flush eye(s) with plenty of water. contact lenses. nharmed eye. ration persists, consult a specialist.
If swallowed	Do not gi Never giv If sympto	piratory tract clear. ve milk or alcoholic beverages. ve anything by mouth to an unconscious person. ms persist, call a physician. buth with water.
Most important sym and effects, both ac delayed		own.
Notes to physician		aid procedure should be established in consultation doctor responsible for industrial medicine.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards during fire fighting	:	No information available.
Hazardous combustion products	:	Carbon oxides
Further information	:	Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Local authorities should be advised if significant spillages



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		cannot be	contained.
Methods and materials containment and cleani		Keep in su	vith absorbent material (e.g. cloth, fleece). uitable, closed containers for disposal. alizing agents.
SECTION 7. HANDLING AI	ND STOR	AGE	
Advice on protection ag	jainst :	Normal me	easures for preventive fire protection.
Advice on safe handling	g :		nal protection see section 8. eating and drinking should be prohibited in the n area.
Conditions for safe stor	age :		installations / working materials must comply vological safety standards.
Further information on storage conditions	:	See label,	package insert or internal guidelines
Materials to avoid	:	Keep awag	als to be especially mentioned. y from oxidizing agents, strongly alkaline and cid materials in order to avoid exothermic read
Further information on storage stability	:	No decom	position if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible	Basis
Acetic acid	64-19-7	TWA	concentration	ACGIH
	04-19-7	STEL	10 ppm 15 ppm	ACGIH
		TWA	10 ppm 25 mg/m3	NIOSH REL
		ST	15 ppm 37 mg/m3	NIOSH REL
		TWA	10 ppm 25 mg/m3	OSHA Z-1
		TWA	10 ppm 25 mg/m3	OSHA P0

Engineering measures

: No data available

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.



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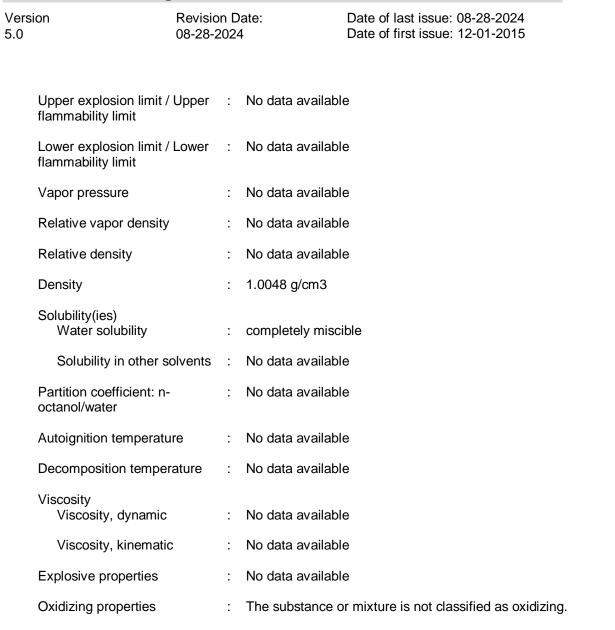
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Hand protection		
Material	:	In case of full contact: Nitrile rubber
Break through time Glove thickness	÷	480 min
Glove thickness	:	0.11 mm
		In case of contact through splashing:
Material	:	Nitrile rubber
Break through time	:	480 min
Glove thickness	:	0.11 mm
Remarks	:	Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly.
Eye protection	:	Safety glasses
Skin and body protection	:	Protective suit
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	red
Odor	:	characteristic, vinegar-like
Odor Threshold	:	No data available
рН	:	ca. 3.0
Melting point/range	:	No data available
Boiling point/boiling range	:	ca. 212 °F / 100 °C
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Does not sustain combustion.
Flammability (liquids)	:	Does not sustain combustion.
Self-ignition	:	Not applicable

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SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use	
Chemical stability	:	Stable under normal conditions.	
Possibility of hazardous reactions	:	Reacts with the following substances: Acids Bases Oxidizing agents Amines Stable under recommended storage conditions. No hazards to be specially mentioned.	
Conditions to avoid	:	Protect from frost.	
Incompatible materials	:	Acids	





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		Amines
Hazardous decomposition products	:	In case of fire hazardous decomposition products may be produced such as: Carbon oxides Nitrogen oxides (NOx) Sulfur oxides

Oxidizing agents

Bases

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified due to lack of data.

Product:

Acute oral toxicity		Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
<u>Components:</u>		
Acetic acid:		
Acute oral toxicity	:	LD50 Oral (Rat, male and female): 3,310 mg/kg GLP: no
Acute inhalation toxicity	:	LC50 (Rat, male and female): 11.4 mg/l Exposure time: 4 h Test atmosphere: vapor GLP: no Assessment: The substance or mixture has no acute inhalation toxicity

Skin corrosion/irritation

Not classified due to lack of data.

Components:

Acetic acid:

Species Exposure time Method Result GLP Rabbit 4 h OECD Test Guideline 404 Causes severe burns. No information available.

Serious eye damage/eye irritation

Not classified due to lack of data.

Components:

Acetic acid:

Species:RabbitResult:Risk of serious damage to eyes.

2

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Exposure time	: 4 h
Method	: OECD Test Guideline 405
GLP	: No information available.

Respiratory or skin sensitization

Skin sensitization

Not classified due to lack of data.

Respiratory sensitization

Not classified due to lack of data.

Germ cell mutagenicity

Not classified due to lack of data.

Components:

Acetic acid:

Genotoxicity in vitro :	Test Type: Microbial mutagenesis assay (Ames test) Test system: Salmonella typhimurium Metabolic activation: Metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: No information available. Remarks: In vitro tests did not show mutagenic effects
	Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative GLP: no Remarks: In vitro tests did not show mutagenic effects
Genotoxicity in vivo :	Test Type: Micronucleus test Species: Rat (male and female) Application Route: Inhalation Exposure time: 13 weeks Dose: 0, 1, 5, 20 ppm Method: Mutagenicity (micronucleus test) Result: negative GLP: yes
Carcinogenicity	

Not classified due to lack of data.

Components:

Acetic acid:

:	Mouse, female
:	Dermal
:	32 weeks
:	negative
:	no
	:

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	Remarks	:		this product present at levels greater than or identified as probable, possible or confirmed en by IARC.			
	IARC		ngredient of this product present at levels greater than or equal to 0.1% is ified as probable, possible or confirmed human carcinogen by IARC.				
	OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.					
	NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.					
	Reproductive Not classified of	toxicity due to lack of data.					
	Components:						
	Acetic acid:						
Effects on fetal development : Species: Mouse, female Application Route: Oral Dose: 10 ml/kg body weight Duration of Single Treatment: 6 - 15 d Developmental Toxicity: NOAEL: 345 mg/kg body we Method: Regulation (EC) No. 440/2008, Annex, B.31 GLP: No information available.							
	STOT-single e	exposure due to lack of data.					
	STOT-repeate	d exposure					
	Not classified of	due to lack of data.					
	Aspiration to	cicity					
	Not classified due to lack of data.						
SEC	TION 12. ECO		IATION				
	Ecotoxicity						
	-						
	Components:						
	Acetic acid: Toxicity to fish	:	End point: morta Exposure time: 9 Test Type: semi- Analytical monito	96 h static test			

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Toxicity to daphnia and other	:	EC50 (Daphnia magna (Water flea)): > 300.82 mg/l
aquatic invertebrates		End point: Immobilization
-		Exposure time: 48 h



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ersion 0	Revision I 08-28-202		Date of last issue: 08-28-2024 Date of first issue: 12-01-2015	
		Test Type: static Analytical monito Method: OECD GLP: yes		
Toxicity to algae plants	e/aquatic :	EC50 (Skeletone Exposure time: 7 Test Type: static Analytical monito GLP: yes	test	2 mg/
Persistence an	d degradability			
Components:				
Acetic acid:				
Biodegradability	· :	aerobic Inoculum: activa Concentration: 3 Result: Readily b Biodegradation: Exposure time: 2 GLP: no	mg/l biodegradable. 96 %	
Bioaccumulativ	ve potential			
Components:				
Acetic acid:				
Bioaccumulatior	ו :	Bioconcentration	factor (BCF): 3.16	
Partition coeffici octanol/water	ent: n- :	pH: 7	mation available.	
Mobility in soil No data availab	le			
Other adverse	effects			
Product:				
Ozone-Depletio	n Potential :	Protection of Stra Substances Remarks: This p manufactured wi	FR Protection of Environment; Part 82 atospheric Ozone - CAA Section 602 Cla roduct neither contains, nor was th a Class I or Class II ODS as defined b ct Section 602 (40 CFR 82, Subpt. A, Ap	by the



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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	: Can be disposed as waste water, when in compliance with local regulations.
Contaminated packaging	 Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

Domestic regulation

49 CFR

Not regulated as a dangerous good

Special precautions for user

Remarks

Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity

1

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	No SARA Hazards
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SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.



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Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61). This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F). The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489): Acetic acid 64-19-7 $>= 1 - < 5\%$					
Clean Water Act					
The following Hazardous Substances are listed under the U.S. CleanWat	ter Act, Section 311,				
Table 116.4A: Acetic acid 64-19-7 >	= 1 - < 5 %				
The following Hazardous Chemicals are listed under the U.S. CleanWate 117.3:					
Acetic acid 64-19-7 > This product does not contain any toxic pollutants listed under the U.S. C 307	e= 1 - < 5 % lean Water Act Section				
This product does not contain any priority pollutants related to the U.S. C	lean Water Act				
US State Regulations					
Massachusetts Right To Know					
Acetic acid	64-19-7				
Pennsylvania Right To Know					
Water Acetic acid	7732-18-5 64-19-7				
Maine Chemicals of High Concern					
Product does not contain any listed chemicals					
Vermont Chemicals of High Concern					
Product does not contain any listed chemicals					
Washington Chemicals of High Concern					
Product does not contain any listed chemicals					
California List of Hazardous Substances	04.40.7				
	64-19-7				
California Permissible Exposure Limits for Chemical Contaminants Acetic acid	64-19-7				
The ingredients of this product are reported in the following inventor					
AIIC : On the inventory, or in compliance with					
DSL : All components of this product are on	the Canadian DSL				
NZIOC : On the inventory, or in compliance with	h the inventory				
ENCS : On the inventory, or in compliance with	h the inventory				
ISHL : On the inventory, or in compliance with	h the inventory				



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KECI	: Not in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: All substances listed as active on the TSCA inventory
TECI	: Not in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information NFPA 704: Flammability Health 0 0 Instability

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

Special hazard

ACGIH NIOSH REL OSHA P0	:	USA. ACGIH Threshold Limit Values (TLV) USA. NIOSH Recommended Exposure Limits USA. Table Z-1-A Limits for Air Contaminants (1989 vacated
OSHA Z-1	:	values) USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average



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ACGIH / STEL	:	Short-term exposure limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation: DOT - Department of Transportation: DSL -Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS -Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / Z8 / 2304



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SECTION 1. IDENTIFICATION

Product name	:	Trichrome Blue	
Manufacturer or supplier's of Company name of Supplier		ails Roche Diagnostics Deutschlan	id GmbH
	•	<u> </u>	
Address	:	116 Sandhoferstrasse Mannheim, 68305 Deutschland	
Telephone	:	+496217590	
Telefax	:	+496217592890	
E-mail address Emergency telephone	:	info.dia-sds@roche.com	
Im Notfall:	:	Werkschutzzentrale Roche Diagnostics GmbH	+49(0)621-759-2203
Giftnotruf:	:	Mainz	+49(0)6131-19240

Recommended use of the chemical and restrictions on use

Recommended use	:	Laboratory chemicals Refer to product literature for further details.
		•

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)					
Skin sensitization	:	Category 1			
GHS label elements					
Hazard pictograms	:				
Signal Word	:	Warning			
Hazard Statements	:	H317 May cause an allergic skin reaction.			
Precautionary Statements	:	Prevention: P261 Avoid breathing mist or vapors. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves. Response:			



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P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P363 Wash contaminated clothing before reuse.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Acetic acid	64-19-7	>= 1 - < 5
Benzenesulfonic acid, aminomethyl[[4- [(sulfophenyl)amino]phenyl][4- [(sulfophenyl)imino]-2,5- cyclohexadien-1-ylidene]methyl]-, sodium	28631-66-5	>= 0.1 - < 1

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Do not leave the victim unattended.	
If inhaled	Move to fresh air. If unconscious, place in recovery position and seek me advice. If symptoms persist, call a physician.	dical
In case of skin contact	If on skin, rinse well with water.	
In case of eye contact	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.	
If swallowed	Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious perso If symptoms persist, call a physician.	n.



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	F	Rinse mouth with water.	
Most important sympton and effects, both acuted delayed		May cause an allergic skin reaction.	
Notes to physician		The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.	
SECTION 5. FIRE-FIGHTI	NG MEASUR	ES	
Suitable extinguishing		Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	
Unsuitable extinguishi media	ng : H	High volume water jet	
Specific hazards durir fighting	g fire : N	No information available.	
Hazardous combustio products	n : (Carbon oxides	
Further information	ι	Standard procedure for chemical fires. Jse extinguishing measures that are appropriate to local circumstances and the surrounding environment.	
Special protective equ for fire-fighters	•	: Wear self-contained breathing apparatus for firefighting if necessary.	
SECTION 6. ACCIDENTA	L RELEASE	MEASURES	
Personal precautions, protective equipment emergency procedure	and F	Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.	
Environmental precau	F	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.	
Methods and material containment and clear	ning up a	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.	

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Do not breathe vapors/dust.

Use neutralizing agents.

