

## Section 1. Identification

<b>Product identifier</b>	: URAN <sup>®</sup> (NITROGEN FERTILIZER SOLUTION)
<b>Product code</b>	: URAN28, URAN30, URAN32
<b>SDS #</b>	: 307
<b>Other means of identification</b>	: Uran <sup>®</sup> 28, 30 or 32% (Nitrogen Fertilizer Solution), Urea Ammonium Nitrate Fertilizer Solution, UAN Solution
<b>Product type</b>	: Liquid.

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

<b>Identified uses</b>
Fertilizer.
<b>Uses advised against</b>
None

<b>Supplier's details</b>	: PCS Sales (USA), Inc. (A Subsidiary of Nutrien Ltd.) Suite 150 500 Lake Cook Road Deerfield, IL 60015 United States
	: PCS Sales (Canada), Inc. (A Subsidiary of Nutrien Ltd.) Suite 1700 211 - 19th Street East Saskatoon SK S7K 5R6 Canada
<b>Telephone no.:</b>	: 001-880-524-0132 (dial from Mexico - Customer Service)
<b>Email</b>	: sds@nutrien.com

<b>Emergency telephone number (with hours of operation)</b>	: Nutrien 24 hour Emergency Telephone Numbers:  English: Transportation Emergencies: 00-1-880-792-8311 (from Mexico) Medical Emergencies: 00-1-303-389-1653  French or Spanish: Transportation or Medical Emergencies: 00-1-303-389-1654
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## SECTION 2: Hazards identification

<b>Classification of the substance or mixture</b>	: ACUTE TOXICITY (oral) - Category 5 EYE IRRITATION - Category 2B
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### GHS label elements

<b>Signal word</b>	: Warning
<b>Hazard statements</b>	: H303 - May be harmful if swallowed. H320 - Causes eye irritation.

### Precautionary statements

**SECTION 2: Hazards identification**

- Prevention** : P264 - Wash hands thoroughly after handling.
- Response** : P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 - If eye irritation persists: Get medical advice or attention.
- Storage** : Not applicable.
- Disposal** : Not applicable.

**SECTION 3: Composition/information on ingredients**

**Substance/mixture** : Mixture

Ingredient name	% (w/w)	CAS number
ammonium nitrate	40 - 45	6484-52-2
urea	30 - 35	57-13-6
water	20 - 30	7732-18-5

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.

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures****Description of necessary first aid measures**

- Eye contact** : Begin eye irrigation immediately. Exposures to eye irritants may require medical evaluation following decontamination if pain or irritation persists. Immediately rinse eyes with large quantities of water or saline for a minimum of 15 minutes. If possible, remove contact lenses being careful not to cause additional eye damage. If the initial water supply is insufficient, keep the affected area wet with a moist cloth and transfer the person to the nearest place where rinsing can be continued for the recommended length of time. For additional advice call the medical emergency number on this SDS or your poison center or doctor.
- Inhalation** : Remove person to fresh air. No known significant effects. Seek medical attention for any signs of wheezing and/or breathing difficulties. For additional advice call the medical emergency number on this SDS or your poison center or medical provider.
- Skin contact** : No known significant effects. Rinse the affected areas with water. Remove contaminated clothing, jewelry, and shoes. Wash/clean items before reuse. Seek medical attention for persistent skin pain or irritation. For additional advice call the medical emergency number on this SDS or your poison center or doctor.
- Ingestion** : 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. Never give anything by mouth to an unconscious person. 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. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. 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**

## SECTION 4: First aid measures

### Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Nitrate based product. May be irritating to mouth, throat and stomach. Over-exposure by ingestion is unlikely under normal working conditions.

### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
stomach pains  
diarrhea

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

- Notes to physician** : In case of inhalation of decomposition products (carbon monoxide, carbon dioxide, nitrogen oxides) in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for up to 72 hours. In cases of suspected methemoglobinemia, monitor methemoglobin blood levels. Treatment is supportive; methylene blue may be indicated based on patient severity.
- Specific treatments** : Call the medical emergency number on this SDS or your poison center or doctor immediately if large quantities have been ingested. In cases of suspected methemoglobinemia, methylene blue may be indicated based on patient severity.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Decontamination measures may be necessary. Personnel and equipment must be checked and decontaminated prior to leaving the area.

