

**BenchMark Special Stains AFB Staining Kit**

Version  
2.2

Revision Date:  
08-20-2025

Date of last issue: 08-20-2025  
Date of first issue: 01-30-2018

**Cover letter for product:**

Trade name : BenchMark Special Stains AFB Staining Kit  
Product code : 08432503001

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

- AFB CORE STAIN
- AFB CORE DECOLORIZER
- ANILINE BLUE FOR AFB

**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.  
H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.  
H314 Causes severe skin burns and eye damage.  
H350 May cause cancer.  
H370 Causes 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.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately



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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.  
P362 Take off contaminated clothing and wash before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
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 : AFB CORE STAIN

**Manufacturer or supplier's details**

Company name of supplier : Roche Diagnostics  
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Address : 9115 Hague Road  
Indianapolis, IN 46250  
USA

Telephone : 1-800-428-5074

Emergency telephone

In case of emergencies: : CHEMTREC 1-800-424-9300 (U.S. or  
Canada)  
1-703-527-3887  
(International)

**Recommended use of the chemical and restrictions on use**

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

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**SECTION 2. HAZARDS IDENTIFICATION**

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

Flammable liquids : Category 2

Acute toxicity (Oral) : Category 4

Eye irritation : Category 2A

Carcinogenicity : Category 1A

**Specific target organ toxicity : Category 1 (Eyes)**  
**- single exposure**

**GHS label elements**

Hazard pictograms :   

Signal Word : **Danger**

Hazard Statements : **H225 Highly flammable liquid and vapor.**  
**H302 Harmful if swallowed.**  
**H319 Causes serious eye irritation.**  
**H350 May cause cancer.**



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H370 Causes 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.
- 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.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
- P337 + P313 If eye irritation persists: Get medical advice/ attention.
- 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.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
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Ethanol	64-17-5	>= 70 - < 90
Methanol	67-56-1	>= 3 - < 5
2-Propanol	67-63-0	>= 1 - < 5
Alcohols, C11-15-secondary, ethoxylated	68131-40-8	>= 1 - < 5
Benzenamine, 4,4'-[(4-imino-3-methyl-2,5-cyclohexadien-1-ylidene)methylene]bis[2-methyl-, hydrochloride (1:1)	3248-91-7	>= 1 - < 5

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 : Consult a physician after significant exposure.  
If unconscious, place in recovery position and seek medical advice.
- 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.
- Most important symptoms and effects, both acute and delayed : Harmful if swallowed.  
Causes serious eye irritation.  
May cause cancer.  
Causes damage to organs.
- Notes to physician : Treat symptomatically.

**SECTION 5. FIRE-FIGHTING MEASURES**

- Suitable extinguishing media : Alcohol-resistant foam  
Carbon dioxide (CO2)  
Dry chemical



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Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

- Unsuitable extinguishing media : High volume water jet
  
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
  
- Hazardous combustion products : Carbon oxides  
Gaseous hydrogen chloride (HCl).  
Nitrogen oxides (NOx)
  
- 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.  
For safety reasons in case of fire, cans should be stored separately in closed containments.  
Use a water spray to cool fully closed containers.
  
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

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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.  
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.  
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 : 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).

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**SECTION 7. HANDLING AND STORAGE**



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- 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. 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. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
  
- Conditions for safe storage : No smoking. 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
  
- 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
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



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		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
2-Propanol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m3	NIOSH REL
		<b>ST</b>	<b>500 ppm 1.225 mg/m3</b>	<b>NIOSH REL</b>
		TWA	400 ppm 980 mg/m3	OSHA Z-1
		TWA	400 ppm 980 mg/m3	OSHA P0
		<b>STEL</b>	<b>500 ppm 1.225 mg/m3</b>	<b>OSHA P0</b>

**Biological occupational exposure limits**

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	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 workweek	40 mg/l	ACGIH BEI

**Engineering measures** : No data available

**Personal protective equipment**

Hand protection

In case of full contact:  
 Material : butyl-rubber  
 Break through time : > 480 min  
 Glove thickness : 0.7 mm

In case of contact through splashing:  
 Material : Nitrile rubber  
 Break through time : > 120 min  
 Glove thickness : 0.4 mm



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- 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.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- Appearance : liquid
- Color : No data available
- Odor : alcohol-like
- Odor Threshold : No data available
- pH : No data available
- Melting point/ range : No data available
- Boiling point/boiling range : 172 °F / 78 °C
- Flash point : 48 °F / 9 °C
- 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



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- Vapor pressure : No data available
- Relative vapor density : No data available
- Relative density : No data available
- Density : 0.800 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
  
- Oxidizing properties : The substance or mixture is not classified as oxidizing.
  