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		Avoid contact with For personal prof Smoking, eating application area. Dispose of rinse regulations. Persons susceptial allergies, chronic	tection see section 8. and drinking should be prohibited in the
Conditions for safe sto	orage :	place. Electrical installa	ightly closed in a dry and well-ventilated ations / working materials must comply with I safety standards.
Further information on storage conditions	:	See label, packa	age insert or internal guidelines
Materials to avoid	:		oxidizing agents, strongly alkaline and terials in order to avoid exothermic reactions.
Further information on storage stability	ı :	No decompositio	on if stored and applied as directed.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Acetic acid	64-19-7	TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGIH
		TWA	10 ppm 25 mg/m3	NIOSH REL
		ST	15 ppm 37 mg/m3	NIOSH REL
		TWA	10 ppm 25 mg/m3	OSHA Z-1
		TWA	10 ppm 25 mg/m3	OSHA P0

Engineering measures : No data available

Personal protective equipment

Hand protection

	In case of full contact:
Material	: Nitrile rubber
Break through time	: 480 min
Glove thickness	: 0.11 mm



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Material Break through Glove thickne	time : Nitrile rubl 480 min	contact through splashing: ber
Remarks Eye protection	Replace to Eye wash	ropriate protective gloves to prevent skin contact. orn or punctured gloves promptly. bottle with pure water ing safety goggles
Skin and body pr		s clothing ody protection according to the amount and

		concentration of the dangerous substance at the work place.
Hygiene measures	:	Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	blue
Odor	:	none
Odor Threshold	:	No data available
рН	:	1.25
Melting point/range	:	No data available
Boiling point/boiling range	:	ca. 212 °F / 100 °C
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Does not sustain combustion.
Flammability (liquids)	:	Does not sustain combustion.
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower	:	No data available



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flammability	limit
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Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	0.9902 g/cm3
Solubility(ies) Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n- octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	Hazardous decomposition products formed under fire conditions.
Viscosity Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Reacts with the following substances: Acids Bases Oxidizing agents Amines Alcohol No decomposition if stored and applied as directed.
Conditions to avoid	:	No data available
Incompatible materials	:	Oxidizing agents Amines Alcohol





richrome Stain	ing Kit		
rsion)	Revision D 08-28-2024		Date of last issue: 08-28-2024 Date of first issue: 12-01-2015
		Acids and bases	s
Hazardous decom products	position :		on if stored and applied as directed. azardous decomposition products may be as:
ECTION 11. TOXICO		RMATION	
Acute toxicity Not classified due	to lack of data.		
Product:			
Acute oral toxicity	:	Acute toxicity est Method: Calculat	timate: > 5,000 mg/kg tion method
<u>Components:</u>			
Acetic acid:			
Acute oral toxicity	:	LD50 Oral (Rat, GLP: no	male and female): 3,310 mg/kg
Acute inhalation to	oxicity :	Exposure time: 4 Test atmosphere GLP: no	e: vapor e substance or mixture has no acute
Skin corrosion/ir	ritation		
Not classified due	to lack of data.		
Product:			
Remarks	:	May cause skin i	irritation and/or dermatitis.
Components:			
Acetic acid:			
Species	:	Rabbit	
Exposure time	:	4 h	Joline 404
Method Result		OECD Test Guid Causes severe b	
GLP	:	No information a	
		ethyl[[4-[(sulfoph thyl]-, sodium:	nenyl)amino]phenyl][4-[(sulfophenyl)imi
		unyij-, soululli.	

Not classified due to lack of data.



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Product:

Remarks

Vapors may cause irritation to the eyes, respiratory system and the skin.

Components:

Acetic acid:		
Species	:	Rabbit
Result	:	Risk of serious damage to eyes.
Exposure time	:	4 h
Method	:	OECD Test Guideline 405
GLP	:	No information available.

Benzenesulfonic acid, aminomethyl[[4-[(sulfophenyl)amino]phenyl][4-[(sulfophenyl)imino]-2,5-cyclohexadien-1-ylidene]methyl]-, sodium:

Result	: Irritating to eyes.
rtoount	· · · · · · · · · · · · · · · · · · ·

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified due to lack of data.

Product:

Remarks

: Causes sensitization.

Components:

Benzenesulfonic acid, aminomethyl[[4-[(sulfophenyl)amino]phenyl][4-[(sulfophenyl)imino]-2,5-cyclohexadien-1-ylidene]methyl]-, sodium:

Assessment

: May cause sensitization by skin contact.

Germ cell mutagenicity

Not classified due to lack of data.

Components:

Acetic acid:

Genotoxicity in vitro :	 Test Type: Microbial mutagenesis assay (Ames test) Test system: Salmonella typhimurium Metabolic activation: Metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: No information available. Remarks: In vitro tests did not show mutagenic effects
	Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473



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	ining Kit		
sion	Revision 08-28-202		Date of last issue: 08-28-2024 Date of first issue: 12-01-2015
		Result: negativ GLP: no Remarks: In vit	e ro tests did not show mutagenic effects
Genotoxicity in	vivo :	Application Rou Exposure time: Dose: 0, 1, 5, 2	nale and female) ite: Inhalation 13 weeks 0 ppm enicity (micronucleus test)
Carcinogenicit	y ue to lack of data		
<u>Components:</u>			
Acetic acid:			
Species Application Rou Exposure time Result GLP Remarks	ite :		f this product present at levels greater tha s identified as probable, possible or confiri gen by IARC.
IARC			ent at levels greater than or equal to 0.1% confirmed human carcinogen by IARC.
OSHA	No component of on OSHA's list of		sent at levels greater than or equal to 0.1% ogens.
NTP			ent at levels greater than or equal to 0.1% d carcinogen by NTP.
Reproductive Not classified d	toxicity ue to lack of data		
<u>Components:</u>			
Acetic acid:			
Effects on fetal	development :	Developmental	ite: Oral body weight gle Treatment: 6 - 15 d Toxicity: NOAEL: 345 mg/kg body weight ation (EC) No. 440/2008, Annex, B.31

STOT-single exposure

Based on available data, the classification criteria are not met.



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Product:

Assessment

The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

2

Product:

Assessment

: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity

Not classified due to lack of data.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

<u>i loudet.</u>		
Ecotoxicology Assessment		
Toxicity Data on Soil	:	Not expected to adsorb on soil.
Other organisms relevant to the environment	:	No data available
Components:		
Acetic acid:		
Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 300.82 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Analytical monitoring: no Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 300.82 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	EC50 (Skeletonema costatum (marine diatom)): > 300.82 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: no GLP: yes



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Persistence and degradability

Components:

Acetic acid:

Biodegradability

: aerobic Inoculum: activated sludge Concentration: 3 mg/l Result: Readily biodegradable. Biodegradation: 96 % Exposure time: 20 d GLP: no

Bioaccumulative potential

Components:

Acetic acid:

Bioaccumulation	:	Bioconcentration factor (BCF): 3.16
Partition coefficient: n- octanol/water	:	log Pow: -0.17 (77 °F / 25 °C) pH: 7 Method: No information available. GLP: No information available.

Benzenesulfonic acid, aminomethyl[[4-[(sulfophenyl)amino]phenyl][4-[(sulfophenyl)imino]-2,5-cyclohexadien-1-ylidene]methyl]-, sodium:

Partition coefficient: n- octanol/water	: Remarks: No data available
Mobility in soil	
No data available	
Other adverse effects	
Product:	
Ozone-Depletion Potential	 Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Can be disposed as waste water, when in compliance with local regulations.



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Contaminated packaging	: Empty remaining contents.
	Dispose of as unused product.
	Empty containers should be taken to an approved waste
	handling site for recycling or disposal.
	Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Domestic regulation

49 CFR

Not regulated as a dangerous good

Special precautions for user

Remarks

Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity

2

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	Respiratory or skin sensitization
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SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).



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Ao Th	his product does not contain an ccidental Release Prevention (he following chemical(s) are lis termediate or Final VOC's (40	(40 CFR 68.130, Su sted under the U.S. (CFR 60.489):	bpart F). Clean Air Act Section	111 SOCMI			
C	Acetic acid Iean Water Act	64-19-7	>:	= 1 - < 5 %			
Tł	he following Hazardous Substa able 116.4A:						
	Acetic acid he following Hazardous Chemi 17.3:	64-19-7 icals are listed unde		= 1 - < 5 % r Act, Section 311, Table			
	Acetic acid his product does not contain a 07	64-19-7 ny toxic pollutants lis		= 1 - < 5 % ean Water Act Section			
	his product does not contain a	ny priority pollutants	related to the U.S. Cl	ean Water Act			
	S State Regulations						
IM	assachusetts Right To Knov Acetic acid	V		64-19-7			
Pe	ennsylvania Right To Know						
	Water Acetic acid			7732-18-5 64-19-7			
Μ	aine Chemicals of High Con Product does not con		icals				
Ve	ermont Chemicals of High C Product does not con		icals				
W	Washington Chemicals of High Concern						
_	Product does not contain any listed chemicals						
Ca	alifornia List of Hazardous S Acetic acid	Substances		64-19-7			
C	alifornia Permissible Exposu	ure Limits for Chen	nical Contaminants				
_	Acetic acid			64-19-7			
	he ingredients of this produc IIC	•	or in compliance with				
D	SL :	All components of	f this product are on t	he Canadian DSL			
N	ZIoC :	Not in compliance	e with the inventory				
El	NCS :	On the inventory,	or in compliance with	the inventory			
IS	SHL :	On the inventory,	or in compliance with	the inventory			
KI	ECI :	On the inventory,	or in compliance with	the inventory			
PI	ICCS :	On the inventory,	or in compliance with	the inventory			



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IECSC	: On the inve	entory, or in compliance with the inventory
TCSI	: On the inve	entory, or in compliance with the inventory
TSCA	: All substan	ces listed as active on the TSCA inventory
TECI	: Not in com	pliance with the inventory

TSCA list

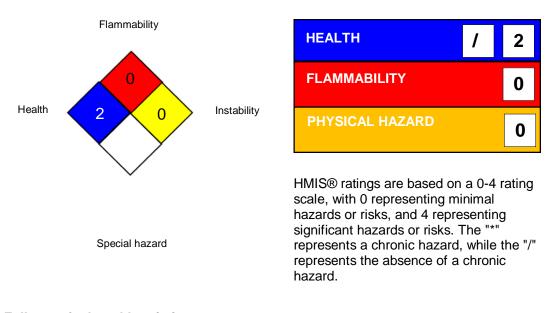
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:

Full text	of	other	abbreviations	

ACGIH	USA. ACGIH Threshold Limit Values (TLV)	
NIOSH REL	USA. NIOSH Recommended Exposure Limits	
OSHA PO	USA. Table Z-1-A Limits for Air Contaminants (1989 vacate values)	əd
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants	
ACGIH / TWA	8-hour, time-weighted average	
ACGIH / STEL	Short-term exposure limit	
NIOSH REL / TWA	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek	
NIOSH REL / ST	STEL - 15-minute TWA exposure that should not be excee at any time during a workday	ded



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OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL -Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS -Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature: SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date

: 08-28-2024

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / Z8 / 2304



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SECTION 1. IDENTIFICATION

Product name	:	Trichrome Staining Kit	
Product code	:	06521908001	
Manufacturer or supplier's	deta	ails	
		Roche Diagnostics Deutschlan	d GmbH
Address	:	116 Sandhoferstrasse Mannheim, 68305 Deutschland	
Telephone	:	+496217590	
Telefax	:	+496217592890	
E-mail address Emergency telephone	:	info.dia-sds@roche.com	
Im Notfall:	:	Werkschutzzentrale Roche Diagnostics GmbH	+49(0)621-759-2203
Giftnotruf:	:	Mainz	+49(0)6131-19240

Recommended use of the chemical and restrictions on use

Restrictions on use : For professional users only.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Oral)	:	Category 4
Acute toxicity (Inhalation)	:	Category 4
Skin corrosion	:	Category 1
Serious eye damage	:	Category 1
Skin sensitization	:	Category 1
Germ cell mutagenicity	:	Category 2
Carcinogenicity	:	Category 1B
Specific target organ toxicity - single exposure	:	Category 1 (Eyes)

GHS label elements



Trichrome Staining Kit Version Date of last issue: 08-28-2024 **Revision Date:** Date of first issue: 12-01-2015 5.0 08-28-2024 Hazard pictograms Signal Word Danger 2 Hazard Statements H302 + H332 Harmful if swallowed or if inhaled. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H341 Suspected of causing genetic defects. H350 May cause cancer. H370 Causes damage to organs (Eyes). **Precautionary Statements** 2 **Prevention:** P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe mist or vapors. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. **Response:** P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor. P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P363 Wash contaminated clothing before reuse. Storage: P405 Store locked up. **Disposal:** P501 Dispose of contents/ container to an approved waste

disposal plant.



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Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

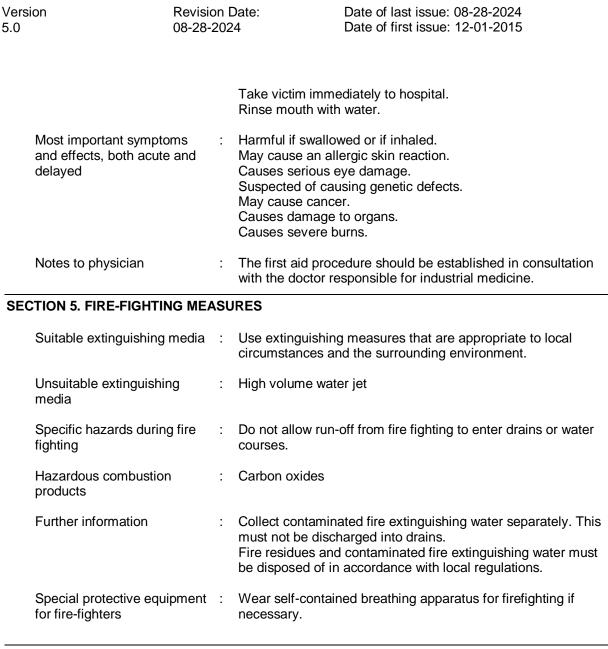
CAS-No.	Concentration (% w/w)
50-00-0	>= 5 - < 10
64-19-7	>= 5 - < 10
67-56-1	>= 1 - < 5
88-89-1	>= 0.1 - < 1
	50-00-0 64-19-7 67-56-1

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice :	Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled :	Move to fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact :	Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact :	Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed :	Clean mouth with water and drink afterwards plenty of water. Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.





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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.
Environmental precautions :	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Use neutralizing agents.



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SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	 Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. To prevent leaks or spillages from spreading, provide a suitable liquid retention system.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.
Further information on storage conditions	:	See label, package insert or internal guidelines
Materials to avoid	:	Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.
Further information on storage stability	:	No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Formaldehyde	50-00-0	TWA	0.016 ppm	NIOSH REL
		С	0.1 ppm	NIOSH REL
		PEL	0.75 ppm	OSHA CARC
		STEL	2 ppm	OSHA CARC
		TWA	0.016 ppm (Formaldehyde)	NIOSH REL
		С	0.1 ppm	NIOSH REL



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			(Formaldehyde)	
		TWA	0.1 ppm	ACGIH
		STEL	0.3 ppm	ACGIH
Acetic acid	64-19-7	TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGIH
		TWA	10 ppm	NIOSH REL
			25 mg/m3	
		ST	15 ppm	NIOSH REL
			37 mg/m3	
		TWA	10 ppm	OSHA Z-1
			25 mg/m3	
		TWA	10 ppm	OSHA P0
			25 mg/m3	
Methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm	NIOSH REL
			260 mg/m3	
		ST	250 ppm	NIOSH REL
			325 mg/m3	
		TWA	200 ppm	OSHA Z-1
			260 mg/m3	
		TWA	200 ppm	OSHA P0
			260 mg/m3	
		STEL	250 ppm	OSHA P0
			325 mg/m3	
Phenol, 2,4,6-trinitro-	88-89-1	TWA	0.1 mg/m3	ACGIH
		TWA	0.1 mg/m3	NIOSH REL
		ST	0.3 mg/m3	NIOSH REL
		TWA	0.1 mg/m3	OSHA Z-1
		TWA	0.1 mg/m3	OSHA P0

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Samplin g time	Permissible concentratio n	Basis
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

Engineering measures

No data available

Personal protective equipment

Respiratory protection	:	In the case of vapor formation use a respirator with an approved filter.
Hand protection		In case of full contact:
Material	:	In case of full contact: Nitrile rubber



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Break through time Glove thickness		480 min 0.11 mm
Material Break through time Glove thickness		In case of contact through splashing: Nitrile rubber 480 min 0.11 mm
Remarks	:	Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly.
Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	yellow
Odor	:	formaldehyde-like
Odor Threshold	:	No data available
рН	:	1.21
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Does not sustain combustion.
Flammability (liquids)	:	Does not sustain combustion.
Self-ignition	:	Not applicable

Trichrome Staining Kit



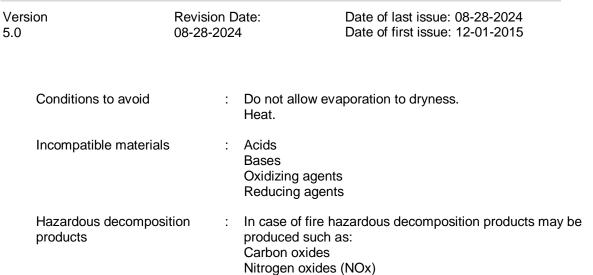
Version	Revision Date:	Date of last issue: 08-28-2024
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Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	1.013 g/cm3
Solubility(ies) Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n- octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, dynamic	:	No data available
Viscosity, kinematic		No data available
Explosive properties	:	Not explosive Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Do not allow to dry. Explosive when dry. Reacts with the following substances: Acids Bases Oxidizing agents Reducing agents No decomposition if stored and applied as directed.





