

SAFETY DATA SHEET

Advancion Corporation

Product name : AMP-ULTRA™ PC 2000, Neutralizing Amine

Revision Date: 08/31/2023
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Advancion Corporation encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : AMP-ULTRA™ PC 2000, Neutralizing Amine

Manufacturer or supplier's details

Company name of supplier : Advancion Corporation
Address : 1500 E. LAKE COOK ROAD
Buffalo Grove IL 60089-6553

Customer Information Number +1-847-808-3711

E-mail address NAR_CC@ADVANCIONSCIENCES.COM

Emergency telephone number **+1 800-424-9300 (24x7)**

Recommended use : Chemical intermediate.
Neutralizing agent.
Cosmetics.
The Advancion Corporation recommends that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact the Customer Information Group (see Section 1 of this data sheet).

2. HAZARDS IDENTIFICATION

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

Flammable liquids : Category 4

Skin irritation : Category 2

Serious eye damage : Category 1

GHS label elements

Hazard pictograms

:



Signal word

:

Danger

Hazard statements

:

H227 Combustible liquid.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary statements

:

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. -
No smoking.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
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.

Other hazards

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components

Chemical name	CAS-No.	Concentration (% w/w)
2-Amino-2-methyl-1-propanol	124-68-5	$\geq 93.5 - \leq 95.5$
Water	7732-18-5	$\geq 4.5 - \leq 5.5$

4. FIRST AID MEASURES

If inhaled : Move person to fresh air; if effects occur, consult a physician.
In case of skin contact : Immediately flush skin with plenty of water for at least 15
minutes while removing contaminated clothing. Seek medical
attention if symptoms occur or irritation persists. Wash
clothing before reuse.
Suitable emergency safety shower facility should be
immediately available.
In case of eye contact : Wash immediately and continuously with flowing water for at
least 30 minutes. Remove contact lenses after the first 5

	minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.
If swallowed	: Seek medical attention immediately. Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.
Most important symptoms and effects, both acute and delayed	: Causes skin irritation. Causes serious eye damage.
Protection of first-aiders	: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Water fog or fine spray. Carbon dioxide fire extinguishers. Dry chemical fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
Specific hazards during firefighting	: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.
Hazardous combustion products	: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon dioxide. Carbon monoxide. Nitrogen oxides (NOx)
Further information	: Keep people away. Isolate fire and deny unnecessary entry. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Burning liquids may be extinguished by dilution with water.
Special protective equipment for firefighters	: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

- | | | |
|---|---|---|
| Personal precautions,
protective equipment and
emergency procedures | : | Keep upwind of spill.
Ventilate area of leak or spill.
No smoking in area.
Only trained and properly protected personnel must be
involved in clean-up operations.
Evacuate area.
Use appropriate safety equipment. For additional information,
refer to Section 8, Exposure Controls and Personal Protection.
Refer to section 7, Handling, for additional precautionary
measures. |
| Environmental precautions | : | Prevent from entering into soil, ditches, sewers, waterways
and/or groundwater. See Section 12, Ecological Information. |
| Methods and materials for
containment and cleaning up | : | Contain spilled material if possible.
Collect in suitable and properly labeled containers.
See Section 13, Disposal Considerations, for additional
information. |

7. HANDLING AND STORAGE

- | | | |
|-----------------------------|---|---|
| Advice on safe handling | : | Keep away from heat, sparks and flame.
Spills of these organic materials on hot fibrous insulations may
lead to lowering of the autoignition temperatures possibly
resulting in spontaneous combustion.
Keep container closed.
Containers, even those that have been emptied, can contain
vapors. Do not cut, drill, grind, weld, or perform similar
operations on or near empty containers.
Product freezes at 13-15°C (55-59°F). May be melted in
drum.
Do not swallow.
Wash thoroughly after handling.
Avoid breathing vapor or mist.
Use with adequate ventilation.
Do not get in eyes, on skin, on clothing.
See Section 8, EXPOSURE CONTROLS AND PERSONAL
PROTECTION. |
| Conditions for safe storage | : | Store in original container.
Store in a cool, dry place.
Keep containers tightly closed when not in use to prevent
formation of carbonate salts.
Do not store in:
Zinc.
Galvanized containers.
Aluminum.
Copper.
Copper alloys.
Brass. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Local exhaust ventilation may be necessary for some operations.
Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

Personal protective equipment

Respiratory protection : Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process.
For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator.
The following should be effective types of air-purifying respirators:
Organic vapor cartridge with a particulate pre-filter, type AP2.

