

# SAFETY DATA SHEET

## AMMONIUM POLYPHOSPHATE SOLUTION

### Section 1. Identification

**Product identifier** : AMMONIUM POLYPHOSPHATE SOLUTION  
**Product code** : POLY10, POLY11, 1522-32047, 2517-32048  
**SDS #** : 216  
**Other means of identification** : APP 10-34-0; APP 11-37-0; COMPEN; POLY  
**Product type** : Liquid.

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

<b>Identified uses</b>
Fertilizer. Fertilizer blend component. For further manufacture of feed. Industrial use.
<b>Uses advised against</b>
Not to be used as an ingredient for human food.

**Supplier's details** : PCS Sales (USA), Inc. (A Subsidiary of Nutrien Ltd.)  
Suite 150  
500 Lake Cook Road  
Deerfield, IL 60015  
United States  
  
Nutrien US LLC (A Subsidiary of Nutrien Ltd.)  
5296 Harvest Lake Dr.  
Loveland, CO 80538  
United States

**Telephone no.** : 1-800-524-0132  
**Email** : sds@nutrien.com

**Emergency telephone number (with hours of operation)** : CHEMTREC (24 hrs) 1-800-424-9300 or +1-703-527-3887

### 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** : EYE IRRITATION - Category 2B

#### GHS label elements

**Hazard pictograms** : Not applicable.  
**Signal word** : Warning  
**Hazard statements** : Causes eye irritation.

#### Precautionary statements

**General** : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

## Section 2. Hazards identification

- Prevention** : Wash thoroughly after handling.
- Response** : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.
- Storage** : Not applicable.
- Disposal** : Not applicable.
- Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	% (w/w)	CAS number
ammonium polyphosphate	70 - 72	68333-79-9
water	< 20	7732-18-5
ammonium dihydrogenorthophosphate	< 10	7722-76-1
diammonium hydrogenorthophosphate	< 10	7783-28-0

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.**

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

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : 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 15 minutes. Get medical attention if irritation occurs.
- 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** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- 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. 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. Never give anything by mouth to an unconscious person.

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

#### 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** : May be harmful if swallowed. Over-exposure by ingestion is unlikely under normal working conditions.

#### Over-exposure signs/symptoms

## Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:  
irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. 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. Fire-fighting 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** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
nitrogen oxides

**Special protective actions for fire-fighters** : No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Contain and collect the water used to fight the fire for later treatment and disposal.

**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. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see Section 9).
- 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).

## Section 6. Accidental release measures

### Methods and materials for containment and cleaning up

- Small spill** : Put on appropriate personal protective equipment (see Section 8). Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Dispose of via a licensed waste disposal contractor.
- Large spill** : 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.
- 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. Store in original container or corrosive-resistant and/or lined container. May be corrosive to metals. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Use appropriate containment to avoid environmental contamination. Incompatible with: aluminum, copper, zinc and their alloys, including brass, bronze and galvanized materials. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

None.

#### Biological exposure indices

No exposure indices known.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

- 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 supplier to verify the compatibility of the equipment for the intended purpose.

## 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.
- 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. Recommended: Use slip resistant footwear.
- 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.  
For U.S. work sites where respiratory protection is required, ensure that a respiratory protection program meeting 29 CFR 1910.134 requirements is in place.

## 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.
- Color** : Green to Brown.
- Odor** : Odorless.
- Odor threshold** : Not available.
- pH** : 6
- Melting point/freezing point** : <-12°C (<10.4°F)
- Boiling point, initial boiling point, and boiling range** : Not available.
- Flash point** : Not applicable.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** :

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

Ingredient name	Vapor Pressure at 20°C (68°F)			Vapor pressure at 50°C (122°F)		
	mm Hg	kPa	Method	mm Hg	kPa	Method
water	17.5	2.3				

<b>Relative vapor density</b>	: Not available.
<b>Relative density</b>	: 1.45
<b>Solubility in water</b>	: Soluble in water in any proportion.
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.
<b>Auto-ignition temperature</b>	: Not applicable.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Not available.
<b>Particle characteristics</b>	
<b>Median particle size</b>	: Not applicable.