- Particle characteristics
  - Particle Size Distribution : 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 : No decomposition if stored and applied as directed. Vapors may form explosive mixture with air.
- Conditions to avoid : Heat, flames and sparks.
- Incompatible materials : Strong oxidizing agents  
Not applicable
  
- Hazardous decomposition products : No hazardous decomposition products are known.



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**SECTION 11. TOXICOLOGICAL INFORMATION**

**Acute toxicity**

Harmful if swallowed.

**Product:**

Acute oral toxicity : Acute toxicity estimate: 1,890 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 8.26 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
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 (Rat): 131.25 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
Assessment: The component/mixture is toxic after short term inhalation.

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Acute dermal toxicity : LD50 (Rabbit): 17,100 mg/kg  
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: no

### Alcohols, C11-15-secondary, ethoxylated:

Acute oral toxicity : LD50 (Rat): > 412 mg/kg

Acute inhalation toxicity : LC50 (Rat): 1.06 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rat, male and female): > 14,000 mg/kg

### Benzenamine, 4,4'-[(4-imino-3-methyl-2,5-cyclohexadien-1-ylidene)methylene]bis[2-methyl-, hydrochloride (1:1):

Acute inhalation toxicity : Target Organs: Respiratory system  
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

### Skin corrosion/irritation

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

### Product:



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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:**

Species : Rabbit  
Exposure time : 20 h  
Result : No skin irritation  
GLP : no

**2-Propanol:**

Species : Rabbit  
Exposure time : 4 h  
Result : No skin irritation  
GLP : no

**Alcohols, C11-15-secondary, ethoxylated:**

Result : Irritating to skin.

**Benzenamine, 4,4'-[(4-imino-3-methyl-2,5-cyclohexadien-1-ylidene)methylene]bis[2-methyl-, hydrochloride (1:1):**

Result : Irritating to skin.

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Product:**

Remarks : May cause irreversible eye damage.



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**Components:**

**Ethanol:**

Species : Rabbit  
Result : Irritating to eyes.  
Method : OECD Test Guideline 405  
GLP : No information available.

**Methanol:**

Species : Rabbit  
Result : No eye irritation  
GLP : no

**2-Propanol:**

Species : Rabbit  
Result : Irritating to eyes.  
Method : OECD Test Guideline 405  
GLP : no  
Remarks : May cause irreversible eye damage.

**Alcohols, C11-15-secondary, ethoxylated:**

Result : Risk of serious damage to eyes.  
Remarks : May cause irreversible eye damage.

**Benzenamine, 4,4'-[(4-imino-3-methyl-2,5-cyclohexadien-1-ylidene)methylene]bis[2-methyl-, hydrochloride (1:1):**

Result : Irritating to eyes.

**Respiratory or skin sensitization**

**Skin sensitization**

Not classified due to lack of data.

**Respiratory sensitization**

Not classified due to lack of data.

**Components:**

**Ethanol:**

Test Type : Maximization Test



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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  
 Dose: 10 or 40% ethanol in water

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Method: OECD Test Guideline 478  
Result: negative  
GLP: No information available.

### Methanol:

Genotoxicity in vitro : Test Type: 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: Ames test  
Test system: Escherichia coli  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative  
GLP: No information available.

Test Type: Micronucleus test  
Test system: Chinese hamster lung cells  
Result: negative  
GLP: No information available.

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Species: Mouse (male and female)  
Cell type: Bone marrow  
Application Route: Intraperitoneal injection  
Dose: 1920; 3200; 4480 mg/kg  
Method: OECD Test Guideline 474  
Result: negative  
GLP: No information available.