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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity Harmful if swallowed or if inhaled.

Product:	
Acute oral toxicity :	Acute toxicity estimate: 792.86 mg/kg Method: Calculation method
Acute inhalation toxicity :	Acute toxicity estimate: 3.87 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity :	Acute toxicity estimate: 2,321 mg/kg Method: Calculation method
Components:	
Formaldehyde:	
Acute oral toxicity :	Acute toxicity estimate: 100 mg/kg Assessment: The component/mixture is toxic after single ingestion.
Acute inhalation toxicity :	Acute toxicity estimate: 3 mg/l Test atmosphere: vapor Assessment: The component/mixture is toxic after short term inhalation.
Acute dermal toxicity :	Acute toxicity estimate: 300 mg/kg Assessment: The component/mixture is toxic after single contact with skin.
Acetic acid:	
Acute oral toxicity :	LD50 Oral (Rat, male and female): 3,310 mg/kg GLP: no
Acute inhalation toxicity :	LC50 (Rat, male and female): 11.4 mg/l Exposure time: 4 h



Version 5.0	Revision Dat 08-28-2024	e: Date of last issue: 08-28-2024 Date of first issue: 12-01-2015
	G As	est atmosphere: vapor LP: no ssessment: The substance or mixture has no acute nalation toxicity
Methanol:		
Acute oral toxicity		cute toxicity estimate: 100 mg/kg ethod: Converted acute toxicity point estimate
	M G As	050 (Rat): 1,187 mg/kg ethod: OECD Test Guideline 401 LP: no ssessment: The component/mixture is toxic after single gestion.
Acute inhalation toxicit	E: Te G A:	C50 (Cat): 43.68 mg/l posure time: 6 h est atmosphere: vapor LP: No information available. ssessment: The component/mixture is toxic after short terr nalation.
	E: Te A:	C50 (Rat): 131.25 mg/l cposure time: 4 h est atmosphere: vapor ssessment: The component/mixture is toxic after short terr nalation.
Acute dermal toxicity	M G As	050 (Rabbit): 17,100 mg/kg ethod: No information available. LP: No information available. ssessment: The component/mixture is toxic after single intact with skin.
Phenol, 2,4,6-trinitro-	:	
Acute oral toxicity	: L[050 (Rat): 200 mg/kg
Acute inhalation toxicity	Τe	cute toxicity estimate: > 0.5 mg/l est atmosphere: dust/mist ethod: Expert judgment
Acute dermal toxicity		cute toxicity estimate: 300 mg/kg ethod: Expert judgment
Skin corrosion/irritati Causes severe burns.	on	
<u>Product:</u> Remarks	: Ex	stremely corrosive and destructive to tissue.

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Components: Formaldehyde: Species Rabbit 2 **OECD** Test Guideline 404 Method 2 Result Causes burns. 2 GLP 1 no Acetic acid: Species Rabbit ÷ Exposure time 4 h ÷ Method **OECD** Test Guideline 404 : Result 2 Causes severe burns. GLP No information available. 2 Methanol: **Species** Rabbit 5 Exposure time 20 h ÷ Result No skin irritation : GLP 2 no Phenol, 2,4,6-trinitro-: Remarks This information is not available. 2 Serious eye damage/eye irritation Causes serious eye damage. Product: Remarks May cause irreversible eye damage. 1 **Components:** Formaldehyde: Result : Risk of serious damage to eyes. Acetic acid: Species ÷ Rabbit Result ÷ Risk of serious damage to eyes. Exposure time 1 4 h Method : **OECD** Test Guideline 405 GLP No information available. 2 Methanol: Species 2 Rabbit Result No eye irritation 1 GLP : no



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Phenol, 2,4,6-trinitro-:

Remarks

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: This information is not available.

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Respiratory or skin sensitization Skin sensitization May cause an allergic skin reaction. **Respiratory sensitization** Not classified based on available information. **Product:** Remarks Causes sensitization. **Components:** Formaldehyde: Test Type Local lymph node assay (LLNA) 2 Species Mouse 1 May cause sensitization by skin contact. Assessment : **OECD** Test Guideline 429 Method : Result Causes sensitization. Methanol: Test Type Maximization Test Species Guinea pig 2 Does not cause skin sensitization. Assessment : **OECD** Test Guideline 406 Method 1 Result Ξ. Did not cause sensitization on laboratory animals. GLP 1 no Germ cell mutagenicity Suspected of causing genetic defects. **Components:** Formaldehyde: Germ cell mutagenicity - : In vitro tests showed mutagenic effects Assessment Acetic acid: Genotoxicity in vitro Test Type: Microbial mutagenesis assay (Ames test) 2 Test system: Salmonella typhimurium Metabolic activation: Metabolic activation Method: OECD Test Guideline 471 **Result:** negative GLP: No information available. Remarks: In vitro tests did not show mutagenic effects

Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation



	-	
sion	Revision Date: 08-28-2024	Date of last issue: 08-28-2024 Date of first issue: 12-01-2015
	Result: neg GLP: no	ECD Test Guideline 473 gative n vitro tests did not show mutagenic effects
Genotoxicity in vivo	Species: R Application Exposure t Dose: 0, 1,	utagenicity (micronucleus test)
Methanol:		
Genotoxicity in vitro	Metabolic a Method: O Result: neg	n: Salmonella typhimurium activation: with and without metabolic activation ECD Test Guideline 471
	Metabolic a Method: O Result: neg	n: Escherichia coli activation: with and without metabolic activatio ECD Test Guideline 471
	Test syster Result: neg	Micronucleus test n: Chinese hamster lung cells gative formation available.
Genotoxicity in vivo	Species: M Cell type: E Application Dose: 1920 Method: O Result: neg	In vivo micronucleus test louse (male and female) 3one marrow Route: Intraperitoneal injection); 3200; 4480 mg/kg ECD Test Guideline 474 gative formation available.
Carcinogenicity May cause cancer.		
Components:		
Formaldehyde:	_	
Carcinogenicity -	, Drooumod	to have carcinogenic potential for humans





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Acetic acid: Species Application Roi Exposure time Result GLP Remarks	ute		this product present at levels greater than or identified as probable, possible or confirmed en by IARC.
Methanol: Species Application Rol Exposure time Method GLP		Mouse, male an inhalation (vapo 18 month(s) OECD Test Guid No information a	[.]) deline 453
IARC	Group 1: Carcino Formaldehyde	ogenic to humans	50-00-0
OSHA	OSHA specificall Formaldehyde	y regulated carcin	ogen 50-00-0
NTP	Known to be hun Formaldehyde	nan carcinogen	50-00-0
Reproductive Not classified b <u>Components:</u> Acetic acid: Effects on fetal	based on available	information. Species: Mouse	female
	development .	Application Rout Dose: 10 ml/kg b Duration of Sing Developmental	e: Oral body weight le Treatment: 6 - 15 d Foxicity: NOAEL: 345 mg/kg body weight ion (EC) No. 440/2008, Annex, B.31
Methanol: Effects on fertil	ity :	Species: Mouse	
			kg bw/day le Treatment: 5 d Parent: LOAEC: 1,000 mg/kg body weight
		Dose: 0.27, 0.8, Duration of Sing	e: inhalation (vapor) 2.39 mg/L air le Treatment: 165 d Parent: NOAEC: 2.39 mg/l

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STOT-repeated exposure

Not classified based on available information.

Components:

Methanol:

Assessment

The substance or mixture is not classified as specific target 1 organ toxicant, repeated exposure.



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Repeated dose toxicity

Components:

Methanol:

Species LOAEL LOAEL Application Route Exposure time Dose GLP	 Monkey, male 2340 mg/kg 2,340 mg/kg Oral 3 d 2340 mg/kg bw/day No information available.
Species NOAEC Application Route Exposure time Dose GLP	 Monkey 0.013 mg/l Inhalation 29 Months 0.013, 0.13 mg/L air No information available.

Aspiration toxicity

Not classified based on available information.

Components:

Ecotoxicity

Phenol, 2,4,6-trinitro-:

No data available

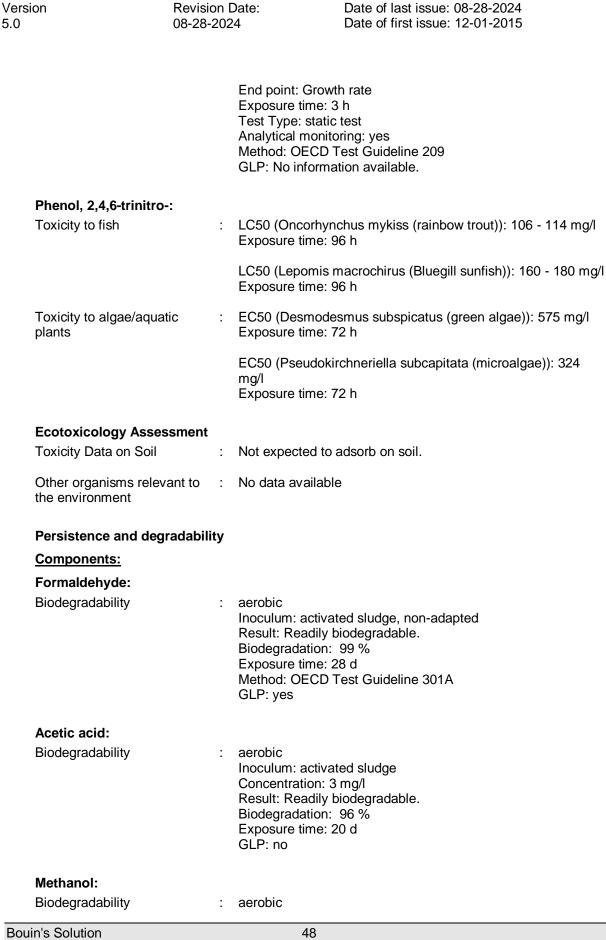
SECTION 12. ECOLOGICAL INFORMATION

Components:		
Formaldehyde:		
Toxicity to fish	:	LC50 (Marine species): 6.7 mg/l End point: mortality Exposure time: 96 h Test Type: static test Analytical monitoring: no GLP: no Remarks: nominal concentration
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia pulex (Water flea)): 5.8 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: no Remarks: nominal concentration
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): 4.89 mg/l End point: Growth rate Exposure time: 72 h



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		GLP: no	itic test D Test Guideline 201 ninal concentration
Acetic acid:			
Toxicity to fish	:	End point: mo Exposure time Test Type: ser Analytical mor	e: 96 h mi-static test
Toxicity to daphn aquatic invertebra		End point: Imr Exposure time Test Type: sta Analytical mor	e: 48 h tic test
Toxicity to algae/ plants	aquatic :	EC50 (Skeleto Exposure time Test Type: sta Analytical mor GLP: yes	tic test
Methanol:			
Toxicity to fish	:	End point: mo Exposure time Test Type: flor Analytical mor	e: 96 h w-through test
Toxicity to daphn aquatic invertebra		End point: Imr Exposure time Test Type: ser Method: OEC	e: 96 h
Toxicity to algae/ plants	aquatic :	mg/l End point: Gro Exposure time Test Type: sta Method: OEC	e: 96 h
Toxicity to microc	organisms :	IC50 (activate	d sludge): > 1,000 mg/l







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ersion 0	Revision I 08-28-202		Date of last issue: 08-28-2024 Date of first issue: 12-01-2015
		Concentration:	biodegradable. : 82.7 %
Biochemical Oxygen Demand (BOD)	:	Biochemical ox 600 - 1,120 mg Incubation time	/g
Chemical Oxygen Der (COD)	nand :	1,420 mg/g	
Theoretical oxygen de (ThOD)	emand :	1,500 mg/g	
Biochemical Oxygen Demand (BOD)/Theor oxygen demand (ThO	etical	76 %	
Bioaccumulative pot	ential		
Components:			
Formaldehyde:			
Partition coefficient: n- octanol/water	· :	log Pow: 0.35 (77 °F / 25 °C)
Acetic acid:			
Bioaccumulation	:	Bioconcentratio	on factor (BCF): 3.16
Partition coefficient: n- octanol/water	- :		(77 °F / 25 °C) ormation available. ation available.
Methanol:			
Bioaccumulation	:		to the distribution coefficient n-octanol/wat o organisms is not expected.
Partition coefficient: n- octanol/water	· :	log Pow: -0.77	(68 °F / 20 °C)
Phenol, 2,4,6-trinitro	-:		
Partition coefficient: n- octanol/water		log Pow: 1.33	
Mobility in soil			



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Other advers	e effects		
Product:	a a Data at'al	Develotion 4	
Ozone-Deplet	ion Potential :	Protection of Substances Remarks: This manufactured	CFR Protection of Environment; Part 82 Stratospheric Ozone - CAA Section 602 Class I s product neither contains, nor was with a Class I or Class II ODS as defined by the r Act Section 602 (40 CFR 82, Subpt. A, App.A +
Additional eco	logical :		ntal hazard cannot be excluded in the event of I handling or disposal. uatic life.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods		
Waste from residues	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

:

Not applicable

Domestic regulation

49 CFR

Not regulated as a dangerous good

Special precautions for user

Remarks

Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR



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SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ	Calculated product RQ
		(lbs)	(lbs)
Formaldehyde	50-00-0	100	1041
Methanol	67-56-1	100	100 (F003)

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ	Calculated product RQ
		(lbs)	(lbs)
Formaldehyde	50-00-0	100	1041

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

Components	CAS-No.	Compone	ent TPQ (lbs)
Formaldehyde	50-00-0		500
SARA 311/312 Hazards :	Acute toxicity (any i Respiratory or skin Germ cell mutageni Carcinogenicity Specific target orga Skin corrosion or im Serious eye damag	sensitization icity an toxicity (single or re ritation	epeated exposure)
SARA 313 :	. .	oonents are subject to RA Title III, Section 3 ⁷	
	Formaldehyde	50-00-0	>= 5 - < 10 %
	Methanol	67-56-1	>= 1 - < 5 %