See toxicological information (Section 11)

## SECTION 5: Firefighting measures

### Extinguishing media

- Suitable extinguishing media** : Non-flammable. Material will not burn. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

### Specific hazards arising from the chemical

- : Not an oxidizer at the manufactured concentration. It may become an oxidizing liquid if concentrated by evaporation. If evaporated to dryness, the product acts as an oxidizing agent, and supports combustion by liberating oxygen even if smothered. Cool containing vessels with flooding quantities of water until well after fire is out. A self contained breathing apparatus should be used to avoid inhalation of toxic fumes. When heated to decomposition it emits toxic fumes (NH<sub>3</sub>, NO, NO<sub>2</sub>...). Contaminated water can cause environmental damage. Contain and collect water used to fight fire.

## SECTION 5: Firefighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides
- 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. Contain and collect the water used to fight the fire for later treatment and disposal. Dangerous if allowed to dry out. Residue may exhibit oxidizing properties.
- 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** : Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering.
- 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 adverse impacts (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Use appropriate equipment to put the spilled substance in a container for reuse or disposal.
- Large spill** : Shut off all ignition sources. No flares, smoking or flames in hazard area. Stop leak if without risk. Put on appropriate personal protective equipment (see Section 8). Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Use appropriate equipment to put the spilled substance in a container for reuse or disposal. Recycle to process, if possible.  
or  
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). Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapor or mist. 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.

## SECTION 7: Handling and storage

- 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 and use in accordance with all applicable regulations and company requirements. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep from freezing. Keep container tightly closed and sealed until ready for use. Dangerous if allowed to dry out. Residue may exhibit oxidizing properties. 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. May form corrosive sludge on prolonged storage. May be corrosive to metals. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment.
- While UAN as produced is not classified as an oxidizer, it is important to prevent conditions during handling and storage which may result in concentration of the product which may encourage it to behave as an oxidizer. Ensure that UAN solution pumps are thermally protected against exceeding a temperature of 66 deg. C (150 deg. F). Also ensure that piping systems, if insulated, are not externally heated (heat traced). Refer to NFPA 400 Hazardous Materials Code for further information on the safe storage and handling of hazardous materials.

## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

None.

- Appropriate engineering controls** : 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

**Contact your personal protective equipment manufacturer to verify the compatibility of the equipment for the intended purpose.**

- 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.

### Skin protection

## SECTION 8: Exposure controls/personal 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. Recommended: Use slip resistant footwear. Hazard of slipping on spilled 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 and safety characteristics

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

### Appearance

- Physical state** : Liquid. [Clear to slightly hazy liquid.]
- Color** : Colorless to light yellow.
- Odor** : Ammoniacal. [Slight]
- Odor threshold** : Not available.
- pH** : 6.3 to 7.2
- Melting point/freezing point** : -17 to -2°C (1.4 to 28.4°F) [Variable, depending on the formulation.]
- Boiling point, initial boiling point, and boiling range** : 117 to 125°C (242.6 to 257°F) [Variable, depending on the formulation.]
- Flash point** : [Product does not sustain combustion.]
- Evaporation rate** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** : Not available.
- Relative vapor density** : Not available.
- Relative density** : 1.28 to 1.33 [Variable, depending on the formulation.]
- Bulk density** : 10.6 to 11.3 lb/gal
- Solubility** : Easily soluble in the following materials: cold water and hot water.
- Solubility in water** : Miscible in water.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.

## Section 9. Physical and chemical properties and safety characteristics

### Particle characteristics

**Median particle size** : Not applicable.

## SECTION 10: Stability and reactivity

- Reactivity** : Not an oxidizer at the manufactured concentration. It may become an oxidizing liquid if concentrated by evaporation. Keep away from incompatible materials. May form corrosive sludge on prolonged storage.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Do not allow to dry out. Avoid high temperatures in combination with high pressures. Keep away from heat and direct sunlight. Keep from freezing. Keep away from incompatible materials. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment.
- Incompatible materials** : Strong acids, strong alkalis, chlorine, hypochlorites, chlorates. Incompatible with copper alloys, copper, and zinc. May be incompatible with some materials of construction.
- Hazardous decomposition products** : 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
URAN® (NITROGEN FERTILIZER SOLUTION)	LD50 Dermal	Rat - Male, Female	>5000 mg/kg	-
	LD50 Oral	Rat - Male, Female	2950 mg/kg	-
ammonium nitrate	LD50 Oral	Rat	2217 mg/kg	-
	LD50 Oral	Rat - Male, Female	14300 mg/kg	-
urea	LD50 Oral	Rat	>90 g/kg	-

