

## Protease A

### Section 1. Identification

**GHS product identifier** : Protease A  
**Product code** : Not applicable  
**Other means of identification** : Not applicable  
**Product type** : Solid.

**Relevant identified uses of the substance or mixture and uses advised against**

**Product use** : For research use only. Not for use in diagnostic procedures.  
**Area of application** : Professional applications.

Uses advised against	Reason
This product is not intended for use in humans or animals.	-

**Supplier's details** : NanoString Technologies, Inc.  
 530 Fairview Avenue North,  
 Suite 2000, Seattle, WA 98109  
  
 Telephone:206-378-NANO (6266)  
 www.nanostring.com

**e-mail address of person responsible for this SDS** : operations@nanostring.com

**Emergency telephone number (with hours of operation)** : 206-378-6266 (24/7)

### Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : H302 ACUTE TOXICITY (oral) - Category 4  
 H315 SKIN IRRITATION - Category 2  
 H318 SERIOUS EYE DAMAGE - Category 1  
 H334 RESPIRATORY SENSITIZATION - Category 1  
 H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

**GHS label elements**

**Hazard pictograms** :



**Signal word** : Danger

## Section 2. Hazards identification

<b>Hazard statements</b>	: H302 - Harmful if swallowed. H315 - Causes skin irritation. H318 - Causes serious eye damage. H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 - May cause respiratory irritation.
<b><u>Precautionary statements</u></b>	
<b>Prevention</b>	: P280 - Wear protective gloves. Wear eye or face protection. P285 - In case of inadequate ventilation wear respiratory protection. P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing dust. P270 - Do not eat, drink or smoke when using this product. P264 - Wash thoroughly after handling.
<b>Response</b>	: P304 + P340, P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor. P301 + P312, P330 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P332 + P313 - If skin irritation occurs: Get medical advice or attention. 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 or doctor.
<b>Storage</b>	: P405 - Store locked up. P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
<b>Disposal</b>	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazards not otherwise classified</b>	: None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: Substance
<b>Other means of identification</b>	: Not applicable

### CAS number/other identifiers

**CAS number** : -

Ingredient name	Other names	%	CAS number
Component A	Proprietary	100	Proprietary

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes skin irritation.
- Ingestion** : Harmful if swallowed.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur

## Section 4. First aid measures

**Ingestion** : Adverse symptoms may include the following:  
stomach pains

### Indication of immediate medical attention and special treatment needed, if necessary

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, alcohol-resistant foam or water spray (fog).

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : No specific fire or explosion hazard.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
Thermal decomposition can lead to release of irritating gases and vapors.

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

## Section 6. Accidental release measures

### Methods and materials for containment and cleaning up

- Small spill** : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Keep container tightly closed and store at recommended temperature. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Component A	<b>ACGIH TLV (United States, 1/2022). [Subtilisins]</b> C: 0.00006 mg/m <sup>3</sup> , (measured as 100% pure crystalline enzyme) <b>NIOSH REL (United States, 10/2020). [SUBTILISINS]</b> STEL: 0.00006 mg/m <sup>3</sup> 60 minutes.

- Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

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## Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

- Physical state** : Solid. [Massive solid.]
- Color** : Pale color.
- Odor** : Odorless.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point, initial boiling point, and boiling range** : Not applicable.
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Not applicable.
- Vapor pressure** : Not available.
- Relative vapor density** : Not applicable.
- Relative density** : Not available.
- Density** : 1.32 to 1.42 g/cm<sup>3</sup>

## Section 9. Physical and chemical properties

<b>Solubility(ies)</b>	<b>Media</b>	<b>Result</b>
	cold water hot water	Easily soluble Easily soluble
<b>Solubility in water</b>	: >100 g/l	
<b>Miscible with water</b>	: Yes.	
<b>Partition coefficient: n-octanol/water</b>	: -3.1 [OECD 107]	
<b>Auto-ignition temperature</b>	: Not applicable.	
<b>Decomposition temperature</b>	: Not available.	
<b>SADT</b>	: Not available.	
<b>Viscosity</b>	: Not applicable.	
<b>Flow time (ISO 2431)</b>	: Not available.	
<b><u>Particle characteristics</u></b>		
<b>Median particle size</b>	: Not available.	
<b><u>Other information</u></b>		
<b>Physical/chemical properties comments</b>	: No additional information.	