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

Formaldehyde	50-00-0	>= 5 - < 10 %
Methanol	67-56-1	>= 1 - < 5 %
The following chemical(s) are lis	ted under the U.S.	Clean Air Act Section 112(r) for Accidental
Release Prevention (40 CFR 68	.130, Subpart F):	
Formaldehyde	50-00-0	>= 5 - < 10 %
The following chemical(s) are lis	ted under the U.S.	Clean Air Act Section 111 SOCMI
Intermediate or Final VOC's (40	CFR 60.489):	
Formaldehyde	50-00-0	>= 5 - < 10 %
Acetic acid	64-19-7	>= 5 - < 10 %
Methanol	67-56-1	>= 1 - < 5 %

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:



sion	Revisior 08-28-2		Date of last issue: 08-28-2024 Date of first issue: 12-01-2015
	Formaldehyde Acetic acid wing Hazardous Chem	50-00-0 64-19-7 icals are listed un	>= 5 - < 10 % >= 5 - < 10 % der the U.S. CleanWater Act, Section 311, Ta
117.3: This proc	Formaldehyde Acetic acid luct does not contain a	50-00-0 64-19-7 ny toxic pollutants	>= 5 - < 10 % >= 5 - < 10 % s listed under the U.S. Clean Water Act Sectio
307 This proc	luct does not contain a	ny priority polluta	nts related to the U.S. Clean Water Act
US State	Regulations		
Massach	usetts Right To Know	w	
	Formaldehyde Acetic acid Methanol		50-00-0 64-19-7 67-56-1
Pennsylv	vania Right To Know		
	Water Formaldehyde Acetic acid Methanol Phenol, 2,4,6-trinitro-		7732-18-5 50-00-0 64-19-7 67-56-1 88-89-1
Maine Cl	hemicals of High Con	icern	
	Product does not cor	ntain any listed ch	emicals
Vermont	Chemicals of High C	Concern	
	Formaldehyde		50-00-0
Washing	ton Chemicals of Hig	Jh Concern	
	Formaldehyde		50-00-0
	a Prop. 65		
the State	•		nicals including Methanol, which is/are known her reproductive harm. For more information
Californi	a List of Hazardous S	Substances	
	Formaldehyde Acetic acid Methanol		50-00-0 64-19-7 67-56-1
Californi	a Permissible Expos	ure Limits for Ch	emical Contaminants
	Formaldehyde Acetic acid Methanol		50-00-0 64-19-7 67-56-1
Californi	a List of Acutely Haz	ardous Chemica	Is, Toxics and Reactives
	Formaldehyde		50-00-0
Californi	a Regulated Carcino	gens	
	Formaldehyde		50-00-0

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	obligations	/restrictions apply
ופח		pents of this product are on the Canadian DS

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DSL	:	All components of this product are on the Canadian DSL
NZIoC	:	Not in compliance with the inventory
ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	All substances listed as active on the TSCA inventory
TECI	:	On the inventory, or in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION



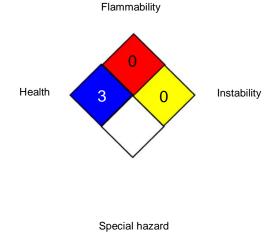
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NFPA 704:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH ACGIH BEI	:	USA. ACGIH Threshold Limit Values (TLV) ACGIH - Biological Exposure Indices (BEI)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA CARC	:	OSHA Specifically Regulated Chemicals/Carcinogens
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
NIOSH REL / C	:	Ceiling value not be exceeded at any time.
OSHA CARC / PEL	:	Permissible exposure limit (PEL)
OSHA CARC / STEL	:	Excursion limit
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
OSHA Z-1 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EMS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -



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International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date

: 08-28-2024

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / Z8 / 2204 SECTION 1. IDENTIFICATION

Product name : Clarifier

Manufacturer or supplier's details					
Company name of supplier	: Roche Diagnostics Deutschland GmbH		nd GmbH		
Address	Ma	6 Sandhoferstrasse annheim, 68305 eutschland			
Telephone Telefax E-mail address Emergency telephone Im Notfall:	: +4 : inf : W	96217590 96217592890 o.dia-sds@roche.com erkschutzzentrale Roche agnostics GmbH	+49(0)621-759-2203		



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Giftnotruf:	:	Mainz	+49(0)6131-19240
Recommended use of the o	chei	nical and restrictions on use	

Recommended use : Laboratory chemicals Refer to product literature for further details.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a hazardous substance or mixture.

GHS label elements

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)		
Acetic acid	64-19-7	>= 1 - < 5		
Actual concentration is withheld as a trade secret				

SECTION 4. FIRST AID MEASURES

General advice	:	Do not leave the victim unattended.	
If inhaled	:	Move to fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.	
In case of skin contact	:	If on skin, rinse well with water.	
In case of eye contact	:	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.	
If swallowed	:	Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.	



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	Ri	nse mouth with water.
Most important symptoms and effects, both acute an delayed		one known.
Notes to physician		ne first aid procedure should be established in consultation the doctor responsible for industrial medicine.
SECTION 5. FIRE-FIGHTING	MEASURE	S
Suitable extinguishing me		se extinguishing measures that are appropriate to local roumstances and the surrounding environment.
Specific hazards during fi	re : No	o information available.
fighting		
fighting Hazardous combustion products	: Ca	arbon oxides
Hazardous combustion	: St Us	arbon oxides andard procedure for chemical fires. se extinguishing measures that are appropriate to local rcumstances and the surrounding environment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal. Use neutralizing agents.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.
Conditions for safe storage	:	Electrical installations / working materials must comply with the technological safety standards.



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	Further information on storage conditions	:	See label, packa	ge insert or internal guidelines
	Materials to avoid	:	Keep away from	e especially mentioned. oxidizing agents, strongly alkaline and erials in order to avoid exothermic reactions.
	Further information on storage stability	:	No decompositio	n if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Acetic acid	64-19-7	TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGIH
		TWA	10 ppm 25 mg/m3	NIOSH REL
		ST	15 ppm 37 mg/m3	NIOSH REL
		TWA	10 ppm 25 mg/m3	OSHA Z-1
		TWA	10 ppm 25 mg/m3	OSHA P0

Engineering measures : No data available

Personal protective equipment

Respiratory protection	:	No personal respiratory protective equipment normally required.
Hand protection		
-		In case of full contact:
Material	:	Nitrile rubber
Break through time	:	480 min
Glove thickness	:	0.11 mm

Material Break through time Glove thickness	In case of contact through splashing: Nitrile rubber 480 min 0.11 mm
Material	: Protective gloves

Remarks:Wear appropriate protective gloves to prevent skin contact.
Replace torn or punctured gloves promptly.Eye protection:Safety glasses





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Skin and body protect	ction : Protective	suit
Hygiene measures	: Handle in a practice.	accordance with good industrial hygiene and safety
SECTION 9. PHYSICAL	AND CHEMICAL PROP	ERTIES
Appearance	: liquid	
Color	: clear, colo	orless
Odor	: vinegar-lik	ke
Odor Threshold	: No data a	vailable
рН	: ca. 3.0	
Melting point/range	: No data a	vailable
Boiling point/boiling r	range : ca. 212 °F	-/ 100 °C
Flash point	: does not f	lash
Evaporation rate	: No data a	vailable
Flammability (solid, g	gas) : The produ	ct is not flammable., Does not sustain combustion.
	Does not	sustain combustion.
Flammability (liquids	s) : Does not	sustain combustion.
	Does not	sustain combustion.
Self-ignition	: No data a	vailable
Upper explosion limit flammability limit	it / Upper : No data a	vailable
Lower explosion limit	it / Lower : No data a	vailable
Vapor pressure	: No data a	vailable
Relative vapor densi	ity : No data a	vailable
Relative density	: No data a	vailable



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Density		0.9975 g/cm3
Solubility(ies) Water solubility		completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n- octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature		Hazardous decomposition products formed under fire conditions.
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal us	
Chemical stability	:	Stable under normal conditions.	
Possibility of hazardous reactions	:	Reacts with the following substances: Acids Bases Oxidizing agents Amines Stable under recommended storage conditions. No hazards to be specially mentioned.	
Conditions to avoid	:	Protect from frost.	
Incompatible materials	:	Acids Bases Oxidizing agents Amines	
Hazardous decomposition products	:	No decomposition if stored and applied as directed. In case of fire hazardous decomposition products may be produced such as: Carbon oxides	



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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified due to lack of data.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

Acetic acid:

Acute oral toxicity	:	LD50 Oral (Rat, male and female): 3,310 mg/kg GLP: no
Acute inhalation toxicity	:	LC50 (Rat, male and female): 11.4 mg/l Exposure time: 4 h Test atmosphere: vapor GLP: no Assessment: The substance or mixture has no acute inhalation toxicity

Skin corrosion/irritation

Not classified due to lack of data.

Components:

Acetic acid:

Rabbit
4 h
OECD Test Guideline 404
Causes severe burns.
No information available.

Serious eye damage/eye irritation

Not classified due to lack of data.

Components:

Acetic acid:

Species	:	Rabbit
Result	:	Risk of serious damage to eyes.
Exposure time	:	4 h
Method	:	OECD Test Guideline 405
GLP	:	No information available.

Respiratory or skin sensitization

Skin sensitization

Not classified due to lack of data.

Respiratory sensitization

Not classified due to lack of data.



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Germ cell mutagenicity Not classified due to lack of data. Components: Acetic acid:

Genotoxicity in vitro :	Test Type: Microbial mutagenesis assay (Ames test) Test system: Salmonella typhimurium Metabolic activation: Metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: No information available. Remarks: In vitro tests did not show mutagenic effects
	Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative GLP: no Remarks: In vitro tests did not show mutagenic effects
Genotoxicity in vivo :	Test Type: Micronucleus test Species: Rat (male and female) Application Route: Inhalation Exposure time: 13 weeks Dose: 0, 1, 5, 20 ppm Method: Mutagenicity (micronucleus test) Result: negative GLP: yes

Carcinogenicity

Not classified due to lack of data.

Components:

Acetic acid:

Species Application Roi Exposure time Result GLP Remarks	 Mouse, female Dermal 32 weeks negative no No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. 	
IARC	No ingredient of this product present at levels greater than or equal to 0.1% is dentified as probable, possible or confirmed human carcinogen by IARC.	
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.	
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.	



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Reproductive toxicity

Not classified due to lack of data.

Components:

Acetic acid:

Effects on fetal development	:	Species: Mouse, female Application Route: Oral Dose: 10 ml/kg body weight Duration of Single Treatment: 6 - 15 d Developmental Toxicity: NOAEL: 345 mg/kg body weight Method: Regulation (EC) No. 440/2008, Annex, B.31 GLP: No information available.
------------------------------	---	--

STOT-single exposure

Based on available data, the classification criteria are not met.

2

Product:

Assessment

The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Product:

Assessment

: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity

Not classified due to lack of data.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity <u>Product:</u>

Ecotoxicology Assessment

Toxicity Data on Soil	:	Not expected to adsorb on soil.
Other organisms relevant to	:	No data available

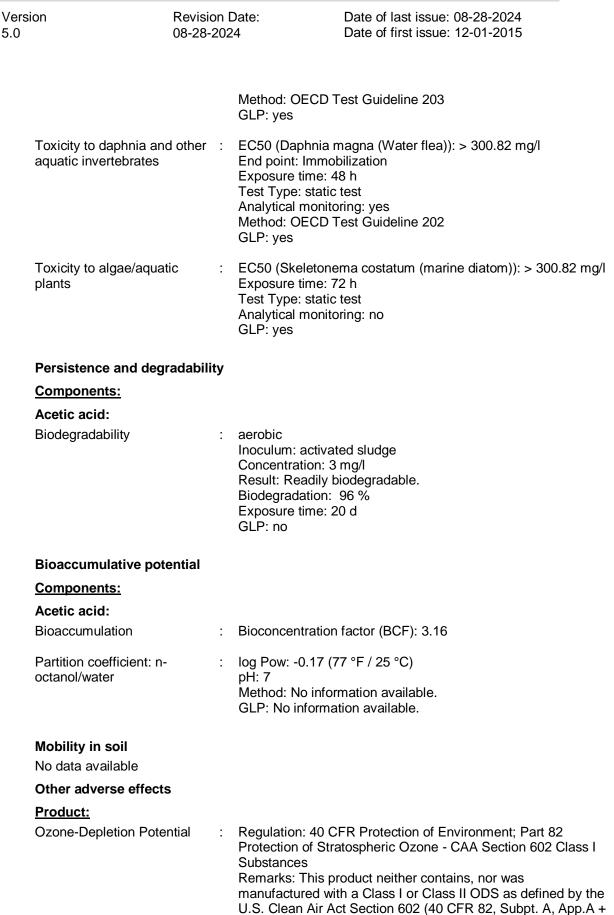
the environment

Components:

Acetic acid:

Toxicity to fish	 LC50 (Oncorhynchus mykiss (rainbow trout)): > 300.82 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Analytical monitoring: no
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B).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Can be disposed as waste water, when in compliance with local regulations.
Contaminated packaging		Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable Not applicable

Domestic regulation

49 CFR

Not regulated as a dangerous good

Special precautions for user

Remarks

Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR No data available

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity

2

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : No SARA Hazards

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SARA 313

: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Clean All Act					
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean					
Air Act Section 112 (40 CFR 61).					
	chemicals listed under the U.S. Clean	Air Act Section 112(r) for			
Accidental Release Prevention (40	d under the U.S. Clean Air Act Section				
Intermediate or Final VOC's (40 CF					
Acetic acid		>= 1 - < 5 %			
Clean Water Act					
The following Hazardous Substanc Table 116.4A:	es are listed under the U.S. CleanWa	ter Act, Section 311,			
Acetic acid		>= 1 − < 5 %			
117.3:	Is are listed under the U.S. CleanWate				
Acetic acid		= 1 - < 5%			
307	toxic pollutants listed under the U.S. C	Jean Water Act Section			
	priority pollutants related to the U.S. C	Clean Water Act			
US State Regulations					
Massachusetts Right To Know					
Acetic acid		64-19-7			
Pennsylvania Right To Know					
Water		7732-18-5			
Acetic acid		64-19-7			
Maine Chemicals of High Concer	rn				
Product does not contain any listed chemicals					
Vermont Chemicals of High Cone	cern				
Product does not contain any listed chemicals					
Washington Chemicals of High C	Concern				
Product does not contair	n any listed chemicals				
California List of Hazardous Sub	stances				
Acetic acid		64-19-7			
California Permissible Exposure	Limits for Chemical Contaminants				
Acetic acid		64-19-7			
The ingredients of this product a	are reported in the following invento	ories:			
AIIC : 0	On the inventory, or in compliance wit	h the inventory			
DSL : /	All components of this product are on	the Canadian DSI			



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NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
ISHL	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: All substances listed as active on the TSCA inventory
TECI	: On the inventory, or in compliance with the inventory

TSCA list

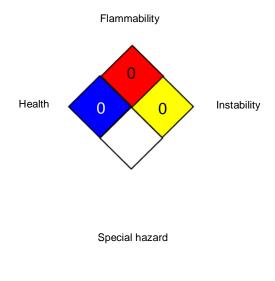
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION



NFPA 704:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH	: USA. ACGII
NIOSH REL	: USA. NIOSI

USA. ACGIH Threshold Limit Values (TLV) USA. NIOSH Recommended Exposure Limits

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OSHA P0

•	values)
:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	8-hour, time-weighted average
:	Short-term exposure limit
:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
:	8-hour time weighted average
	8-hour time weighted average
	:

. USA Table 7-1-A Limits for Air Contaminants (1080 vacated

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AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL -Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS -Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is



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not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / Z8 / 2304



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SECTION 1. IDENTIFICATION

Product name	:	Hematoxylin A	
Manufacturer or supplier's of Company name of supplier		ails Roche Diagnostics Deutschlan	nd GmbH
Address	:	116 Sandhoferstrasse Mannheim, 68305 Deutschland	
Telephone Telefax E-mail address Emergency telephone Im Notfall:		+496217590 +496217592890 info.dia-sds@roche.com Werkschutzzentrale Roche	+49(0)621-759-2203
Giftnotruf:	:	Diagnostics GmbH Mainz	+49(0)6131-19240

Recommended use of the chemical and restrictions on use

Recommended use	:	Laboratory chemicals
		Refer to product literature for further details.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in ac 1910.1200)	ordance with the OSHA Hazard Communication Standard (29 CFR
Flammable liquids	: Category 2
Acute toxicity (Oral)	: Category 4
Eye irritation	: Category 2A
Carcinogenicity	: Category 1A

Specific target organ toxicity	:	Category 2 (Eyes)
 single exposure 		

Hazard pictograms

:			
---	--	--	--

H225 Highly flammable liquid and vapor.