Hand protection

Remarks : Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyethylene. Chlorinated polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Viton. Butyl rubber. Neoprene. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Avoid gloves made of: Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Eye protection : Use chemical goggles.

Skin and body protection : Use protective clothing chemically resistant to this material.
Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid.

Colour : Colorless

Odour	: Amine.
Odour Threshold	: No test data available
pH	: 11.3 (68 °F / 20 °C) Method: Literature 1% aqueous solution.
Freezing point	: 59 °F / 15 °C Method: Measured
Boiling point/boiling range	: 212 - 329 °F / 100 - 165 °C Method: Literature
Flash point	: 179.76 °F / 82.09 °C Method: Setaflash Closed Cup ASTM D3828
Evaporation rate	: No test data available
Upper explosion limit / Upper flammability limit	: Not applicable
Lower explosion limit / Lower flammability limit	: Not applicable
Vapour pressure	: 0.34 mmHg (68 °F / 20 °C) Method: Literature Anhydrous
Relative vapour density	: 3 Method: Literature
Density	: 0.941 g/cm ³ (77 °F / 25 °C) Method: Measured
Solubility(ies) Water solubility	: >= 920 g/l completely soluble (68 °F / 20 °C)
Partition coefficient: n-octanol/water	: log Pow: -0.63 (68 °F / 20 °C) Method: OECD Test Guideline 107 or Equivalent GLP: yes Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Decomposition temperature	: No test data available
Viscosity Viscosity, dynamic	: 135 mPa.s (77 °F / 25 °C) Method: Measured
Viscosity, kinematic	: No test data available
Molecular weight	: 89.14 g/mol Active ingredient
Particle size	: No data available

10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under recommended storage conditions. See Storage, Section 7.
Possibility of hazardous reactions	:	None known.
Conditions to avoid	:	Exposure to elevated temperatures can cause product to decompose. Product absorbs carbon dioxide from the air. Reaction with carbon dioxide may form carbonate salts.
Incompatible materials	:	Avoid contact with metals such as: Zinc. Galvanized metals. Aluminum. Copper. Copper alloys. Brass. Avoid contact with: Strong acids. Strong oxidizers. Avoid unintended contact with: Halogenated hydrocarbons.
Hazardous decomposition products	:	Thermal decomposition may yield the following: Carbon dioxide (CO ₂), carbon monoxide (CO), oxides of nitrogen (NO _x), dense black smoke.

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Acute toxicity

Product:

Acute oral toxicity	:	Remarks: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Swallowing may result in irritation or burns of the mouth, throat, and gastrointestinal tract. LD50 (Rat, male): 2,900 mg/kg Method: OECD 401 or equivalent LD50 (Mouse): 2,150 mg/kg
Acute inhalation toxicity	:	Remarks: At room temperature, exposure to vapor is minimal due to low volatility. Vapor from heated material or mist may cause respiratory irritation. Remarks: The LC50 has not been determined.

Acute dermal toxicity : Remarks: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50 (Rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Remarks : Brief contact may cause severe skin irritation with pain and local redness.
Prolonged contact may cause severe skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.

Serious eye damage/eye irritation

Product:

Result : Corrosive
Remarks : May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness.
Chemical burns may occur.

Respiratory or skin sensitisation

Product:

Remarks : For skin sensitization:
Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:
No relevant data found.

Carcinogenicity

IARC No component 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 component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Teratogenicity

Product

In a screening study in rats, 2-amino-2-methyl-1-propanol hydrochloride salt was toxic to the fetus when administered at high oral doses. However, this material did not cause birth defects or any other effects on the fetus when high doses were administered dermally, the most likely route of exposure, in a definitive rat developmental toxicity study.

