

VENTANA Kappa and Lambda Dual ISH mRNA Probe Cocktail

Version 1.4 Revision Date: 06-21-2024

Date of last issue: 06-21-2024 Date of first issue: 01-17-2019

SECTION 1. IDENTIFICATION

Product name	:	VENTANA KAPPA LAMBDA D USExport	DISH mRNA PRB CKT/CKT-
Manufacturer or supplier's d Company name of supplier			
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 Ca- nada) 1-703-527-3887 (Internatio- nal)
Recommended use of the chemical and restrictions on use			
Recommended use	:	Laboratory chemicals	

SECTION 2. HAZARDS IDENTIFICATION

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

Refer to product literature for further details.

GHS label elements		
Specific target organ toxicity - repeated exposure (Oral)	:	Category 2 (Blood)
Reproductive toxicity	:	Category 1B
Carcinogenicity	:	Category 2

Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	H351 Suspected of causing cancer. H360FD May damage fertility. May damage the unborn child. H373 May cause damage to organs (Blood) through prolonged or repeated exposure if swallowed.
Precautionary Statements	:	Prevention:



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P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist or vapors.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Storage:

P405 Store locked up.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Formamide	75-12-7	>= 30 - < 50
Dextran, hydrogen sulfate, sodium	9011-18-1	>= 10 - < 20
salt		
Glycine, N,N'-1,2-ethanediylbis[N-	139-33-3	< 0.1
(carboxymethyl)-, sodium salt (1:2)		
Actual concontration is withhold as a	trada coarat	

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 atten- dance. Do not leave the victim unattended.
If inhaled	:	Move to fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If on skin, rinse well with water.
In case of eye contact	:	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing.



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			If eye irritation	persists, consult a specialist.
	If swallowed	:	Never give any If symptoms pe	k or alcoholic beverages. thing by mouth to an unconscious person. rsist, call a physician. nediately to hospital.
	Most important symptor and effects, both acute delayed			ertility. May damage the unborn child. nage to organs through prolonged or repeated
	Notes to physician	:		ocedure should be established in consultation responsible for industrial medicine.
SE	CTION 5. FIRE-FIGHTIN	G MEASI	JRES	
	Suitable extinguishing r	nedia :		ng measures that are appropriate to local cir- d the surrounding environment.
	Unsuitable extinguishin media	g :	High volume wa	ater jet
	Specific hazards during fighting	fire :	Do not allow ru courses.	n-off from fire fighting to enter drains or water

Hazardous combustion prod- : ucts	Carbon oxides Nitrogen oxides (NOx) Sulfur oxides Gaseous hydrogen chloride (HCl). Sodium oxides
Further information :	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment : for fire-fighters	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- tive equipment and emer- gency procedures	:	Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.



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Methods and materials for	:	Soak up with inert absorbent material (e.g. sand, silica gel,
containment and cleaning up		acid binder, universal binder, sawdust).
		Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Do not breathe vapors/dust. 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 ap- plication area. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated pla- ce. Electrical installations / working materials must comply with the technological safety standards.
Further information on stor- age conditions	:	See label, package insert or internal guidelines
Further information on stor- age 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 parame- ters / Permissible concentration	Basis
Formamide	75-12-7	TWA	1 ppm	ACGIH
		TWA	10 ppm 15 mg/m3	NIOSH REL
		TWA	20 ppm 30 mg/m3	OSHA P0
		STEL	30 ppm 45 mg/m3	OSHA P0
Glycine, N,N'-1,2- ethanediylbis[N- (carboxymethyl)-, sodium salt (1:2) The value is given in analogy to the following substances: Edetic acid	139-33-3	IOEL	1.5 mg/m3	Roche In- dustrial Hy- giene Com- mittee (RIHC)

Engineering measures



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Personal protective equipm	nt	
Respiratory protection	: In the case of vapor formation use a respirator with an approved filter.	
Hand protection		
Material Break through time Glove thickness	In case of contact through splashing: Nitrile rubber > 30 min > 0.11 mm	
Material Break through time Glove thickness	In case of full contact: : butyl-rubber : > 480 min : > 0.4 mm	
Remarks	: Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly.	
Eye protection	 Eye wash bottle with pure water Tightly fitting safety goggles 	
Skin and body protection	: Impervious clothing Choose body protection according to the amount and con- centration of the dangerous substance at the work place.	
Hygiene measures	 When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. 	