### 2-Propanol:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
Test system: Chinese hamster ovary cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative  
GLP: yes

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





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Assessment

**IARC** Group 1: Carcinogenic to humans  
Ethanol 64-17-5  
Group 2B: Possibly carcinogenic to humans  
Benzenamine, 4,4'-[(4-imino-3-methyl-2,5-cyclohexadien-1-ylidene)methylene]bis[2-methyl-, hydrochloride (1:1) 3248-91-7 (magenta)

**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 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.

Effects on fetal development : Species: Rat, female  
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:**

Effects on fertility : Species: Mouse, male  
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.



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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  
Application Route: inhalation (vapor)  
Dose: 270, 1330, 6650 mg/m<sup>3</sup> air  
Duration of Single Treatment: 7 - 17 d  
General Toxicity Maternal: NOAEC: 1.33 mg/l  
Teratogenicity: NOAEC F1: 1.33 mg/l  
Method: OECD Test Guideline 414  
GLP: No information available.

**2-Propanol:**

Effects on fertility : Species: Rat, male and female  
Application Route: Oral  
General Toxicity Parent: NOAEL: 853 mg/kg body weight  
Method: OECD Test Guideline 415  
GLP: yes

Effects on fetal development : Species: Rat, male and female  
Application Route: Oral  
Dose: 596, 1242, 1605 mg/kg bw/day  
Duration of Single Treatment: 6 - 16 d  
General Toxicity Maternal: NOAEL: 596 mg/kg body weight  
Developmental Toxicity: NOAEL: 596 mg/kg body weight  
Method: OECD Test Guideline 414  
GLP: yes

**STOT-single exposure**

Causes damage to organs (Eyes).

**Components:**

**Methanol:**

Target Organs : Eyes  
Assessment : Causes damage to organs.



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**2-Propanol:**

Assessment : May cause drowsiness or dizziness.

**STOT-repeated exposure**

Not classified due to lack of data.

**Components:**

**Methanol:**

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 : 14 Weeks  
Dose : 0, 5, 10, 20 mg/Kg  
Method : OECD Test Guideline 408  
GLP : yes

**Methanol:**

Species : Monkey, male  
LOAEL : 2340 mg/kg  
LOAEL : 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 : 29 Months  
Dose : 0.013, 0.13 mg/L air  
GLP : No information available.

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### 2-Propanol:

Species : Rat, male and female  
NOAEC : 5000  
Application Route : Inhalation  
Test atmosphere : vapor  
Exposure time : 104 Weeks  
Dose : 500, 2500, 5000 ppm parts per million  
GLP : yes

### Aspiration toxicity

Not classified due to lack of data.

### Further information

#### Product:

Remarks : Solvents may degrease the skin.

## 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

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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  
Test Type: flow-through test  
Analytical monitoring: yes  
GLP: No information available.

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 18,260 mg/l  
End point: Immobilization  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 202  
GLP: No information available.

Toxicity to algae/aquatic plants : EC50 (*Pseudokirchneriella subcapitata* (green algae)): 22,000 mg/l  
End point: Growth rate  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 201  
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.

### 2-Propanol:

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 10,000 mg/l  
End point: mortality  
Exposure time: 96 h  
Test Type: flow-through test  
Analytical monitoring: yes  
Method: OECD Test Guideline 203  
GLP: no

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- Toxicity to daphnia and other aquatic invertebrates : LC50 (*Daphnia magna* (Water flea)): > 10,000 mg/l  
End point: Immobilization  
Exposure time: 24 h  
Test Type: static test  
Analytical monitoring: no  
Method: OECD Test Guideline 202  
GLP: no
- Toxicity to algae/aquatic plants : EC10 (*Scenedesmus quadricauda* (Green algae)): 1,800 mg/l  
Exposure time: 7 d  
Test Type: static test  
Analytical monitoring: no  
GLP: no
- Toxicity to microorganisms : (*Pseudomonas putida*): 1,050 mg/l  
Exposure time: 16 h  
Test Type: static test  
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

### Alcohols, C11-15-secondary, ethoxylated:

- Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 3.2 - 3.6 mg/l  
Exposure time: 96 h  
Test Type: static test
- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 7.3 mg/l  
Exposure time: 48 h  
Test Type: static test

### Ecotoxicology Assessment

- Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.
- Toxicity Data on Soil : Not expected to adsorb on soil.
- Other organisms relevant to the environment : No data available

### Benzenamine, 4,4'-[[4-imino-3-methyl-2,5-cyclohexadien-1-ylidene)methylene]bis[2-methyl-, hydrochloride (1:1):

#### Ecotoxicology Assessment

- Acute aquatic toxicity : Very toxic to aquatic life.