Mutagenicity

Product

Animal genetic toxicity studies were negative.

In vitro genetic toxicity studies were negative.

STOT - single exposure

Product:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Repeated dose toxicity

Product:

Application Route : Oral
Remarks : In animals, effects have been reported on the following organs:
Liver.

Aspiration toxicity

Product:

Based on physical properties, not likely to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish :
Remarks: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.

LC50 (Lepomis macrochirus (Bluegill sunfish)): 190 mg/l
Exposure time: 96.0 h
Test Type: static test
Method: OECD Test Guideline 203 or Equivalent

LC50 (European plaice (Pleuronectes platessa.): 184 mg/l
Exposure time: 96.0 h
Test Type: semi-static test
Method: OECD Test Guideline 203 or Equivalent

LC50 (Leuciscus idus (Golden orfe)): 331 mg/l
Exposure time: 48.0 h
Test Type: static test
Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other aquatic invertebrates : LC50 (Crangon crangon (shrimp)): 179.00 mg/l
Exposure time: 96.0 h

	Test Type: semi-static test Method: OECD Test Guideline 202 or Equivalent
	LC50 (Daphnia magna (Water flea)): 193.00 mg/l Exposure time: 48.0 h Test Type: static test Method: OECD Test Guideline 202 or Equivalent
Toxicity to algae/aquatic plants	: EyC50 (alga Scenedesmus sp.): 565.5 mg/l End point: Biomass Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 or Equivalent
Toxicity to microorganisms	: EC50 (activated sludge): 342.9 mg/l Exposure time: 3 h Test Type: static test Method: OECD 209 Test

Components:

2-Amino-2-methyl-1-propanol:

Toxicity to fish	: Remarks: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.
	LC50 (Lepomis macrochirus (Bluegill sunfish)): 190 mg/l Exposure time: 96.0 h Test Type: static test Method: OECD Test Guideline 203 or Equivalent
	LC50 (European plaice (Pleuronectes platessa.): 184 mg/l Exposure time: 96.0 h Test Type: semi-static test Method: OECD Test Guideline 203 or Equivalent
	LC50 (Leuciscus idus (Golden orfe)): 331 mg/l Exposure time: 48.0 h Test Type: static test Method: OECD Test Guideline 203 or Equivalent
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	LC50 (Daphnia magna (Water flea)): 193.00 mg/l Exposure time: 48.0 h Test Type: static test Method: OECD Test Guideline 202 or Equivalent
Toxicity to algae/aquatic plants	: EyC50 (alga Scenedesmus sp.): 565.5 mg/l End point: Biomass Exposure time: 72 h Test Type: static test

Method: OECD Test Guideline 201 or Equivalent

Toxicity to microorganisms : EC50 (activated sludge): 342.9 mg/l
End point: Respiration rates.
Exposure time: 3 h
Test Type: static test
Method: OECD 209 Test

Persistence and degradability

Product:

Biodegradability : Result: Readily biodegradable.
Remarks: Material is readily biodegradable. Passes OECD
test(s) for ready biodegradability.

Biodegradation: 89.3 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent
Remarks: 10-day Window: Pass

Chemical Oxygen Demand (COD) : 2.410 mg/mg
Method: Estimated.

ThOD : 2.690 mg/mg
Method: Estimated.

Photodegradation : Sensitiser: OH radicals
Concentration: 1,500,000 1/cm³
Rate constant: 2.55E-11 cm³/s
Method: Estimated.

Components:

2-Amino-2-methyl-1-propanol:

Biodegradability : Remarks: Material is readily biodegradable. Passes OECD
test(s) for ready biodegradability.

Result: Readily biodegradable.
Biodegradation: 89.3 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent
Remarks: 10-day Window: Pass

Chemical Oxygen Demand (COD) : 2.410 mg/mg
Method: Estimated.

ThOD : 2.690 mg/mg
Method: Estimated.