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	No data available
Odor	:	No data available
Odor Threshold	_	No. defense allebia
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Flash point	:	306 °F / 152 °C
		(for a component of this mixture)
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	:	1.190 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.

SECTION 10. STABILITY AND REACTIVITY

Reactivity

: No dangerous reaction known under conditions of normal use.



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Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reac- tions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	No data available
Incompatible materials	:	No data available
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified due to lack of data.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Components:		
Formamide:		
Acute oral toxicity	:	LD50 Oral (Rat, male and female): 5,325 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat, male): > 21 mg/l Exposure time: 4 h Test atmosphere: vapor Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhala- tion toxicity Remarks: No mortality observed at this dose.
Acute dermal toxicity	:	LD50 Dermal (Rat): > 3,000 mg/kg
Dextran, hydrogen sulfate, s	sod	ium salt:
Acute oral toxicity		LD50 Oral (Mouse): 21,000 mg/kg
		LD50 Oral (Rat): 20,600 mg/kg Symptoms: Diarrhea
Acute inhalation toxicity	:	Acute toxicity estimate: > 30 mg/l Test atmosphere: dust/mist Method: Expert judgment
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Expert judgment



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Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, sodium salt (1:2):

Acute oral toxicity	: LD50 Oral (Rat): > $2,000 - 5,000 \text{ mg/kg}$
Acute inhalation toxicity	 LC50 (Rat): > 1 - < 5 mg/l Exposure time: 6 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The component/mixture is moderately toxic after short term inhalation.
Skin corrosion/irritation	
Not classified due to lack of	data.
<u>Components:</u>	
Formamide:	
Species Result	: Rabbit : No skin irritation
Dextran, hydrogen sulfate	, sodium salt:
Remarks	: This information is not available.
Glycine, N,N'-1,2-ethaned Result Serious eye damage/eye i	ylbis[N-(carboxymethyl)-, sodium salt (1:2): : No skin irritation rritation
Not classified due to lack of	data.
Components:	
Formamide:	
Species Result	: Rabbit : No eye irritation
Dextran, hydrogen sulfate	, sodium salt:
Remarks	: This information is not available.
Glycine, N,N'-1,2-ethaned Result	ylbis[N-(carboxymethyl)-, sodium salt (1:2): : No eye irritation
Respiratory or skin sensit	ization
Skin sensitization	
Not classified due to lack of	data.
Respiratory sensitization	

Not classified due to lack of data.



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Components:

Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, sodium salt (1:2):

ation.

Germ cell mutagenicity

Not classified due to lack of data.

Components:

Formamide:		
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 Test Type: In vitro mammalian cell gene mutation test
		Result: negative
Genotoxicity in vivo	:	Test Type: In vivo micronucleus test Species: Mouse Cell type: Bone marrow Application Route: Intraperitoneal injection Method: OECD Test Guideline 474 Result: positive
		Test Type: In vivo micronucleus test Species: Mouse Application Route: Oral Method: OECD Test Guideline 474 Result: negative
		Test Type: dominant lethal test Species: Mouse Application Route: Intraperitoneal injection Method: OECD Test Guideline 478 Result: negative
Carcinogenicity		
Suspected of causing cancer.		
Components:		
Formamide:		
Carcinogenicity - Assess- ment	:	Limited evidence of a carcinogenic effect.