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Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

**Persistence and degradability**

**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 %

**2-Propanol:**

Biodegradability : aerobic  
Inoculum: activated sludge  
Result: Readily biodegradable.  
Biodegradation: 53 %  
Exposure time: 5 d  
GLP: no

**Alcohols, C11-15-secondary, ethoxylated:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: > 60 %  
Method: OECD Test Guideline 301F

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### Bioaccumulative potential

#### Components:

##### **Ethanol:**

Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Partition coefficient: n-octanol/water : log Pow: -0.35 (75 °F / 24 °C)  
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:**

Bioaccumulation : 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

##### **Alcohols, C11-15-secondary, ethoxylated:**

Partition coefficient: n-octanol/water : log Pow: 2.72

##### **Benzenamine, 4,4'-[(4-imino-3-methyl-2,5-cyclohexadien-1-ylidene)methylene]bis[2-methyl-, hydrochloride (1:1):**

Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Partition coefficient: n-octanol/water : log Pow: 1.54

##### **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 +



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B).

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Harmful to aquatic life with long lasting effects.

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**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.  
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 : UN 1170  
Proper shipping name : ETHANOL  
Class : 3  
Packing group : II  
Labels : 3  
Environmentally hazardous : no

**IATA-DGR**

- UN/ID No. : UN 1170  
Proper shipping name : Ethanol  
Class : 3  
Packing group : II  
Labels : Flammable Liquids  
Packing instruction (cargo aircraft) : 364  
Packing instruction (passenger aircraft) : 353

**IMDG-Code**

- UN number : UN 1170  
Proper shipping name : ETHANOL
- Class : 3  
Packing group : II  
Labels : 3  
EmS Code : F-E, S-D  
Marine pollutant : 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 1170  
 Proper shipping name                : Ethanol  
  
 Class                                        : 3  
 Packing group                            : II  
 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 (lbs)	Calculated product RQ (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 exposure)  
 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	67-56-1	>= 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 SOCMII Intermediate or Final VOC's (40 CFR 60.489):

Ethanol	64-17-5	>= 70 - < 90 %
Methanol	67-56-1	>= 1 - < 5 %
2-Propanol	67-63-0	>= 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

**Pennsylvania Right To Know**

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](http://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.

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**SECTION 16. OTHER INFORMATION**

**Further information**

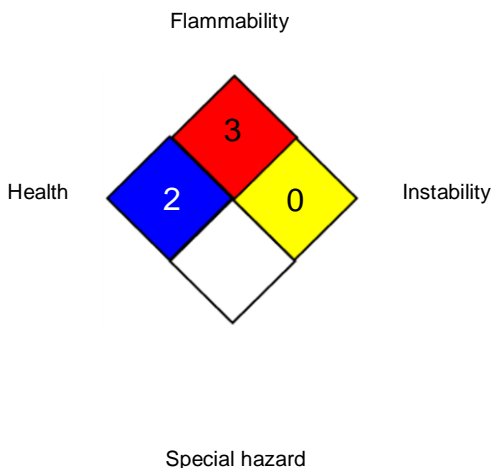
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**NFPA 704:**



**HMIS® IV:**

<b>HEALTH</b>	*	<b>4</b>
<b>FLAMMABILITY</b>		<b>3</b>
<b>PHYSICAL HAZARD</b>		<b>0</b>

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)
- ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
- 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. 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
- 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 - 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.