Signal Word

Hazard Statements

: Danger

:



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ersion 0	Revision Date: 08-28-2024	Date of last issue: 08-28-2024 Date of first issue: 12-01-2015
	H319 Caus H350 May	nful if swallowed. ses serious eye irritation. cause cancer. cause damage to organs (Eyes).
Precautionary S	Prevention P201 Obta P202 Do n and unders P210 Keep No smokin P233 Keep P240 Grou P241 Use equipment P242 Use P243 Take P260 Do n P264 Wasl P270 Do n	in special instructions before use. ot handle until all safety precautions have been read stood. o away from heat/ sparks/ open flames/ hot surfaces. g. o container tightly closed. nd/bond container and receiving equipment. explosion-proof electrical/ ventilating/ lighting/ only non-sparking tools. precautionary measures against static discharge. ot breathe mist or vapors. n skin thoroughly after handling. ot eat, drink or smoke when using this product. r protective gloves/ protective clothing/ eye protection
	CENTER/ P303 + P3 all contami P305 + P3 for several to do. Cont P308 + P3 CENTER/ P308 + P3 attention. P337 + P3 attention. P370 + P3	 12 + P330 IF SWALLOWED: Call a POISON doctor if you feel unwell. Rinse mouth. 61 + P353 IF ON SKIN (or hair): Take off immediately nated clothing. Rinse skin with water/ shower. 51 + P338 IF IN EYES: Rinse cautiously with water minutes. Remove contact lenses, if present and easy tinue rinsing. 11 IF exposed or concerned: Call a POISON
	P405 Store	35 Store in a well-ventilated place. Keep cool. e locked up.
	Disposal: P501 Dispo disposal pl	ose of contents/ container to an approved waste ant.

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS



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Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Ethanol	64-17-5	>= 70 - < 90
Methanol	67-56-1	>= 1 - < 5
2-Propanol	67-63-0	>= 1 - < 5
Benz[b]indeno[1,2-d]pyran-	517-28-2	>= 1 - < 5
3,4,6a,9,10(6H)-pentol, 7,11b-		
dihydro-, (6aS,11bR)-		

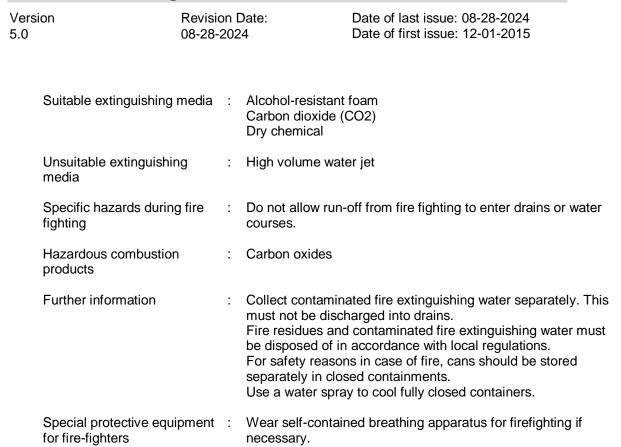
Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	:	Move to fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	:	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Clean mouth with water and drink afterwards plenty of water. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital. Rinse mouth with water.
Most important symptoms and effects, both acute and delayed	:	Harmful if swallowed. Causes serious eye irritation. May cause cancer. May cause damage to organs.
Notes to physician	:	The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5. FIRE-FIGHTING MEASURES

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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Refer to protective measures listed in sections 7 and 8. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.
Methods and materials for containment and cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
Advice on safe handling	:	Avoid formation of aerosol.





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		Avoid contact with For personal pro Smoking, eating application area. Take precautiona Provide sufficient Open drum caref	- obtain special instructions before use. th skin and eyes. tection see section 8. and drinking should be prohibited in the
Conditions for safe st	orage :	place. Containers which kept upright to pr Electrical installa	ightly closed in a dry and well-ventilated n are opened must be carefully resealed and revent leakage. tions / working materials must comply with I safety standards.
Further information o storage conditions	n :	See label, packa	ge insert or internal guidelines
Further information o storage stability	n :	No decompositio	on if stored and applied as directed.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m3	OSHA P0
		STEL	1,000 ppm	ACGIH
Methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m3	NIOSH REL
		ST	250 ppm 325 mg/m3	NIOSH REL
		TWA	200 ppm 260 mg/m3	OSHA Z-1
		TWA	200 ppm 260 mg/m3	OSHA P0
		STEL	250 ppm 325 mg/m3	OSHA P0



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2-Propanol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m3	NIOSH REL
		ST	500 ppm 1,225 mg/m3	NIOSH REL
		TWA	400 ppm 980 mg/m3	OSHA Z-1
		TWA	400 ppm 980 mg/m3	OSHA P0
		STEL	500 ppm 1,225 mg/m3	OSHA P0

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Samplin g time	Permissible concentratio n	Basis
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI
2-Propanol	67-63-0	Acetone	Urine	End of shift at end of workwee k	40 mg/l	ACGIH BEI

Engineering measures : No data available

Personal protective equipment

Respiratory protection : In the case of vapor formation use a respirator with an approved filter.

Hand	protection
riunu	protootion

' Material Break through time Glove thickness	In case of contact through splashing: Nitrile rubber > 120 min 0.4 mm
Material Break through time Glove thickness	In case of full contact: Nitrile rubber > 480 min : 0.7 mm
Remarks Eye protection	 Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly. Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing





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		problems.	
Skin and body prote	ection :		ing otection according to the amount and the dangerous substance at the work place.
Hygiene measures	:	When using do r When using do r Wash hands bef	

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	yellow-orange
Odor	:	alcohol-like, mild
Odor Threshold	:	No data available
рН	:	ca. 5.36
Melting point/range	:	No data available
Boiling point/boiling range	:	171 °F / 77 °C
Flash point	:	54 °F / 12 °C
		Method: closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Sustains combustion
Flammability (liquids)	:	Sustains combustion
Self-ignition	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available



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Relative density	:	No data available
Density	:	0.793 g/cm3
Solubility(ies) Water solubility	:	completely miscible
Solubility in other solvents		No data available
Partition coefficient: n- octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, dynamic Viscosity, kinematic	:	No data available No data available
Explosive properties	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Reacts with the following substances: Oxidizing agents Acids Alkali metals Alkaline earth metals Nitric acid No decomposition if stored and applied as directed. Vapors may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents Alkali metals Alkaline earth metals Nitric acid Acid chlorides Acid anhydrides Peroxides Ammonia
Hazardous decomposition	:	No decomposition if stored and applied as directed.



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products

In case of fire hazardous decomposition products may be produced such as: Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity Harmful if swallowed. Product:		
Acute oral toxicity	:	Acute toxicity estimate: 1,905 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 60.77 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Components:		
Ethanol:		
Acute oral toxicity	:	LD50 (Rat, male and female): 10,470 mg/kg Method: OECD Test Guideline 401 GLP: no
Acute inhalation toxicity	:	LC50 (Rat, male and female): 124.7 mg/l Exposure time: 4 h Test atmosphere: vapor Method: OECD Test Guideline 403 GLP: no
Acute dermal toxicity	:	(Rabbit): 17,100 mg/kg GLP: No information available. Remarks: Based on data from similar materials
Methanol:		
Acute oral toxicity	:	Acute toxicity estimate: 100 mg/kg Method: Converted acute toxicity point estimate
		LD50 (Rat): 1,187 mg/kg Method: OECD Test Guideline 401 GLP: no Assessment: The component/mixture is toxic after single ingestion.
Acute inhalation toxicity	:	LC50 (Cat): 43.68 mg/l Exposure time: 6 h Test atmosphere: vapor GLP: No information available.

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Assessment: The component/mixture is toxic after short to inhalation. LC50 (Rat): 131.25 mg/l Exposure time: 4 h Test atmosphere: vapor Assessment: The component/mixture is toxic after short to inhalation. Acute dermal toxicity LD50 (Rabbit): 17,100 mg/kg Method: No information available. GLP: No information available. GLP: No information available. Acute dermal toxicity LD50 (Rat): 5,840 mg/kg Method: OECD Test Guideline 401 GLP: no Acute inhalation toxicity LC50 (Rat): 5,840 mg/kg Method: OECD Test Guideline 401 GLP: no Acute dermal toxicity LC50 (Rat): 13,900 mg/kg Method: OECD Test Guideline 403 GLP: no Acute dermal toxicity LD50 (Rabbit): 13,900 mg/kg Method: OECD Test Guideline 402 GLP: no Based on available data, the classification criteria are not met. Producti Remarks May cause skin irritation and/or dermatitis. Components: Ethanol: Species Rabbit Method: OECD Test Guideline 404 Result Method <th>rsion</th> <th>Revision Date: 08-28-2024</th> <th>Date of last issue: 08-28-2024 Date of first issue: 12-01-2015</th>	rsion	Revision Date: 08-28-2024	Date of last issue: 08-28-2024 Date of first issue: 12-01-2015
Exposure time: 4 h Test atmosphere: vapor Assessment: The component/mixture is toxic after short to inhalation. Acute dermal toxicity : LD50 (Rabbit): 17,100 mg/kg Method: No information available. GLP: No information available. Acute dermal toxicity : LD50 (Rat): 5,840 mg/kg Method: OECD Test Guideline 401 GLP: no information available. Acute oral toxicity : LC50 (Rat): 5,840 mg/kg Method: OECD Test Guideline 401 GLP: no Acute inhalation toxicity : LC50 (Rat, male and female): > 10000 ppm Exposure time: 6 h Test atmosphere: vapor Method: OECD Test Guideline 403 GLP: yes Acute dermal toxicity : LD50 (Rabbit): 13,900 mg/kg Method: OECD Test Guideline 402 GLP: no Benz[b]indenc[1,2-d]pyran-3,4,6a,9,10(6H)-pentol, 7,11b-dihydro-, (6aS,11bR)-: Acute oral toxicity : LD50 Oral (Rat): 400 mg/kg Skin corrosion/firritation Based on available data, the classification criteria are not met.			
Method: No information available. GLP: No information available. Assessment: The component/mixture is toxic after single contact with skin. 2-Propanol: Acute oral toxicity : LD50 (Rat): 5,840 mg/kg Method: OECD Test Guideline 401 GLP: no Acute inhalation toxicity : LC50 (Rat, male and female): > 10000 ppm Exposure time: 6 h Test atmosphere: vapor Method: OECD Test Guideline 403 GLP: yes Acute dermal toxicity : LD50 (Rabbit): 13,900 mg/kg Method: OECD Test Guideline 402 GLP: yes Acute oral toxicity : LD50 (Rabbit): 13,900 mg/kg Method: OECD Test Guideline 402 GLP: no Benz[b]indeno[1,2-d]pyran-3,4,6a,9,10(6H)-pentol, 7,11b-dihydro-, (6aS,11bR)-: Acute oral toxicity : LD50 Oral (Rat): 400 mg/kg Skin corrosion/irritation Based on available data, the classification criteria are not met. Product: Remarks : May cause skin irritation and/or dermatitis. Components: Ethanol: Species : Rabbit Exposure time : 24 h Method : OE		Exp Test Asse	osure time: 4 h atmosphere: vapor essment: The component/mixture is toxic after short term
Acute oral toxicity £ LD50 (Rat): 5,840 mg/kg Method: OECD Test Guideline 401 GLP: no Acute inhalation toxicity £ LC50 (Rat, male and female): > 10000 ppm Exposure time: 6 h Test atmosphere: vapor Method: OECD Test Guideline 403 GLP: yes Acute dermal toxicity £ LD50 (Rabbit): 13,900 mg/kg Method: OECD Test Guideline 402 GLP: no Benz[b]indeno[1,2-d]pyran-3,4,6a,9,10(6H)-pentol, 7,11b-dihydro-, (6aS,11bR)-: Acute oral toxicity £ LD50 Oral (Rat): 400 mg/kg Method: OECD Test Guideline 402 GLP: no Benz[b]indeno[1,2-d]pyran-3,4,6a,9,10(6H)-pentol, 7,11b-dihydro-, (6aS,11bR)-: Acute oral toxicity £ LD50 Oral (Rat): 400 mg/kg Method: OECD Test Guideline 402 GLP: no Skin corrosion/irritation Based on available data, the classification criteria are not met. Product: Remarks May cause skin irritation and/or dermatitis. Components: Ethanol: Species Rabbit Exposure time 24 h Method OECD Test Guideline 404 Result No skin irritation GLP No skin irritation Methanol:	Acute dermal toxicity	Metl GLP Asse	nod: No information available. ': No information available. essment: The component/mixture is toxic after single
Acute oral toxicity : LD50 (Rat): 5,840 mg/kg Method: OECD Test Guideline 401 GLP: no Acute inhalation toxicity : LC50 (Rat, male and female): > 10000 ppm Exposure time: 6 h Test atmosphere: vapor Method: OECD Test Guideline 403 GLP: yes Acute dermal toxicity : LD50 (Rabbit): 13,900 mg/kg Method: OECD Test Guideline 402 GLP: no Benz[b]indeno[1,2-d]pyran-3,4,6a,9,10(6H)-pentol, 7,11b-dihydro-, (6aS,11bR)-: Acute oral toxicity : LD50 Oral (Rat): 400 mg/kg Skin corrosion/irritation Based on available data, the classification criteria are not met. Product: Remarks Remarks : May cause skin irritation and/or dermatitis. Components: Ethanol: : Rabbit Exposure time Species : Rabbit Exposure time Exposure time : 24 h Method Method : OECD Test Guideline 404 Result Result : Wo skin irritation GLP Methoal: : Yes	2-Propanol		
Exposure time: 6 h Test atmosphere: vapor Method: OECD Test Guideline 403 GLP: yes Acute dermal toxicity : LD50 (Rabbit): 13,900 mg/kg Method: OECD Test Guideline 402 GLP: no Benz[b]indeno[1,2-d]pyran-3,4,6a,9,10(6H)-pentol, 7,11b-dihydro-, (6aS,11bR)-: Acute oral toxicity : LD50 Oral (Rat): 400 mg/kg Skin corrosion/irritation Based on available data, the classification criteria are not met. Product: Remarks : May cause skin irritation and/or dermatitis. Components: Ethanol: Species : Rabbit Exposure time : 24 h Method : OECD Test Guideline 404 Result : No skin irritation GLP : yes Method : yes	•	Metl	nod: OECD Test Guideline 401
Method: OECD Test Guideline 402 GLP: no Benz[b]indeno[1,2-d]pyran-3,4,6a,9,10(6H)-pentol, 7,11b-dihydro-, (6aS,11bR)-: Acute oral toxicity : LD50 Oral (Rat): 400 mg/kg Skin corrosion/irritation Based on available data, the classification criteria are not met. Product: Remarks : May cause skin irritation and/or dermatitis. Components: Ethanol: Species : Rabbit Exposure time : 24 h Method : OECD Test Guideline 404 Result : No skin irritation GLP : yes Methanol:	Acute inhalation toxici	Exp Test Met	osure time: 6 h atmosphere: vapor nod: OECD Test Guideline 403
Acute oral toxicity : LD50 Oral (Rat): 400 mg/kg Skin corrosion/irritation Based on available data, the classification criteria are not met. Product: Remarks : May cause skin irritation and/or dermatitis. Components: Ethanol: Species : Rabbit Exposure time : 24 h Method : OECD Test Guideline 404 Result : No skin irritation GLP : yes	Acute dermal toxicity	Metl	nod: OECD Test Guideline 402
Acute oral toxicity : LD50 Oral (Rat): 400 mg/kg Skin corrosion/irritation Based on available data, the classification criteria are not met. Product: Remarks : May cause skin irritation and/or dermatitis. Components: Ethanol: Species : Rabbit Exposure time : 24 h Method : OECD Test Guideline 404 Result : No skin irritation GLP : yes	Benz[b]indeno[1.2-d]	Invran-3 4 6a 9 '	10(6H)-pentol 711b-dibydro- (6aS11bB)-
Based on available data, the classification criteria are not met. Product: Remarks : May cause skin irritation and/or dermatitis. Components: Ethanol: Species : Rabbit Exposure time : 24 h Method : OECD Test Guideline 404 Result : No skin irritation GLP : yes			
Remarks : May cause skin irritation and/or dermatitis. Components:			tion criteria are not met.
Components: Ethanol: Species : Rabbit Exposure time : 24 h Method : OECD Test Guideline 404 Result : No skin irritation GLP : yes	Product:		
Ethanol: Species : Rabbit Exposure time : 24 h Method : OECD Test Guideline 404 Result : No skin irritation GLP : yes	Remarks	: May	cause skin irritation and/or dermatitis.
Species : Rabbit Exposure time : 24 h Method : OECD Test Guideline 404 Result : No skin irritation GLP : yes Methanol:	Components:		
Exposure time : 24 h Method : OECD Test Guideline 404 Result : No skin irritation GLP : yes	Ethanol:		
Method : OECD Test Guideline 404 Result : No skin irritation GLP : yes Methanol:			
	Method Result	: OE0 : No s	CD Test Guideline 404
	Methanol		
		: Rab	bit
arifier 70	···		70