Dextran, hydrogen sulfate, sodium salt:



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Remarks	eq	o ingredient of this product present at levels greater than ual to 0.1% is identified as probable, possible or confirme man carcinogen by IARC.				
IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.					
OSHA	No component of this on OSHA's list of reg	s product present at levels greater than or equal to 0.1% julated carcinogens.				
NTP		product present at levels greater than or equal to 0.1% is or anticipated carcinogen by NTP.				
Reproductive May damage f	toxicity ertility. May damage th	e unborn child.				
Components:						
Formamide: Reproductive t sessment STOT-single	me	ay damage fertility. May damage the unborn child., Presu ed human reproductive toxicant				
STOT-repeate						
-	•) through prolonged or repeated exposure if swallowed.				
Components:						
Formamide:						
Routes of expo Target Organs Assessment	: Blo : Ma	gestion ood ay cause damage to organs through prolonged or repeate posure.				
Glycine, N,N'-	1,2-ethanediylbis[N-(carboxymethyl)-, sodium salt (1:2):				
Routes of expo Target Organs Assessment	osure inh Re Ma	nalation (dust/mist/fume) espiratory Tract ay cause damage to organs through prolonged or repeate posure.				
Repeated dos	e toxicity					
<u>Components:</u>	-					
Formamide:						
Species		at, male and female				

Species	:	Rat, male and female
NOAEL	:	40 - 80 mg/kg
Application Route	:	Oral
Exposure time	:	90 days



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Species	:	Rat, male and female
NOAEL	:	100 mg/kg
Application Route	:	Dermal
Exposure time	:	90 days

Aspiration toxicity

Not classified due to lack of data.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Formamide:

Toxicity to fish	LC50 (Leuciscus idus (Golden orfe)): 6,569 mg/l Exposure time: 96 h Test Type: static test Method: DIN 38412		
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna (Water flea)): > 500 mg/l Exposure time: 48 h Test Type: static test Method: Regulation (EC) No. 440/2008, Annex, C.2		
Toxicity to algae/aquatic plants	ErC50 (Desmodesmus subspicatus (green algae)): > 500 mg/l Exposure time: 96 h Test Type: static test Method: DIN 38412		
Toxicity to microorganisms	EC50 (activated sludge): > 1,000 mg/l Exposure time: 30 min Test Type: static test Method: OECD Test Guideline 209		
Ecotoxicology Assessment			
Toxicity Data on Soil	Not expected to adsorb on soil.		
Other organisms relevant to the environment	No data available		
Dextran, hydrogen sulfate, sodium salt:			
Toxicity to fish	LC50 : > 100 mg/l Exposure time: 96 h		
Toxicity to fish (Chronic tox-	> 1 mg/l		
Ecotoxicology Assessment			
Toxicity Data on Soil	Not expected to adsorb on soil.		
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Other organisms relevant to the environment	:	No data available	
Glycine, N,N'-1,2-ethanediylb	is	[N-(carboxymethyl)-, sodium salt (1:2):	
Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): > 100 mg/l Exposure time: 96 h Test Type: static test Remarks: nominal concentration Based on data from similar materials	
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Test Type: static test Method: DIN 38412 Remarks: nominal concentration	
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Test Type: static test Remarks: Based on data from similar materials	
Toxicity to fish (Chronic tox- icity)	:	NOEC (Danio rerio (zebra fish)): >= 36.9 mg/l Exposure time: 35 d Test Type: flow-through test Method: OECD Test Guideline 210 Remarks: Based on data from similar materials	
Toxicity to microorganisms	:	EC20 (activated sludge): > 500 mg/l Exposure time: 30 min Method: OECD Test Guideline 209	
Persistence and degradability	у		
Components:			
Formamide:			
Biodegradability	:	aerobic Result: Readily biodegradable. Biodegradation: 99 % Exposure time: 28 d Method: OECD Test Guideline 301A	
Photodegradation	:	Rate constant: 2E-12 cm3/s Degradation (indirect photolysis): 50 %	
Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, sodium salt (1:2):			
Biodegradability	:	aerobic Result: Not readily biodegradable. Method: OECD Test Guideline 301D Remarks: Based on data from similar materials	