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**SECTION 1. IDENTIFICATION**

Product name : AFB CORE DECOLORIZER

**Manufacturer or supplier's details**

Company name of supplier : Roche Diagnostics  
-

Address : 9115 Hague Road  
Indianapolis, IN 46250  
USA

Telephone : 1-800-428-5074

Emergency telephone

In case of emergencies: : CHEMTREC 1-800-424-9300 (U.S. or  
Canada)  
1-703-527-3887  
(International)

**Recommended use of the chemical and restrictions on use**

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

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**SECTION 2. HAZARDS IDENTIFICATION**

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

- Flammable liquids : Category 2
- Acute toxicity (Oral) : Category 3
- Acute toxicity (Inhalation) : Category 3
- Acute toxicity (Dermal) : Category 3
- Skin corrosion : Category 1A
- Serious eye damage : Category 1
- Carcinogenicity : Category 1A
- Specific target organ toxicity : Category 1 (Eyes)  
- single exposure

**GHS label elements**

Hazard pictograms : 



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- Signal Word : Danger
- Hazard Statements : H225 Highly flammable liquid and vapor.  
 H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.  
 H314 Causes severe skin burns and eye damage.  
 H350 May cause cancer.  
 H370 Causes 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.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
  
**Response:**  
 P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. 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.  
 P362 Take off contaminated clothing and wash before reuse.  
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
  
**Storage:**  
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P403 + P235 Store in a well-ventilated place. Keep cool.  
 P405 Store locked up.



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**Disposal:**

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

**Other hazards**

None known.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
Methanol	67-56-1	>= 50 - < 70
Sulfuric acid	7664-93-9	>= 20 - < 30

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 : 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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Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : Toxic if swallowed, in contact with skin or if inhaled.  
Causes serious eye damage.  
May cause cancer.  
Causes damage to organs.  
Causes severe burns.

Notes to physician : Treat symptomatically.

---

**SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Alcohol-resistant foam  
Carbon dioxide (CO2)  
Dry chemical

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Carbon oxides  
Sulfur 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.  
For safety reasons in case of fire, cans should be stored separately in closed containments.  
Use a water spray to cool fully closed containers.

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 : Use personal protective equipment.  
Ensure adequate ventilation.  
Remove all sources of ignition.  
Evacuate personnel to safe areas.



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Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. 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 : 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. 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. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : No smoking. 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. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions : See label, package insert or internal guidelines

Further information on storage stability : No decomposition 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
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
Sulfuric acid	7664-93-9	TWA (Thoracic particulate matter)	0.2 mg/m3	ACGIH
		TWA	1 mg/m3	NIOSH REL
		TWA	1 mg/m3	OSHA Z-1
		TWA	1 mg/m3	OSHA P0

**Biological occupational exposure limits**

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	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**

Hand protection

In case of full contact:  
 Material : butyl-rubber  
 Break through time : 480 min  
 Glove thickness : 0.5 mm

Remarks : Wear appropriate protective gloves to prevent skin contact.  
 Replace torn or punctured gloves promptly.  
 Eye protection : Eye wash bottle with pure water



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- 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 : Avoid contact with skin, eyes and clothing.  
When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and immediately after handling the product.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- Appearance : liquid
- Color : clear, colorless
- Odor : characteristic, alcohol-like
- Odor Threshold : No data available
- pH : acidic
- Melting point/ range : -144 °F / -98 °C  
(for a component of this mixture)
- Boiling point/boiling range : > 163 °F / 73 °C
- Flash point : 61 °F / 16 °C
- Evaporation rate : No data available
- Flammability (solid, gas) : Sustains combustion
- Flammability (liquids) : Sustains combustion
- Self-ignition : 878 °F / 470 °C  
(for a component of this mixture)
- Upper explosion limit / Upper flammability limit : 36.5 %(V)
- Lower explosion limit / Lower flammability limit : 6.0 %(V)



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- Vapor pressure : No data available
- Relative vapor density : No data available
- Relative density : No data available
- Density : 0.9941 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.
- Particle characteristics
  - Particle Size Distribution : Not applicable

---

**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. Vapors may form explosive mixture with air.
- Conditions to avoid : Heat, flames and sparks.
- Incompatible materials : Strong acids  
Oxidizing agents  
Alkali metals  
Reducing agents  
Peroxides  
  
Not applicable
- Hazardous decomposition : No hazardous decomposition products are known.