- Conclusion/Summary** : Low acute toxicity. Nitrate based product. May be irritating to the digestive tract. May cause nausea, vomiting, diarrhea, and abdominal pain. May cause methemoglobinemia (a condition that interferes with the oxygen-carrying capacity of the blood) if ingested in large quantities or over a prolonged period of time. Persons with methemoglobinemia may have blue tinge color to lips, nails, and skin. Also they may have shortness of breath or trouble breathing. Persons more susceptible to methemoglobinemia include: very young (less than 3 months), the elderly, those with chronic obstructive pulmonary disease (COPD), anemia, coronary artery disease, recent surgery or infection, and those with a genetic deficiency of G-6-PD.

#### Irritation/Corrosion

**SECTION 11: Toxicological information**

Product/ingredient name	Result	Species	Score	Exposure	Observation
ammonium nitrate	Skin - Edema	Rabbit	0	-	72 hours
	Eyes - Edema of the conjunctivae	Rabbit	3	-	3 days
urea	Skin - Edema	Rabbit	0	-	72 hours

**Conclusion/Summary**

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

**Eyes** : Irritating to the eyes.

**Sensitization**

Product/ingredient name	Route of exposure	Species	Result
ammonium nitrate	skin	Mouse	Not sensitizing
urea	skin	Mouse	Not sensitizing

**Conclusion/Summary**

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

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

**Mutagenicity**

Product/ingredient name	Test	Experiment	Result
ammonium nitrate	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative
urea	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative

**Conclusion/Summary** : No known significant effects or critical hazards.

**Carcinogenicity**

Not available.

**Conclusion/Summary** : No known significant effects or critical hazards. Potential for nitrosamine formation if ingested. Do not ingest.

**Reproductive toxicity**

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
ammonium nitrate	Negative	Negative	Negative	Rat - Male, Female	Oral: 1500 mg/kg	-

**Conclusion/Summary** : No known significant effects or critical hazards.

**Teratogenicity**

Product/ingredient name	Result	Species	Dose	Exposure
ammonium nitrate	Negative - Oral	Rat - Female	1500 mg/kg	-

**Conclusion/Summary** : No known significant effects or critical hazards.

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

**SECTION 11: Toxicological information**

Not available.

**Aspiration hazard**

Not available.

**Information on the likely routes of exposure** : Routes of entry anticipated: Dermal. Eye contact.

**Potential acute health effects**

**Eye contact** : Causes eye irritation.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : Nitrate based product. May be irritating to mouth, throat and stomach. Over-exposure by ingestion is unlikely under normal working conditions.

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

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

**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
stomach pains  
diarrhea

**Delayed and immediate effects and also chronic effects from short and long term exposure****Short term exposure**

**Potential immediate effects** : See above.  
**Potential delayed effects** : See above.

**Long term exposure**

**Potential immediate effects** : Methemoglobinemia (see Acute Health Effects).  
**Potential delayed effects** : See below.

**Potential chronic health effects**

Product/ingredient name	Result	Species	Dose	Exposure
ammonium nitrate	Chronic NOAEL Oral	Rat - Male, Female	256 mg/kg	12 months Continuous
urea	Chronic NOAEL Oral	Rat - Male, Female	2250 mg/kg	12 months Continuous

**Conclusion/Summary** : Adverse chronic health effects are associated with high level exposures.  
**General** : See above.  
**Carcinogenicity** : Potential for nitrosamine formation if ingested. Do not ingest.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Reproductive toxicity** : No known significant effects or critical hazards.