Photodegradation : Sensitiser: OH radicals
Concentration: 1,500,000 1/cm³
Rate constant: 2.55E-11 cm³/s
Method: Estimated.

Bioaccumulative potential

Product:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): < 1
Method: Measured

Components:

2-Amino-2-methyl-1-propanol:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): < 1
Method: Measured

Partition coefficient: n-
octanol/water : log Pow: -0.63
Method: OECD Test Guideline 107 or Equivalent
Remarks: Bioconcentration potential is low (BCF < 100 or Log
Pow < 3).

Mobility in soil

Product:

Distribution among
environmental compartments : Koc: 18
Method: Estimated.
Remarks: Potential for mobility in soil is very high (Koc
between 0 and 50).

Components:

2-Amino-2-methyl-1-propanol:

Distribution among
environmental compartments : Koc: 18
Method: Estimated.
Remarks: Potential for mobility in soil is very high (Koc
between 0 and 50).

Other adverse effects

Product:

Endocrine disrupting
potential : The substance/mixture does not contain components
considered to have endocrine disrupting properties according
to REACH Article 57(f) or Commission Delegated regulation
(EU) 2017/2100 or Commission Regulation (EU) 2018/605 at
levels of 0.1% or higher.

Components:

2-Amino-2-methyl-1-propanol:

Results of PBT and vPvB
assessment : This substance is readily biodegradable and thus is not
considered persistent or very persistent (P or vP). This
substance has a low potential to bioaccumulate due to low
affinity for octanol and high water solubility so is not
considered bioaccumulative or very bioaccumulative (B or vB).
This substance is not classified as mutagenic, carcinogenic or
reproductive toxicant to mammalian species, and the values
are much higher than the threshold for toxicity to aquatic
species; thus is not considered toxic (T). Methanol.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.
All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations.
Regulations may vary in different locations.
Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.
THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information.
FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.
Landfill.
ADVANCION HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL.

14. TRANSPORT INFORMATION

International Regulations

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 for product as supplied.

National Regulations

49 CFR

UN/ID/NA number : NA 1993
Proper shipping name : Combustible liquid, n.o.s.
(2-Amino-2-methyl-1-propanol)
Class : 3
Packing group : III
Labels : FLAMMABLE LIQUID
ERG Code : 128
Marine pollutant : no

Special precautions for user

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.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

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

Components	CAS-No.	Component TPQ (lbs)
SARA 311/312 Hazards	: Fire Hazard Acute Health Hazard Chronic Health Hazard	

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.

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (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 SOCMII Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

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

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

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

US State Regulations

Massachusetts Right To Know

2-Amino-2-methyl-1-propanol 124-68-5

Pennsylvania Right To Know

2-Amino-2-methyl-1-propanol 124-68-5

Maine Chemicals of High Concern

This product does not contain any chemicals that are listed as Maine Chemicals of High Concern.

New Jersey Right To Know

2-Amino-2-methyl-1-propanol

124-68-5

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

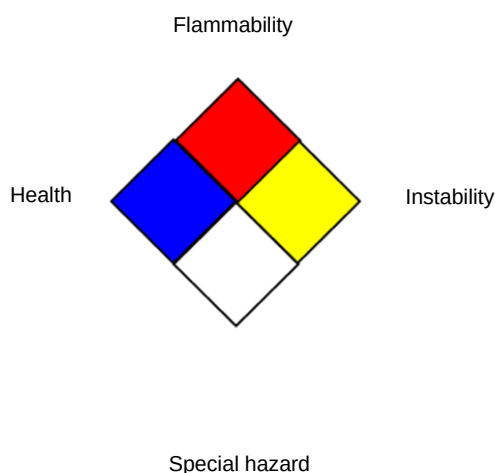
The components of this product are reported in the following inventories:

TSCA : All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:

HEALTH		3
FLAMMABILITY		2
PHYSICAL HAZARD		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 - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 -

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

Revision Date 08/31/2023
Version 2.1

Identification Number: 000040000024

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

US / EN