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Exposure time Result GLP	:	20 h No skin irritation no
2-Propanol: Species Exposure time Result GLP	:	Rabbit 4 h No skin irritation no
Benz[b]indeno[1,2-d]pyran Result Remarks	-3,4, :	6a,9,10(6H)-pentol, 7,11b-dihydro-, (6aS,11bR)-: Irritating to skin. May cause skin irritation in susceptible persons.
Serious eye damage/eye irr Causes serious eye irritation.		ion
<u>Product:</u> Remarks	:	May cause irreversible eye damage.
Components:		
Ethanol: Species Result Method GLP	:	Rabbit Irritating to eyes. OECD Test Guideline 405 No information available.
Methanol: Species Result GLP	: : :	Rabbit No eye irritation no
2-Propanol: Species Result Method GLP Remarks	:	Rabbit Irritating to eyes. OECD Test Guideline 405 no May cause irreversible eye damage.
	-3,4,	6a,9,10(6H)-pentol, 7,11b-dihydro-, (6aS,11bR)-:
Result Remarks	:	Irritating to eyes. May cause irreversible eye damage.

Respiratory or skin sensitization

Skin sensitization

Not classified due to lack of data.



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Respiratory sensitization

Not classified due to lack of data.

Components:

Ethanol:

	Maximization Test
Species	Guinea pig
Assessment	Does not cause skin sensitization.
Method	OECD Test Guideline 406
Result	Did not cause sensitization on laboratory animals.
GLP	no
Remarks	Based on data from similar materials

Methanol:

Test Type :	Maximization Test
Species :	Guinea pig
Assessment :	Does not cause skin sensitization.
Method :	OECD Test Guideline 406
Result :	Did not cause sensitization on laboratory animals.
GLP :	no

2-Propanol:

Test Type	:	Buehler Test
Species	:	Guinea pig
Assessment	:	Does not cause skin sensitization.
Method	:	OECD Test Guideline 406
GLP	:	yes

Germ cell mutagenicity

Not classified due to lack of data.

Components:

Ethanol:

Genotoxicity in vitro :	Test Type: Microbial mutagenesis assay (Ames test) Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: No information available.
	Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative GLP: No information available.
Genotoxicity in vivo :	Test Type: dominant lethal test Species: Mouse (male) Application Route: Oral



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	Method: Result: n	or 40% ethanol in water OECD Test Guideline 478 egative information available.
Methanol:		
Genotoxicity in vitro	Test syst Metaboli Method: Result: n	e: Ames test em: Salmonella typhimurium c activation: with and without metabolic activation OECD Test Guideline 471 egative information available.
	Test syst Metaboli Method: Result: n	e: Ames test em: Escherichia coli c activation: with and without metabolic activation OECD Test Guideline 471 egative information available.
	Test syst Result: n	e: Micronucleus test em: Chinese hamster lung cells egative information available.
Genotoxicity in vivo	Species: Cell type Applicati Dose: 19 Method: Result: n	e: In vivo micronucleus test Mouse (male and female) : Bone marrow on Route: Intraperitoneal injection 20; 3200; 4480 mg/kg OECD Test Guideline 474 egative information available.
2-Propanol:		
Genotoxicity in vitro	Test syst Metaboli	
	Test syst Metaboli	e: Microbial mutagenesis assay (Ames test) em: Salmonella typhimurium c activation: with and without metabolic activation OECD Test Guideline 471 egative
Genotoxicity in vivo	Species:	e: In vivo micronucleus test Mouse (male and female) : Bone marrow



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Application Route: Intraperitoneal injection Method: OECD Test Guideline 474 Result: negative GLP: yes

Carcinogenicity

May cause cancer.

Components:

Ethanol:

Species	:	Mouse, male and female
Application Route	:	inhalation (vapor)
Exposure time	:	18 month(s)
Control Group	:	yes
Frequency of Treatment	:	19 hours/day
Method	:	OECD Test Guideline 453
Result	:	negative
GLP	:	No information available.
Remarks	:	Based on data from similar materials

Methanol:

Species	:	Mouse, male and female
Application Route	:	inhalation (vapor)
Exposure time	:	18 month(s)
Method	:	OECD Test Guideline 453
GLP	:	No information available.

2-Propanol:

Species	:	Rat, male and female
Application Route	:	inhalation (vapor)
Exposure time	:	104 weeks
Frequency of Treatment	:	5 days/week
Method	:	OECD Test Guideline 451
GLP	:	yes

 Benz[b]indeno[1,2-d]pyran-3,4,6a,9,10(6H)-pentol, 7,11b-dihydro-, (6aS,11bR)-:

 Remarks
 :
 No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- IARCGroup 1: Carcinogenic to humans
Ethanol64-17-5OSHANo component of this product present at levels greater than or equal to 0.1% is
on OSHA's list of regulated carcinogens.
- **NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.



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Reproductive toxicity Not classified due to lack of data. Components: Ethanol: Effects on fertility Test Type: Two-generation study Species: Mouse, male and female **Application Route: Oral** General Toxicity Parent: NOAEL: 20,700 mg/kg body weight Method: OECD Test Guideline 416 Result: No effects on fertility. GLP: No information available. Species: Rat, female Effects on fetal development : Strain: Sprague-Dawley **Application Route: Ingestion** Duration of Single Treatment: 6 Weeks Developmental Toxicity: NOAEL: 5,200 mg/kg body weight GLP: No information available. Methanol: Species: Mouse, male Effects on fertility **Application Route: Oral** Dose: 1000 mg/kg bw/day Duration of Single Treatment: 5 d General Toxicity Parent: LOAEC: 1,000 mg/kg body weight GLP: No information available. Application Route: inhalation (vapor) Dose: 0.27, 0.8, 2.39 mg/L air Duration of Single Treatment: 165 d General Toxicity Parent: NOAEC: 2.39 mg/l Method: OECD Test Guideline 415 GLP: No information available. Species: Rat, male and female **Application Route: Inhalation** Dose: 0.013, 0.13, 1.3 mg/L air Duration of Single Treatment: 153 d General Toxicity Parent: NOAEC: 1.3 mg/l Method: OECD Test Guideline 416 GLP: no Effects on fetal development : Species: Mouse, female **Application Route: Oral** Dose: 5000 mg/kg bw/day Duration of Single Treatment: 6 - 10 d General Toxicity Maternal: NOAEL: 5,000 mg/kg body weight Teratogenicity: LOAEL: 5,000 mg/kg body weight GLP: No information available.

Species: Rat, female



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ion	Revision Date: 08-28-2024	Date of last issue: 08-28-2024 Date of first issue: 12-01-2015
	Dose: 270 Duration General T Teratoge Method: 0	on Route: inhalation (vapor) D, 1330, 6650 mg/m³ air of Single Treatment: 7 - 17 d Foxicity Maternal: NOAEC: 1.33 mg/l nicity: NOAEC F1: 1.33 mg/l DECD Test Guideline 414 information available.
2-Propanol:		
Effects on fertilit	Application General	Rat, male and female on Route: Oral Foxicity Parent: NOAEL: 853 mg/kg body weigh DECD Test Guideline 415
Effects on fetal o	Application Dose: 59 Duration General T Developm	Rat, male and female on Route: Oral 6, 1242, 1605 mg/kg bw/day of Single Treatment: 6 - 16 d Foxicity Maternal: NOAEL: 596 mg/kg body weigh nental Toxicity: NOAEL: 596 mg/kg body weigh
	Method: (GLP: yes	DECD Test Guideline 414
-	GLP: yes	DECD Test Guideline 414
May cause dama Components:	GLP: yes	DECD Test Guideline 414
May cause dam	GLP: yes age to organs (Eyes). : Eyes	DECD Test Guideline 414
May cause dama Components: Methanol: Target Organs Assessment	GLP: yes age to organs (Eyes). : Eyes	DECD Test Guideline 414
May cause dama Components: Methanol: Target Organs	GLP: yes age to organs (Eyes). : Eyes : Causes d	DECD Test Guideline 414
May cause dama <u>Components:</u> Methanol: Target Organs Assessment 2-Propanol: Assessment	GLP: yes age to organs (Eyes). : Eyes : Causes d : May caus	DECD Test Guideline 414
May cause dama <u>Components:</u> Methanol: Target Organs Assessment 2-Propanol: Assessment	GLP: yes age to organs (Eyes). : Eyes : Causes d : May caus [1,2-d]pyran-3,4,6a,9,10(6H sure : Inhalatior	DECD Test Guideline 414 amage to organs. ee drowsiness or dizziness.
May cause dama <u>Components:</u> Methanol: Target Organs Assessment 2-Propanol: Assessment Benz[b]indenol Routes of expos Assessment STOT-repeated	GLP: yes age to organs (Eyes). : Eyes : Causes d : May caus [1,2-d]pyran-3,4,6a,9,10(6H sure : Inhalatior : May caus	DECD Test Guideline 414 amage to organs. ee drowsiness or dizziness. I)-pentol, 7,11b-dihydro-, (6aS,11bR)-:
May cause dama <u>Components:</u> Methanol: Target Organs Assessment 2-Propanol: Assessment Benz[b]indenol Routes of expos Assessment STOT-repeated	GLP: yes age to organs (Eyes). : Eyes : Causes d : May caus [1,2-d]pyran-3,4,6a,9,10(6H sure : Inhalatior : May caus	DECD Test Guideline 414 amage to organs. ee drowsiness or dizziness. I)-pentol, 7,11b-dihydro-, (6aS,11bR)-:
May cause dama <u>Components:</u> Methanol: Target Organs Assessment 2-Propanol: Assessment Benz[b]indenol Routes of expos Assessment STOT-repeated Not classified du	GLP: yes age to organs (Eyes). : Eyes : Causes d : May caus [1,2-d]pyran-3,4,6a,9,10(6H sure : Inhalatior : May caus exposure ue to lack of data.	DECD Test Guideline 414 amage to organs. ee drowsiness or dizziness. I)-pentol, 7,11b-dihydro-, (6aS,11bR)-:



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Assessment	: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicity	
Components:	
Ethanol:	
Species	: Rat, male and female
LOAEL	: 3156 mg/kg
Application Route	: Oral
Exposure time Dose	: 14 Weeks
Method	: 0, 5, 10, 20 mg/Kg : OECD Test Guideline 408
GLP	: yes
Methanol:	
Species LOAEL	: Monkey, male
LOAEL	: 2340 mg/kg : 2,340 mg/kg
Application Route	: Oral
Exposure time	: 3 d
Dose	: 2340 mg/kg bw/day
GLP	: No information available.
Species	: Monkey
NOAEC	: 0.013 mg/l
Application Route	: Inhalation
Exposure time Dose	: 29 Months : 0.013, 0.13 mg/L air
GLP	: No information available.
2-Propanol:	
Species	: Rat, male and female
NOAEC	: 5000
Application Route Test atmosphere	: Inhalation
Exposure time	: vapor : 104 Weeks
Dose	: 500, 2500, 5000 ppm parts per million
GLP	: yes
Aspiration toxicity	
Not classified due to lack of	f data.
Further information	
Product:	
Remarks	: Solvents may degrease the skin.