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products

**SECTION 11. TOXICOLOGICAL INFORMATION**

**Acute toxicity**

Toxic if swallowed, in contact with skin or if inhaled.

**Product:**

Acute oral toxicity : Acute toxicity estimate: 192.36 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 5.9 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 589.85 mg/kg  
Method: Calculation method

**Components:**

**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 (Rat): 131.25 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
Assessment: The component/mixture is toxic after short term inhalation.

Acute dermal toxicity : LD50 (Rabbit): 17,100 mg/kg  
Method: No information available.  
GLP: No information available.  
Assessment: The component/mixture is toxic after single contact with skin.

**Sulfuric acid:**

Acute oral toxicity : LD50 Oral (Rat): 2,140 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.51 mg/l  
Exposure time: 2 h  
Test atmosphere: vapor



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LC50 (Mouse): 0.32 mg/l  
Exposure time: 2 h  
Test atmosphere: vapor

**Skin corrosion/irritation**

Causes severe burns.

**Product:**

Remarks : Extremely corrosive and destructive to tissue.

**Components:**

**Methanol:**

Species : Rabbit  
Exposure time : 20 h  
Result : No skin irritation  
GLP : no

**Sulfuric acid:**

Result : Corrosive after 3 minutes or less of exposure

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Product:**

Remarks : May cause irreversible eye damage.

**Components:**

**Methanol:**

Species : Rabbit  
Result : No eye irritation  
GLP : no

**Sulfuric acid:**

Result : Risk of serious damage to eyes.

**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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**Components:**

**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

**Germ cell mutagenicity**

Not classified due to lack of data.

**Components:**

**Methanol:**

Genotoxicity in vitro : Test Type: 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: Ames test  
 Test system: Escherichia coli  
 Metabolic activation: with and without metabolic activation  
 Method: OECD Test Guideline 471  
 Result: negative  
 GLP: No information available.

Test Type: Micronucleus test  
 Test system: Chinese hamster lung cells  
 Result: negative  
 GLP: No information available.

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
 Species: Mouse (male and female)  
 Cell type: Bone marrow  
 Application Route: Intraperitoneal injection  
 Dose: 1920; 3200; 4480 mg/kg  
 Method: OECD Test Guideline 474  
 Result: negative  
 GLP: No information available.

**Sulfuric acid:**

Genotoxicity in vitro : Test Type: Ames test  
 Result: negative  
 Remarks: In vitro tests did not show mutagenic effects





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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  
Application Route: inhalation (vapor)  
Dose: 270, 1330, 6650 mg/m<sup>3</sup> air  
Duration of Single Treatment: 7 - 17 d  
General Toxicity Maternal: NOAEC: 1.33 mg/l  
Teratogenicity: NOAEC F1: 1.33 mg/l  
Method: OECD Test Guideline 414  
GLP: No information available.

**STOT-single exposure**

Causes damage to organs (Eyes).

**Components:**

**Methanol:**

Target Organs : Eyes  
Assessment : Causes damage to organs.

**STOT-repeated exposure**

Not classified due to lack of data.

**Components:**

**Methanol:**

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

**Repeated dose toxicity**

**Components:**

**Methanol:**

Species : Monkey, male  
LOAEL : 2340 mg/kg  
LOAEL : 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 : 29 Months  
Dose : 0.013, 0.13 mg/L air  
GLP : No information available.

**Aspiration toxicity**

Not classified due to lack of data.



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**Further information**

**Product:**

Remarks : Solvents may degrease the skin.

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Components:**

**Methanol:**

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 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 : EC50 (Daphnia magna (Water flea)): 18,260 mg/l  
End point: Immobilization  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 202  
GLP: No information available.

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 22,000 mg/l  
End point: Growth rate  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 201  
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.

**Sulfuric acid:**

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 25 mg/l  
Exposure time: 24 h  
  
LC50 (Lepomis macrochirus (Bluegill sunfish)): 18 - 28 mg/l  
Exposure time: 96 h  
Method: No information available.  
  