**SECTION 11: Toxicological information****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)
URAN® (NITROGEN FERTILIZER SOLUTION)	2950	N/A	N/A	N/A	N/A
ammonium nitrate	2217	N/A	N/A	N/A	N/A
urea	14300	N/A	N/A	N/A	N/A

**Other information** : Not available.

**SECTION 12: Ecological information****Toxicity**

Product/ingredient name	Result	Species	Exposure
URAN® (NITROGEN FERTILIZER SOLUTION)	NOEC >1700 mg/l Marine water	Algae	10 days
ammonium nitrate	Acute EC50 490 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 447 mg/l Fresh water	Fish	48 hours
urea	NOEC >1700 mg/l	Algae	10 days
	Acute EC50 490 mg/l	Daphnia	48 hours
	Chronic NOEC 6 to 12 mg/l Fresh water	Crustaceans - Cladocera	21 days
	Acute EC50 6573.1 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute EC50 3910000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 22500 mg/l	Fish - Tilapia - Fry	48 hours
	Chronic NOEC 2 g/L Fresh water	Fish - Heteropneustes fossilis	30 days

**Conclusion/Summary** : May be harmful to the environment if released in large quantities. Excessive nutrient runoff to a body of water may result in eutrophication.

**Persistence and degradability**

**Conclusion/Summary** : Readily biodegradable

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ammonium nitrate	-	-	Readily

**Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
urea	<-1.73	-	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

	<b>DOT Classification</b>	<b>TDG Classification</b>	<b>Mexico Classification</b>	<b>IMDG</b>	<b>IATA</b>
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-	-
<b>Packing group</b>	-	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.	No.

### Additional information

**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.

## SECTION 15: Regulatory information

### 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.

**SECTION 15: Regulatory information****UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Europe</b>	: All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL):</b> All components are listed or exempted. <b>Japan inventory (ISHL):</b> Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: All components are listed or exempted.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: All components are listed or exempted.

**SECTION 16: Other information****History**

<b>Date of issue/Date of revision</b>	: 3/31/2022
<b>Date of previous issue</b>	: 3/31/2022
<b>Version</b>	: 1

<b>Key to abbreviations</b>	: ATE = Acute Toxicity Estimate 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 SGG = Segregation Group UN = United Nations
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**Procedure used to derive the classification**

<b>Classification</b>	<b>Justification</b>
ACUTE TOXICITY (oral) - Category 5 EYE IRRITATION - Category 2B	On basis of test data Weight of evidence

Indicates information that has changed from previously issued version.

**Notice to reader**

## SECTION 16: Other information

Supply chain partners must ensure they pass this SDS, and all other relevant safety information to their customers.

### DISCLAIMER AND LIMITATION OF LIABILITY

The information and recommendations contained in this Safety Data Sheet ("SDS") relate only to the specific material referred to herein (the "Material") and do not relate to the use of such Material in combination with any other material or process. The information and recommendations contained herein are believed to be current and correct as of the date of this SDS. HOWEVER, THE INFORMATION AND RECOMMENDATIONS ARE PRESENTED WITHOUT WARRANTY, REPRESENTATION OR LICENSE OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THEIR ACCURACY, CORRECTNESS OR COMPLETENESS, AND THE SELLER, SUPPLIER AND MANUFACTURER OF THE MATERIAL AND THEIR RESPECTIVE AFFILIATES (COLLECTIVELY, THE "SUPPLIER") DISCLAIM ALL LIABILITY FOR RELIANCE ON SUCH INFORMATION AND RECOMMENDATIONS. This SDS is not a guarantee of safety. A buyer or user of the Material (a "Recipient") is responsible for ensuring that it has all current information necessary to safely use the Material for its specific purpose.

FURTHERMORE, THE RECIPIENT ASSUMES ALL RISK IN CONNECTION WITH THE USE OF THE MATERIAL. THE RECIPIENT ASSUMES ALL RESPONSIBILITY FOR ENSURING THE MATERIAL IS USED IN A SAFE MANNER IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL, HEALTH, SAFETY AND SECURITY LAWS, POLICIES AND GUIDELINES. THE SUPPLIER DOES NOT WARRANT THE MERCHANTABILITY OF THE MATERIAL OR THE FITNESS OF THE MATERIAL FOR ANY PARTICULAR USE AND ASSUMES NO RESPONSIBILITY FOR INJURY OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY OR RELATED TO THE USE OF THE MATERIAL.