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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity		
Components:		
Ethanol:		
Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 15,300 mg/l End point: mortality Exposure time: 96 h Test Type: flow-through test Analytical monitoring: yes GLP: No information available.
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Ceriodaphnia dubia (water flea)): 5,012 mg/l Exposure time: 48 h Test Type: static test GLP: No information available.
Toxicity to algae/aquatic plants	:	EC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l Exposure time: 5 d Analytical monitoring: no Method: OECD Test Guideline 201 GLP: No information available.
Toxicity to fish (Chronic toxicity)	:	NOEC (Danio rerio (zebra fish)): 250 mg/l Exposure time: 120 h GLP: No information available.
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 9.6 mg/l Exposure time: 7 d GLP: No information available.
Toxicity to microorganisms	:	IC50 (activated sludge): > 1,000 mg/l End point: Growth rate Exposure time: 3 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 209 GLP: No information available. Remarks: Based on data from similar materials
Ecotoxicology Assessment Toxicity Data on Soil	:	Not expected to adsorb on soil.
Other organisms relevant to the environment	:	No data available
Methanol:		
Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 mg/l End point: mortality Exposure time: 96 h



		4	Date of first issue: 12-01-2015
		Test Type: flow- Analytical monit GLP: No informa	oring: yes
Toxicity to daphnia and aquatic invertebrates	d other :	End point: Immo Exposure time: 9 Test Type: semi	96 h -static test Test Guideline 202
Toxicity to algae/aquat plants	tic :	mg/l End point: Grow Exposure time: 9 Test Type: statio	96 h 5 test Test Guideline 201
Toxicity to microorgan	isms :	End point: Grow Exposure time: 3 Test Type: static Analytical monit	3 h c test oring: yes Test Guideline 209
2-Propanol:			
Toxicity to fish	:	End point: morta Exposure time: 9 Test Type: flow- Analytical monito	96 h through test
Toxicity to daphnia and aquatic invertebrates	d other :	End point: Immo Exposure time: 2 Test Type: static Analytical monit	24 h c test
Toxicity to algae/aquat plants	tic :	EC10 (Scenede Exposure time: Test Type: statio Analytical monito GLP: no	test
Toxicity to microorgan	isms :	(Pseudomonas Exposure time: Test Type: statio	

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		Analytical monitoring: no Method: DIN 38 412 Part 8 GLP: no
Ecotoxicology Assessment		
Toxicity Data on Soil	:	Not expected to adsorb on soil.
Other organisms relevant to the environment	:	No data available
Benz[b]indeno[1,2-d]pyran-	3,4,	6a,9,10(6H)-pentol, 7,11b-dihydro-, (6aS,11bR)-:
Ecotoxicology Assessment		
Toxicity Data on Soil	:	Not expected to adsorb on soil.
Other organisms relevant to the environment	:	No data available
Persistence and degradabil	ity	
Components:		
Ethanol:		
Biodegradability	:	aerobic Inoculum: activated sludge, non-adapted Result: Readily biodegradable. Biodegradation: 84 % Exposure time: 20 d GLP: No information available.
Methanol:		
Biodegradability	:	aerobic Inoculum: activated sludge, non-adapted Concentration: 4 - 200 g/L Result: Readily biodegradable. Biodegradation: 82.7 % Exposure time: 5 d GLP: no
Biochemical Oxygen Demand (BOD)	:	Biochemical oxygen demand 600 - 1,120 mg/g Incubation time: 5 d
Chemical Oxygen Demand (COD)	:	1,420 mg/g
Theoretical oxygen demand (ThOD)	:	1,500 mg/g
Biochemical Oxygen Demand (BOD)/Theoretical oxygen demand (ThOD)	:	76 %



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2-Propanol: Biodegradability :	aerobic Inoculum: activated sludge
	Result: Readily biodegradable. Biodegradation: 53 % Exposure time: 5 d GLP: no
Bioaccumulative potential	
<u>Components:</u>	
Ethanol:	
Bioaccumulation :	Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.
Partition coefficient: n- :	log Pow: -0.35 (75 °F / 24 °C)
octanol/water	pH: 7.4 Method: OECD Test Guideline 107 GLP: No information available.
Methanol:	
Bioaccumulation :	Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.
Partition coefficient: n- : octanol/water	log Pow: -0.77 (68 °F / 20 °C)
2-Propanol:	
•	Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.
Partition coefficient: n- : octanol/water	log Pow: 0.05 (77 °F / 25 °C) GLP: no
Benz[b]indeno[1.2-d]pyran-3.4	,6a,9,10(6H)-pentol, 7,11b-dihydro-, (6aS,11bR)-:
Partition coefficient: n- : octanol/water	
Mobility in soil No data available	
Other adverse effects	
Product:	
Ozone-Depletion Potential :	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the



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U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Can be disposed as waste water, when in compliance with local regulations.
Contaminated packaging	 Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG UN number Proper shipping name Class	:	UN 1987 ALCOHOLS, N.O.S. (Ethanol, Methanol, Isopropanol Solution) 3
Packing group Labels Environmentally hazardous	:	ll 3 no
IATA-DGR UN/ID No. Proper shipping name	:	UN 1987 Alcohols, n.o.s. (Ethanol, Methanol, Isopropanol Solution)
Class Packing group Labels Packing instruction (cargo aircraft)	:	3 II Flammable Liquids 364
Packing instruction (passenger aircraft)	:	353
IMDG-Code UN number Proper shipping name	:	UN 1987 ALCOHOLS, N.O.S. (Ethanol, Methanol, Isopropanol Solution)
Class Packing group Labels EmS Code Marine pollutant	:	3 II 3 F-E, S-D no



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Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

Domestic regulation

49 CFR UN/ID/NA number : UN 1987 Proper shipping name : Alcohols, n.o.s. (Ethanol, Methanol, Isopropanol Solution) Class 5 3 Packing group 11 5 Labels FLAMMABLE LIQUID : ERG Code 127 Marine pollutant no Special precautions for user

Remarks : No data available

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ	Calculated product RQ
		(lbs)	(lbs)
Methanol	67-56-1	100	100 (F003)

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards :	 Flammable (gases, aerosols, liquids, or solids) Acute toxicity (any route of exposure) Carcinogenicity Specific target organ toxicity (single or repeated expo Serious eye damage or eye irritation 		
SARA 313 :	The following components are subject to reporting levels established by SARA Title III, Section 313:		
	Methanol	67-56-1	>= 1 - < 5 %
	2-Propanol	67-63-0	>= 1 - < 5 %

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):



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Methanol Not Assigned >= 1 - < 5 % This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F). The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489): Ethanol 64-17-5 >= 70 - < 90 % Methanol 67-56-1 >= 1 - < 5 % 67-63-0 2-Propanol >= 1 - < 5 %

Clean	Water	Act	

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

Ethanol	64-17-5
Methanol	67-56-1
2-Propanol	67-63-0
vlvania Right To Know	
Ethanol	64-17-5

Pennsyl

Ethanol	64-17-5
Methanol	67-56-1
2-Propanol	67-63-0

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

California Prop. 65

WARNING: This product can expose you to chemicals including Methanol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances

Ethanol	64-17-5
Methanol	67-56-1
2-Propanol	67-63-0

California Permissible Exposure Limits for Chemical Contaminants

Ethanol	64-17-5
Methanol	67-56-1
2-Propanol	67-63-0

The ingredients of this product are reported in the following inventories:

AIIC : On the inventory, or in compliance with the inventory



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DSL	:	All components of this product are on the Canadian DSL
NZIoC	:	On the inventory, or in compliance with the inventory
ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	All substances listed as active on the TSCA inventory
TECI	:	Not in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

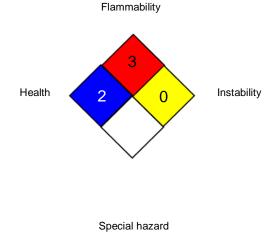


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NFPA 704:



HMIS® IV:



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HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

••	
:	USA. ACGIH Threshold Limit Values (TLV)
:	ACGIH - Biological Exposure Indices (BEI)
:	USA. NIOSH Recommended Exposure Limits
:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
:	8-hour, time-weighted average
:	Short-term exposure limit
:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
:	8-hour time weighted average
:	Short-term exposure limit
:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -



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International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / Z8 / 2304



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SECTION 1. IDENTIFICATION

Product name	:	Hematoxylin B	
Manufacturer or supplier's of Company name of supplier		ails Roche Diagnostics Deutschlan	d GmbH
Address	:	116 Sandhoferstrasse Mannheim, 68305 Deutschland	
Telephone Telefax E-mail address Emergency telephone Im Notfall:		+496217590 +496217592890 info.dia-sds@roche.com Werkschutzzentrale Roche Diagnostics GmbH	+49(0)621-759-2203
Giftnotruf:	:	Mainz	+49(0)6131-19240

Recommended use of the chemical and restrictions on use

Recommended use	:	Laboratory chemicals Refer to product literature for further details.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accor 1910.1200)	rdar	nce with the OSHA Hazard Communication Standard (29 CFR
Skin corrosion	:	Category 1
Serious eye damage	:	Category 1
GHS label elements		
Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	H314 Causes severe skin burns and eye damage.
Precautionary Statements	:	Prevention: P264 Wash skin thoroughly after handling. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. Response:

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P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance /	Mixture	:	Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Iron(III)-chloride hexahydrate	10025-77-1	>= 1 - < 5
Acetic acid	64-19-7	>= 1 - < 5
A studie see sectoration is with healed a	a a fue de la secola	•

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	:	Move to fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. If on skin, rinse well with water. If on clothes, remove clothes.



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In case of eye contact		Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed		Clean mouth with water and drink afterwards plenty of water. Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
Most important symptom and effects, both acute a delayed		Causes serious eye damage. Causes severe burns.
Notes to physician		The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.
SECTION 5. FIRE-FIGHTING	MEASUR	RES
Suitable extinguishing m		Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during f fighting		Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products		Gaseous hydrogen chloride (HCl). Metal oxides Phosgene Hozardous combuction products

Roche

	Hazardous combustion products Carbon oxides
Further information	 Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	 Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, : Use personal protective equipment.



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	protective equipment a emergency procedure		Refer to protectiv	ve measures listed in sections 7 and 8.
	Environmental precau	tions :	Prevent further le	from entering drains. eakage or spillage if safe to do so. should be advised if significant spillages ined.
	Methods and materials containment and clear		acid binder, univ	ert absorbent material (e.g. sand, silica gel, ersal binder, sawdust). , closed containers for disposal. agents.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. To prevent leaks or spillages from spreading, provide a suitable liquid retention system.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.
Further information on storage conditions	:	See label, package insert or internal guidelines
Materials to avoid	:	Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.
Further information on storage stability	:	No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible	Basis
Iron(III)-chloride hexahydrate	10025-77-1	TWA	concentration 1 mg/m3	ACGIH
			(Iron)	



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		TWA	1 mg/m3 (Iron)	OSHA P0
		TWA	1 mg/m3 (Iron)	NIOSH REL
Acetic acid	64-19-7	TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGIH
		TWA	10 ppm 25 mg/m3	NIOSH REL
		ST	15 ppm 37 mg/m3	NIOSH REL
		TWA	10 ppm 25 mg/m3	OSHA Z-1
		TWA	10 ppm 25 mg/m3	OSHA P0

Engineering measures

: No data available

Personal protective equipment

Hand protection

Material Break through time Glove thickness	:	In case of full contact: Nitrile rubber 480 min 0.11 mm
Material Break through time Glove thickness		In case of contact through splashing: Nitrile rubber 480 min 0.11 mm
Remarks	:	Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly.
Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	clear, light brown



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Odor	:	slight, vinegar-like
Odor Threshold	:	No data available
рН	:	1.66
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Does not sustain combustion.
Flammability (liquids)	:	Does not sustain combustion.
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	1.0029 g/cm3
Solubility(ies) Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n- octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	Hazardous decomposition products formed under fire conditions.
Viscosity Viscosity, dynamic	:	No data available





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Viscosity, kinematic	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	No data available
Incompatible materials	:	Strong oxidizing agents Strong bases
Hazardous decomposition products	:	In case of fire hazardous decomposition products may be produced such as: Carbon oxides Gaseous hydrogen chloride (HCI).

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity Not classified due to lack of data.				
Product:				
Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method		
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method		
Components:				
Iron(III)-chloride hexahydrate	e:			
Acute oral toxicity	:	LD50 Oral (Rat): 316 mg/kg		
Acute dermal toxicity	:	LD50 Dermal (Rat, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 Remarks: Based on data from similar materials		
Acetic acid:				
Acute oral toxicity	:	LD50 Oral (Rat, male and female): 3,310 mg/kg GLP: no		
Acute inhalation toxicity	:	LC50 (Rat, male and female): 11.4 mg/l Exposure time: 4 h		



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Test atmosphere: vapor GLP: no Assessment: The substance or mixture has no acute inhalation toxicity

Skin corrosion/irritation

Causes severe burns.

Product:

Remarks : Extremely corrosive and destructive to tissue.

Components:

Iron(III)-chloride hexahydrate:

Species	:	Rabbit
Result	:	Irritating to skin.

Acetic acid:

Species	:	Rabbit
Exposure time	:	4 h
Method	:	OECD Test Guideline 404
Result	:	Causes severe burns.
GLP	:	No information available.

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Remarks

May cause irreversible eye damage.

Components:

Iron(III)-chloride hexahydrate:

Result	:	Risk of serious damage to eyes.
Method	:	OECD Test Guideline 405

:

Acetic acid:

Species	:	Rabbit
Result	:	Risk of serious damage to eyes.
Exposure time	:	4 h
Method	:	OECD Test Guideline 405
GLP	:	No information available.

Respiratory or skin sensitization

Skin sensitization

Not classified due to lack of data.

Respiratory sensitization

Not classified due to lack of data.