LC0 (Fish): 6.3 mg/l  
Exposure time: 24 h



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Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l  
 Exposure time: 48 h  
 Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l  
 End point: Growth rate  
 Test Type: static test  
 Method: OECD Test Guideline 201

**Ecotoxicology Assessment**

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to the environment : No data available

**Persistence and degradability**

**Components:**

**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 %

**Bioaccumulative potential**

**Components:**

**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)



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**Sulfuric acid:**

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).

Additional ecological information                                      :    No data available

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

Waste from residues                                      :    Do not dispose of waste into sewer.  
 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.  
 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                                      :    UN 3266  
 Proper shipping name                                      :    CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.  
 (Sulfuric acid, Methanol solution)  
 Class                                      :    8  
 Packing group                                      :    II  
 Labels                                      :    8  
 Environmentally hazardous                                      :    no

**IATA-DGR**

UN/ID No.                                      :    UN 3266  
 Proper shipping name                                      :    Corrosive liquid, basic, inorganic, n.o.s.  
 (Sulfuric acid, Methanol solution)  
 Class                                      :    8



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Packing group                      : II  
 Labels                                : Corrosive  
 Packing instruction (cargo aircraft)                      : 855  
 Packing instruction (passenger aircraft)                      : 851

**IMDG-Code**

UN number                                : UN 3266  
 Proper shipping name                      : CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sulfuric acid, Methanol solution)  
 Class                                        : 8  
 Packing group                                : II  
 Labels                                        : 8  
 EmS Code                                    : F-A, S-B  
 Marine pollutant                                : no

**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 3266  
 Proper shipping name                      : Corrosive liquid, basic, inorganic, n.o.s. (Sulfuric acid, Methanol solution)  
 Class                                        : 8  
 Packing group                                : II  
 Labels                                        : CORROSIVE  
 ERG Code                                    : 154  
 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 (lbs)	Calculated product RQ (lbs)
Sulfuric acid	7664-93-9	1000	4149
Methanol	67-56-1	100	100 (F003)

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sulfuric acid	7664-93-9	1000	4149

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

Components	CAS-No.	Component TPQ (lbs)
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Sulfuric acid	7664-93-9	1000
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**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)  
 Acute toxicity (any route of exposure)  
 Carcinogenicity  
 Specific target organ toxicity (single or repeated exposure)  
 Skin corrosion or irritation  
 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	>= 50 - < 70 %
Sulfuric acid	7664-93-9	>= 20 - < 30 %

**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):

Methanol	67-56-1	>= 50 - < 70 %
----------	---------	----------------

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 SOCM Intermediate or Final VOC's (40 CFR 60.489):

Methanol	67-56-1	>= 50 - < 70 %
----------	---------	----------------

**Clean Water Act**

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

Sulfuric acid	7664-93-9	>= 20 - < 30 %
---------------	-----------	----------------

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Sulfuric acid	7664-93-9	>= 20 - < 30 %
---------------	-----------	----------------

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**

Methanol	67-56-1
Sulfuric acid	7664-93-9

**Pennsylvania Right To Know**

Methanol	67-56-1
Water	7732-18-5
Sulfuric acid	7664-93-9

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals



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**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**California Prop. 65**

WARNING: This product can expose you to chemicals including Sulfuric acid, which is/are known to the State of California to cause cancer, and 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](http://www.P65Warnings.ca.gov).

**California List of Hazardous Substances**

Methanol	67-56-1
Sulfuric acid	7664-93-9

**California Permissible Exposure Limits for Chemical Contaminants**

Methanol	67-56-1
Sulfuric acid	7664-93-9

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

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

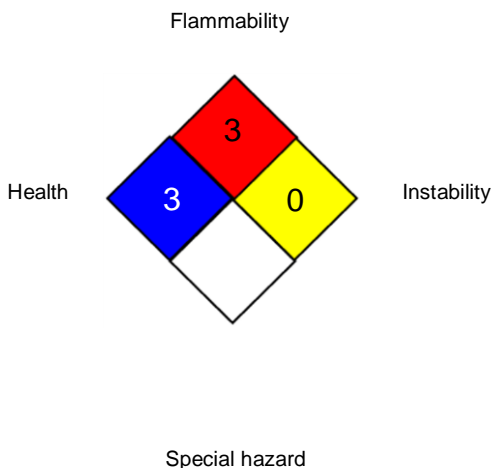
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**NFPA 704:**