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.
<b>Conditions to avoid</b>	: No specific data.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing materials.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Component A	LD50 Oral	Rat - Male, Female	1800 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Component A	Eyes - Moderate irritant	Rabbit	-	3 mg	-

## Section 11. Toxicological information

### Sensitization

Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Component A	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

**Eye contact** : Causes serious eye damage.

**Inhalation** : May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin contact** : Causes skin irritation.

**Ingestion** : Harmful if swallowed.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma

**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur

**Ingestion** : Adverse symptoms may include the following:  
stomach pains

### Delayed and immediate effects and also chronic effects from short and long term exposure



## Section 11. Toxicological information

### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Protease A	1800	N/A	N/A	N/A	N/A
Component A	1800	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Component A	Acute EC50 0.513 mg/l Fresh water	Algae	72 hours
	Acute EC50 23.78 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute EC50 0.868 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 17.7 mg/l	Fish - Oncorhynchus mykiss	96 hours
	Acute NOEC 0.566 mg/l Fresh water	Algae	72 hours
	Acute NOEC 0.324 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.042 mg/l Fresh water	Fish	32 days

**Conclusion/Summary** : Not available.

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Component A	OECD 301B Ready Biodegradability - CO <sub>2</sub> Evolution Test	60 % - Readily - 7 days	10 mg/l	Activated sludge

## Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Component A	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Protease A	-3.1	-	low
Component A	-3.1	-	low

### Mobility in soil







**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	IMDG	IATA
<b>UN number</b>	UN3077	UN3077	UN3077
<b>UN proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s. (Component A)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Component A)	Environmentally hazardous substance, solid, n.o.s. (Component A)
<b>Transport hazard class(es)</b>	9  	9  	9  
<b>Packing group</b>	III	III	III
<b>Environmental hazards</b>	Yes.	Yes.	Yes.

### Additional information

## Section 14. Transport information

- DOT Classification** : Non-bulk packages of this product are not regulated as hazardous materials unless transported by inland waterway. This product is not regulated as a hazardous material when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of §§ 173.24 and 173.24a.  
**Limited quantity** Yes.  
**Packaging instruction** Exceptions: 155. Non-bulk: 213. Bulk: 240.  
**Special provisions** 8, 146, 335, 384, A112, B54, B120, IB8, IP3, N20, N91, T1, TP33
- IMDG** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.  
**Emergency schedules** F-A, S-F  
**Special provisions** 274, 335, 966, 967, 969
- IATA** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.  
**Quantity limitation** Passenger and Cargo Aircraft: 400 kg. Packaging instructions: 956. Cargo Aircraft Only: 400 kg. Packaging instructions: 956. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y956.  
**Special provisions** A97, A158, A179, A197, A215
- Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
- Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

- U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** All components are listed or exempted.  
**United States inventory (TSCA 8b):** All components are active or exempted.
- Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed
- Clean Air Act Section 602 Class I Substances** : Not listed
- Clean Air Act Section 602 Class II Substances** : Not listed
- DEA List I Chemicals (Precursor Chemicals)** : Not listed
- DEA List II Chemicals (Essential Chemicals)** : Not listed
- SARA 302/304**  
**Composition/information on ingredients**  
 No products were found.
- SARA 304 RQ** : Not applicable.
- SARA 311/312**

## Section 15. Regulatory information

**Classification** : ACUTE TOXICITY (oral) - Category 4  
 SKIN IRRITATION - Category 2  
 SERIOUS EYE DAMAGE - Category 1  
 RESPIRATORY SENSITIZATION - Category 1  
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation)  
 - Category 3

### Composition/information on ingredients

Name	%	Classification
Component A	Proprietary	COMBUSTIBLE DUSTS ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 RESPIRATORY SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

### SARA 313

Not applicable.

### State regulations

**Massachusetts** : None of the components are listed.  
**New York** : None of the components are listed.  
**New Jersey** : The following components are listed: Component A  
**Pennsylvania** : None of the components are listed.

### California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	*	3
Flammability		0
Physical hazards		0

## Section 16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### [National Fire Protection Association \(U.S.A.\)](#)



### [Procedure used to derive the classification](#)

Classification	Justification
ACUTE TOXICITY (oral) - Category 4	Calculation method
SKIN IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE - Category 1	Calculation method
RESPIRATORY SENSITIZATION - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method

### [History](#)

<b>Date of issue/Date of revision</b>	: 09/09/2022
<b>Date of previous issue</b>	: No previous validation
<b>Version</b>	: 1
<b>Prepared by</b>	: Sphera Solutions
<b>Key to abbreviations</b>	: ATE = Acute Toxicity Estimate AMP = Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available UN = United Nations
<b>References</b>	: HCS (U.S.A.) - Hazard Communication Standard International transport regulations

Indicates information that has changed from previously issued version.

### [Notice to reader](#)

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.