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Iron(III)-chloride hexahy	vdrate:
Genotoxicity in vitro	: Test Type: Microbial mutagenesis assay (Ames test) Method: OECD Test Guideline 471 Result: negative
	Test Type: Micronucleus test Method: OECD Test Guideline 487 Result: negative
Genotoxicity in vivo	: Test Type: In vivo micronucleus test Species: Mouse Result: negative
Acetic acid:	
Genotoxicity in vitro	 Test Type: Microbial mutagenesis assay (Ames test) Test system: Salmonella typhimurium Metabolic activation: Metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: No information available. Remarks: In vitro tests did not show mutagenic effects
	Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activatio Method: OECD Test Guideline 473 Result: negative GLP: no Remarks: In vitro tests did not show mutagenic effects
Genotoxicity in vivo	 Test Type: Micronucleus test Species: Rat (male and female) Application Route: Inhalation Exposure time: 13 weeks Dose: 0, 1, 5, 20 ppm Method: Mutagenicity (micronucleus test) Result: negative GLP: yes
Carcinogenicity	
Not classified due to lack	of data.
Components:	
Acetic acid:	
Species	· Mouse female



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Result GLP Remarks	 negative no No ingredient of this product present at levels greater than equal to 0.1% is identified as probable, possible or confirme human carcinogen by IARC.
IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% on OSHA's list of regulated carcinogens.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
Reproductive	e toxicity
Not classified	due to lack of data.
<u>Components</u>	<u>:</u>
Acetic acid:	
	Dose: 10 ml/kg body weight Duration of Single Treatment: 6 - 15 d Developmental Toxicity: NOAEL: 345 mg/kg body weight Method: Regulation (EC) No. 440/2008, Annex, B.31 GLP: No information available.
STOT-single	exposure
Based on ava	ilable data, the classification criteria are not met.
Product: Assessment	: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT-repeate	ed exposure
Based on ava	ilable data, the classification criteria are not met.
Product:	
Assessment	: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
A opination to	exicity due to lack of data.
Aspiration to Not classified	
Not classified	DLOGICAL INFORMATION
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Ecotoxicology Assessment





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Toxicity Data on Soil	:	Not expecte	ed to adsorb on soil.
Other organisms relevent the environment	ant to :	No data ava	ailable
Components:			
Iron(III)-chloride hexa	ahydrate:		
Toxicity to fish	:	LC50 (Lepo Exposure ti	omis macrochirus (Bluegill sunfish)): 20.3 mg/l me: 96 h
Toxicity to daphnia and aquatic invertebrates	d other :	Exposure ti	hnia magna (Water flea)): 9.6 mg/l me: 48 h ECD Test Guideline 202
Toxicity to daphnia and aquatic invertebrates (Chronic toxicity)	d other :	EC10 (Dap Exposure ti	hnia magna (Water flea)): 5.2 mg/l me: 21 d
		EC10 (Dap Exposure ti	hnia pulex (Water flea)): 1.26 mg/l me: 21 d
Acetic acid:			
Toxicity to fish	:	End point: r Exposure ti Test Type: Analytical n	
Toxicity to daphnia and aquatic invertebrates	dother :	End point: I Exposure ti Test Type: Analytical n	
Toxicity to algae/aquat plants	ic :	Exposure ti Test Type:	
Persistence and deg	radability		
Components:			
Iron(III)-chloride hexa	ahydrate:		
Biodegradability	:		he methods for determining biodegradability are



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Acetic acid:

Biodegradability :	aerobic Inoculum: activated sludge Concentration: 3 mg/l Result: Readily biodegradable. Biodegradation: 96 % Exposure time: 20 d GLP: no
--------------------	--

Bioaccumulative potential

Dioaccumulative potential					
Components:					
Iron(III)-chloride hexahydrate:					
Bioaccumulation	:	Remarks: No data available			
Partition coefficient: n- octanol/water	:	Remarks: Not applicable			
Acetic acid:					
Bioaccumulation	:	Bioconcentration factor (BCF): 3.16			
Partition coefficient: n- octanol/water	:	log Pow: -0.17 (77 °F / 25 °C) pH: 7 Method: No information available. GLP: No information available.			
Mobility in soil					
No data available					
Other adverse effects					
Product:					
Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +			

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Can be disposed as waste water, when in compliance with local regulations.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product.

B).



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Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

Domestic regulation

49 CFR

Not regulated as a dangerous good

Special precautions for user

Remarks

Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity

5

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	Skin corrosion or irritation Serious eye damage or eye irritation
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).



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rsion	Revision 08-28-20		Date of last issue: 08 Date of first issue: 12	
	lowing chemical(s) are lis ediate or Final VOC's (40 Acetic acid			111 SOCMI = 1 - < 5 %
Clean \	Water Act			
	lowing Hazardous Substa	inces are listed u	nder the U.S. CleanWat	er Act, Section 311,
Table 1	16.4A: Iron(III)-chloride hexahydrate	10025-77-1	>	= 1 - < 5 %
The foll	Acetic acid lowing Hazardous Chemi	64-19-7 cals are listed un		= 1 - < 5 % r Act, Section 311, Tal
117.3:	Iron(III)-chloride	10025-77-1	>	= 1 - < 5 %
This pro	hexahydrate Acetic acid oduct does not contain ar	64-19-7 toxic pollutants		= 1 - < 5 % lean Water Act Section
307				
•	oduct does not contain ar	iy priority polluta	nts related to the U.S. C	lean water Act
	te Regulations			
Massa	chusetts Right To Know Iron(III)-chloride hexa Acetic acid			10025-77-1 64-19-7
Pennsy	ylvania Right To Know			
	Water Iron(III)-chloride hexa Acetic acid	hydrate		7732-18-5 10025-77-1 64-19-7
Maine	Chemicals of High Con	cern		
	Product does not cont	ain any listed ch	emicals	
Vermo	nt Chemicals of High Co	oncern		
	Product does not cont	ain any listed ch	emicals	
Washir	ngton Chemicals of Hig	h Concern		
	Product does not cont	ain any listed ch	emicals	
Califor	nia List of Hazardous S			
	Iron(III)-chloride hexa Acetic acid	hydrate		10025-77-1 64-19-7
Califor	nia Permissible Exposu	re Limits for Ch	emical Contaminants	
	Iron(III)-chloride hexal Acetic acid	hydrate		10025-77-1 64-19-7
-	gredients of this produc	-	-	
AIIC	:	On the invento	ry, or in compliance with	n the inventory
DSL	:	All component	s of this product are on	the Canadian DSL
NZIoC	:	Not in complia	nce with the inventory	
ENCS	:	On the invento	ory, or in compliance with	n the inventory



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ISHL	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: All substances listed as active on the TSCA inventory
TECI	: On the inventory, or in compliance with the inventory

TSCA list

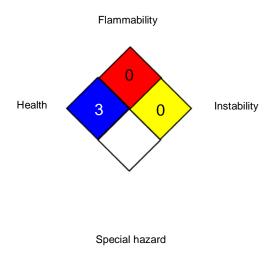
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information





HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	:	USA. Óccupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants



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ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA P0 / TWA OSHA Z-1 / TWA		8-hour time weighted average 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials: bw - Body weight: CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL -Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS -Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 08-28-2024

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



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US / Z8 / 2304



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Date of last issue: 08-28-2024 Date of first issue: 12-01-2015

SECTION 1. IDENTIFICATION

Product name	:	Mordant	
Manufacturer or supplier's of Company name of supplier		ails Roche Diagnostics Deutschlan	nd GmbH
Address	:	116 Sandhoferstrasse Mannheim, 68305 Deutschland	
Telephone Telefax E-mail address Emergency telephone Im Notfall:	: :	+496217590 +496217592890 info.dia-sds@roche.com Werkschutzzentrale Roche	+49(0)621-759-2203
Giftnotruf:	:	Diagnostics GmbH Mainz	+49(0)6131-19240

Recommended use of the chemical and restrictions on use

Recommended use	:	Laboratory chemicals Refer to product literature for further details.
		•

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)		
Skin corrosion	:	Category 1
Serious eye damage	:	Category 1
GHS label elements Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	H314 Causes severe skin burns and eye damage.
Precautionary Statements	:	Prevention: P264 Wash skin thoroughly after handling. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. Response:

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P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture Mixture •

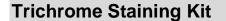
Components

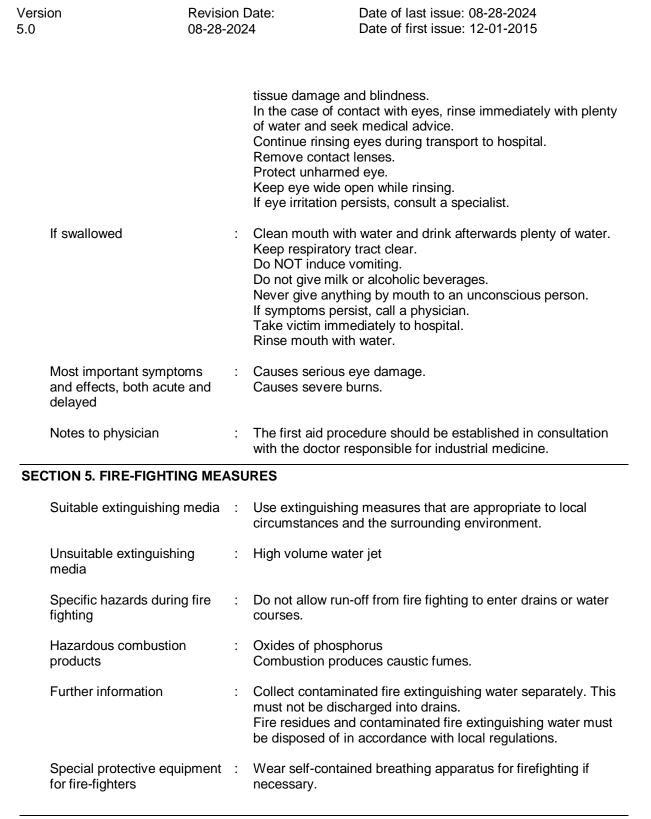
Chemical name	CAS-No.	Concentration (% w/w)		
Molybdatophosphoric acid	51429-74-4	>= 1 - < 5		
Actual concentration is withheld as a trade secret				

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	 Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance. Do not leave the victim unattended. 	
If inhaled	 Move to fresh air. If unconscious, place in recovery position and seek advice. If symptoms persist, call a physician. 	nedical
In case of skin contact	 Immediate medical treatment is necessary as untreat wounds from corrosion of the skin heal slowly and w difficulty. If on skin, rinse well with water. If on clothes, remove clothes. 	
In case of eye contact	: Small amounts splashed into eyes can cause irreven	sible





Roche

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions,	:	Use personal protective equipment.
protective equipment and		Refer to protective measures listed in sections 7 and 8.
emergency procedures		

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internet etaining		
	Revision Da)8-28-2024	
Environmental precaution		Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.
Methods and materials f containment and cleanir	ngup a ł	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Use neutralizing agents.
SECTION 7. HANDLING AN	D STORAG	GE
Advice on protection again fire and explosion	ainst : N	Normal measures for preventive fire protection.
Advice on safe handling	F S S T T	Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. To prevent leaks or spillages from spreading, provide a suitable liquid retention system.
Conditions for safe stora	F F	Keep container tightly closed in a dry and well-ventilated blace. Electrical installations / working materials must comply with the technological safety standards.
Further information on storage conditions	: 9	See label, package insert or internal guidelines
Materials to avoid		Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions
Further information on storage stability	: 1	No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : No data available

Personal protective equipment

Hand protection

	In case of full contact:
Material	: Nitrile rubber
Break through time	: > 480 min
Glove thickness	: 0.11 mm



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	:	In case of contact through splashing: Nitrile rubber > 480 min 0.11 mm
Remarks	:	Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly.
Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	colorless
Odor	:	none
Odor Threshold	:	No data available
рН	:	1.5 - 3.1
Melting point/range	:	No data available
Boiling point/boiling range	:	ca. 212 °F / 100 °C
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Does not sustain combustion.
Flammability (liquids)	:	Does not sustain combustion.
Self-ignition	:	Not applicable
Upper explosion limit / Upper	:	No data available

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flammability limit	
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Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	1.0007 g/cm3
Solubility(ies) Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n- octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Reacts with the following substances: Bases No decomposition if stored and applied as directed.
Conditions to avoid	:	No data available
Incompatible materials	:	Bases
Hazardous decomposition products	:	No decomposition if stored and applied as directed. In case of fire hazardous decomposition products may be produced such as: Oxides of phosphorus



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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity				
-	y due to lack of da	ta.		
Skin corrosio				
Causes sever				
Product:				
Remarks		:	Extremely corrosive and destructive to tissue.	
<u>Components</u> :	<u>:</u>			
Molybdatoph	osphoric acid:			
Result		:	Causes burns.	
-	damage/eye irrit	ati	on	
Causes seriou	is eye damage.			
Product:				
Remarks		:	May cause irreversible eye damage.	
Componente	_			
Components:	_			
	osphoric acid:			
Result		:	Risk of serious damage to eyes.	
Respiratory o	or skin sensitiza	tio	n	
Skin sensitiza	ation			
Not classified	due to lack of da	ta.		
Respiratory s	sensitization			
Not classified	due to lack of da	ta.		
Germ cell mu	Itagenicity			
Not classified due to lack of data.				
Carcinogenic	ity			
Not classified due to lack of data.				
IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.				
	acitation do pr	50		
OSHA			this product present at levels greater than or equal to 0.1% is	
	UT USHAS IISL	U	regulated carcinogens.	
NTP No ingredient of this product present at levels greater than or equal to 0.1% is				
	identified as a	kn	own or anticipated carcinogen by NTP.	



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Reproductive toxicity

Not classified due to lack of data.

STOT-single exposure

Not classified due to lack of data.

Components:

Molybdatophosphoric acid:

Routes of exposure	:	inhalation (dust/mist/fume)
Target Organs	:	Respiratory system
Assessment	:	May cause respiratory irritation.

STOT-repeated exposure

Not classified due to lack of data.

Aspiration toxicity

Not classified due to lack of data.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Molybdatophosphoric acid:

Ecotoxicology Assessment

Toxicity Data on Soil :	:	Not expected to adsorb on soil.
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Other organisms relevant to		No data available
the environment		

Persistence and degradability

Components:

Molybdatophosphoric acid:

Biodegradability :	Remarks: No data available
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Bioaccumulative potential

Components:

Molybdatophosphoric ac	id:
------------------------	-----

Bioaccumulation : Remarks: No data available

Partition coefficient: n- : Remarks: No data available octanol/water

ootano, nator

Mobility in soil

No data available

Other adverse effects



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Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues :	Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Can be disposed as waste water, when in compliance with local regulations.
Contaminated packaging :	Empty remaining contents. Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

Domestic regulation

49 CFR Not regulated as a dangerous good

Special precautions for user

Remarks

Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

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SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	Skin corrosion or irritation Serious eye damage or eye irritation
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

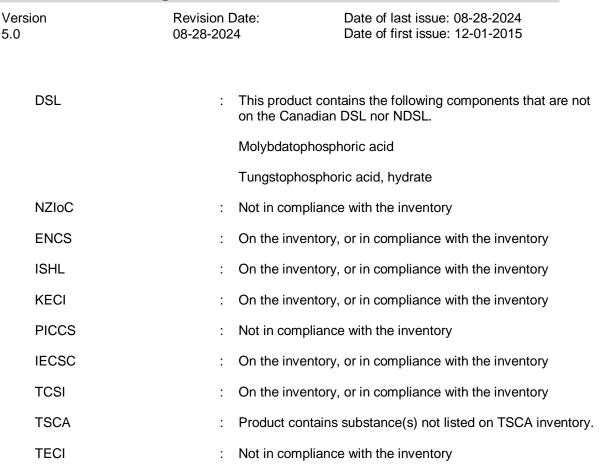
US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know		
Water		7732-18-5
Maine Chemicals of High Con	cern	
Product does not cont	tain any listed chemicals	
Vermont Chemicals of High Co	oncern	
Molybdatophosphoric	acid	51429-74-4
Washington Chemicals of Hig	h Concern	
Product does not cont	tain any listed chemicals	
California List of Hazardous S	Substances	
Molybdatophosphoric	acid	51429-74-4
The ingredients of this product are reported in the following inventories:		
AIIC :	On the inventory, or in compliance with	n the inventory

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TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information



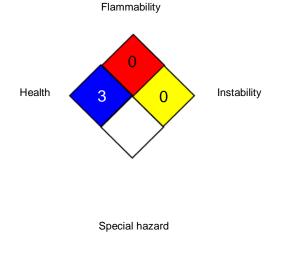
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NFPA 704:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL -Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS -Extremely Hazardous Substance: ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature: SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand



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Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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