**HMIS® IV:**

<b>HEALTH</b>	*	<b>4</b>
<b>FLAMMABILITY</b>		<b>3</b>
<b>PHYSICAL HAZARD</b>		<b>0</b>

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)
- ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
- 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. 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
- OSHA P0 / TWA : 8-hour time weighted average
- OSHA P0 / STEL : Short-term exposure limit
- OSHA Z-1 / TWA : 8-hour time weighted average

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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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- In case of skin contact : Wash off with soap and water.
- In case of eye contact : 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.
- Most important symptoms and effects, both acute and delayed : None known.
- Notes to physician : Treat symptomatically.

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**SECTION 5. FIRE-FIGHTING MEASURES**

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : No information available.
- Hazardous combustion products : No hazardous combustion products are known
- 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.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : No special environmental precautions required.



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Methods and materials for containment and cleaning up : Neutralize with chalk, alkali solution or ammonia.  
Wipe up with absorbent material (e.g. cloth, fleece).  
Keep in suitable, closed containers for disposal.

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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 : 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.

Further information on storage conditions : See label, package insert or internal guidelines

Materials to avoid : No materials to be especially mentioned.  
Do not store near acids.

Further information on storage stability : No decomposition if stored and applied as directed.

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**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

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



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Skin and body protection : Protective suit  
Hygiene measures : General industrial hygiene practice.

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### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : blue

Odor : slight, characteristic

Odor Threshold : No data available

pH : 3.0  
Concentration: 100 %

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 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 : 0.9847 g/cm<sup>3</sup>

Solubility(ies)  
Water solubility : completely miscible



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- 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.
- Particle characteristics
  - Particle Size Distribution : 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 : Stable under recommended storage conditions.  
No hazards to be specially mentioned.
- Conditions to avoid : No data available
- Incompatible materials : Strong oxidizing agents  
Not applicable
- Hazardous decomposition products : No hazardous decomposition products are known.

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**SECTION 11. TOXICOLOGICAL INFORMATION**

**Acute toxicity**

Not classified due to lack of data.

**Skin corrosion/irritation**

Not classified due to lack of data.

**Serious eye damage/eye irritation**

Not classified due to lack of data.



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**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.

**Carcinogenicity**

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.

**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 toxicity**

Not classified due to lack of data.

**STOT-single exposure**

Not classified due to lack of data.

**STOT-repeated exposure**

Not classified due to lack of data.

**Aspiration toxicity**

Not classified due to lack of data.

**Further information**

**Product:**

Remarks : No data available

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

**Product:**



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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).

Additional ecological information : No data available

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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.

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**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**

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**

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



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**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

**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 SOCM Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

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

Acetic acid	64-19-7	>= 0.1 - < 1 %
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The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Acetic acid	64-19-7	>= 0.1 - < 1 %
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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
Acetic acid	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

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

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

DSL : All components of this product are on the Canadian DSL

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

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- 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**

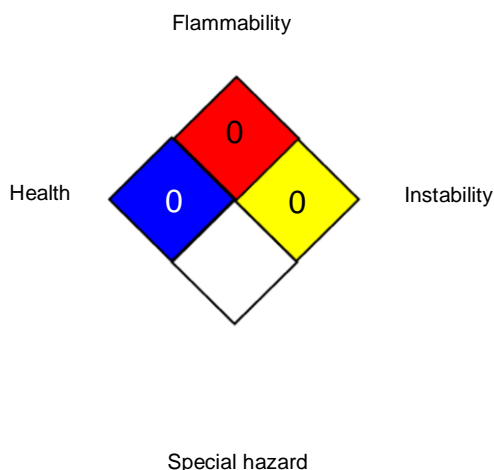
No substances are subject to a Significant New Use Rule.

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

**SECTION 16. OTHER INFORMATION**

**Further information**

**NFPA 704:**



**HMIS® IV:**

<b>HEALTH</b>	/	0
<b>FLAMMABILITY</b>		0
<b>PHYSICAL HAZARD</b>		0

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 -

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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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