## 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.
<b>Conditions to avoid</b>	: Keep away from incompatible materials.
<b>Incompatible materials</b>	: Aluminium, copper, zinc and their alloys, including brass, bronze and galvanized materials. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment.
<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
water ammonium dihydrogenorthophosphate	LD50 Oral	Rat	>90 g/kg	-
	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5 mg/l	4 hours
	LD50 Dermal	Rat - Male, Female	>5000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>2000 mg/kg	-
diammonium hydrogenorthophosphate	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5 mg/l	4 hours
	LD50 Dermal	Rat - Male, Female	>5000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>2000 mg/kg	-

## Section 11. Toxicological information

Female

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
diammonium hydrogenorthophosphate	Eyes - Cornea opacity	Rabbit	0	72 hours	-
	Skin - Edema	Rabbit	0	72 hours	-

### Conclusion/Summary

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

**Eyes** : Causes eye irritation.

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

### Sensitization

Product/ingredient name	Route of exposure	Species	Result
diammonium hydrogenorthophosphate	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 dihydrogenorthophosphate	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
diammonium hydrogenorthophosphate	OECD 471 Bacterial Reverse Mutation Test	Subject: Bacteria	Negative

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

### Carcinogenicity

Not available.

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

### Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
ammonium dihydrogenorthophosphate	Negative	Negative	Negative	Rat - Male, Female	Oral: >1500 mg/kg	-
diammonium hydrogenorthophosphate	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 dihydrogenorthophosphate	Negative - Oral	Rat - Male, Female	>1500 mg/kg	-

### 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** : 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** : May be harmful if swallowed. 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** : No specific data.

### 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 below.

#### Long term exposure

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

#### Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
ammonium dihydrogenorthophosphate	Chronic NOAEL Oral	Rat - Male, Female	250 mg/kg	-
diammonium hydrogenorthophosphate	Chronic NOAEL Oral	Rat - Male, Female	250 mg/kg	-

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



## Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
AMMONIUM POLYPHOSPHATE SOLUTION	2500	N/A	N/A	N/A	N/A
ammonium dihydrogenorthophosphate	2500	N/A	N/A	N/A	N/A
diammonium hydrogenorthophosphate	2500	N/A	N/A	N/A	N/A

**Other information** : Not available.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
ammonium polyphosphate	Acute EC50 90890 µg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 >500 mg/l	Fish	96 hours
	Acute LC50 70000 µg/l Fresh water	Fish - <i>Oncorhynchus tshawytscha</i> - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
ammonium dihydrogenorthophosphate	Acute EC50 >97.1 mg/l	Aquatic plants	72 hours
	Acute LC50 1790 mg/l Fresh water	Daphnia	72 hours
diammonium hydrogenorthophosphate	Acute LC50 >85.9 mg/l Fresh water	Fish	96 hours
	Acute LC50 1700 mg/l Fresh water	Fish - <i>Cirrhinus mrigala</i> /L. <i>Rohita</i> - Fry	96 hours
	Acute LC50 26500 µg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours

**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** : Not persistent.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ammonium polyphosphate	-	-	Readily
water	-	-	Readily
ammonium dihydrogenorthophosphate	-	-	Readily
diammonium hydrogenorthophosphate	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
water	-1.38	-	Low
ammonium dihydrogenorthophosphate	<1	-	Low

### Mobility in soil

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

## Section 12. Ecological information

**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	TDG Classification	IMDG	IATA
<b>UN number</b>	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.

**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

### 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>Eurasian Economic Union</b>	: <b>Russian Federation inventory</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.
<b>U.S. Federal regulations</b>	: <b>TSCA 8(a) CDR Exempt/Partial exemption</b> : Not determined

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : 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 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : EYE IRRITATION - Category 2B

### SARA 313

	<b>Product name</b>	<b>CAS number</b>	<b>%</b>
<b>Form R - Reporting requirements</b>	ammonium dihydrogenorthophosphate	7722-76-1	< 10
	diammonium hydrogenorthophosphate	7783-28-0	< 10
<b>Supplier notification</b>	ammonium dihydrogenorthophosphate	7722-76-1	< 10
	diammonium hydrogenorthophosphate	7783-28-0	< 10

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

<b>Massachusetts</b>	: None of the components are listed.
<b>New York</b>	: None of the components are listed.
<b>New Jersey</b>	: None of the components are listed.
<b>Pennsylvania</b>	: None of the components are listed.

## Section 15. Regulatory information

### [California Prop. 65](#)

**⚠ WARNING:** This product can expose you to cadmium, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## Section 16. Other information

### [History](#)

**Date of issue/Date of revision** : 5/15/2024

**Date of previous issue** : 7/11/2023

**Version** : 4.2

### [Key to abbreviations](#)

: 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

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

Classification	Justification
EYE IRRITATION - Category 2B	Calculation method

**✔** Indicates information that has changed from previously issued version.

### [Notice to reader](#)

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.**