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Bioaccumulative potential		
Components:		
Formamide:		
Bioaccumulation	:	Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.
Partition coefficient: n- octanol/water	:	log Pow: -0.82 (77 °F / 25 °C)
Dextran, hydrogen sulfate,	sod	ium salt:
Partition coefficient: n- octanol/water	:	Remarks: No data available
Glycine, N,N'-1,2-ethanediy	lbis	[N-(carboxymethyl)-, sodium salt (1:2):
Bioaccumulation	:	Species: Lepomis macrochirus (Bluegill sunfish) Bioconcentration factor (BCF): 1.8 Exposure time: 28 d Remarks: Bioaccumulation is unlikely.
Partition coefficient: n- octanol/water	:	log Pow: -4.3 (77 °F / 25 °C) pH: 4.5
Mobility in soil No data available		
Other adverse effects		
Product:		
Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Pro- tection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufac- tured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B)

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods		
Waste from residues	:	Do not contaminate ponds, waterways or ditches with chemi- cal or used container. Send to a licensed waste management company. Can be disposed as waste water, when in compliance with local regulations.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Empty containers should be taken to an approved waste



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handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Domestic regulation

49 CFR Not regulated as a dangerous good

Special precautions for user

Remarks : No data available

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

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

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 :	Carcinogenicity Reproductive toxi Specific target or	icity gan toxicity (single or	repeated exposure)
SARA 313 :	5	nponents are subject t A Title III, Section 313	
	Formamide	75-12-7	>= 30 - < 50 %

Clean Air Act

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



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Accidental Release Preventi	on (40 CFR 68.130, Subpart F). e listed under the U.S. Clean Air	e U.S. Clean Air Act Section 112(r) for Act Section 111 SOCMI Intermedi- >= 30 - < 50 %	
Clean Water Act			
Section 311, Table 116.4A. This product does not contai Section 311, Table 117.3.	in any Hazardous Chemicals list	eted under the U.S. CleanWater Act, ed under the U.S. CleanWater Act, er the U.S. Clean Water Act Section	
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This product does not contai	in any priority pollutants related t	to the U.S. Clean Water Act	
US State Regulations			
Massachusetts Right To K	now		
Formamide		75-12-7	
Pennsylvania Right To Kno	ow		
Formamide Water	n sulfate, sodium salt	75-12-7 7732-18-5 9011-18-1	
Maine Chemicals of High (Concern		
Product does not	contain any listed chemicals		
Vermont Chemicals of Hig	h Concern		
Product does not contain any listed chemicals			
Washington Chemicals of	High Concern		
Product does not	contain any listed chemicals		
California List of Hazardou	is Substances		
Formamide		75-12-7	
California Permissible Exp	osure Limits for Chemical Co	ntaminants	
Formamide		75-12-7	
	duct are reported in the follow	-	
AIIC	: Not in compliance with the	e inventory	
DSL	: This product contains the on the Canadian DSL nor	following components that are not NDSL.	
	Primer / Oligonucleotide /	Probe	
NZIoC	: On the inventory, or in cor	mpliance with the inventory	
ENCS	: Not in compliance with the	e inventory	
ISHL	: Not in compliance with the	e inventory	
KECI	: Not in compliance with the	e inventory	



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PICCS	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory
TCSI	:	Not in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
TECI	:	Not in compliance with the inventory

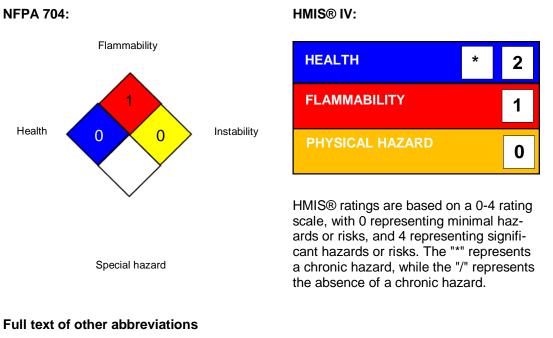
TSCA list

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



ACGIH NIOSH REL OSHA P0	:	USA. ACGIH Threshold Limit Values (TLV) USA. NIOSH Recommended Exposure Limits USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
ACGIH / TWA	:	8-hour, time-weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA P0 / TWA OSHA P0 / STEL		8-hour time weighted average Short-term exposure limit



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

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