SAFETY DATA SHEET

(MAP) MONOAMMONIUM PHOSPHATE

Section 1. Identification

Product identifier : (MAP) MONOAMMONIUM PHOSPHATE

Product code : MAP, MAPOS

SDS # : 201

Other means of identification : Phosphoric acid, monoammonium salt; Ammonium dihydrogen phosphate

Product type : Solid.

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

Identified uses
Fertilizer. Manufacture of specialty fertilizers. Manufacture of chemical products.

Uses advised against
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

PCS Sales (Canada), Inc. (A Subsidiary of Nutrien Ltd.)
Suite 1700
211 - 19th Street East
Saskatoon SK S7K 5R6
Canada

Telephone no.: : 1-800-524-0132

Email : sds@nutrien.com

Emergency telephone number (with hours of operation) : Nutrien North American
24 HOUR EMERGENCY TELEPHONE NUMBERS:

English:
Transportation Emergencies: 1-800-792-8311
Medical Emergencies: 1-303-389-1653

French or Spanish:
Transportation or Medical Emergencies: 1-303-389-1654

Section 2. Hazard identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Hazard pictograms :

Section 2. Hazard identification

Not applicable.

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

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.

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

CAS number/other identifiers

CAS number : 7722-76-1

Ingredient name	% (w/w)	CAS number
ammonium dihydrogenorthophosphate	80 - 90	7722-76-1
ammonium sulfate	3 - 5	7783-20-2
calcium sulfate, dihydrate	1 - 2	10101-41-4

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 and keep comfortable for breathing. If exposed person is not breathing, give artificial respiration or oxygen applied by trained personnel. Get medical attention if symptoms occur. 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.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

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 symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : May cause irritation due to mechanical action.

Section 4. First-aid measures

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact : May cause irritation due to mechanical action.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

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

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
redness

Ingestion : No specific data.

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

Notes to physician : Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 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 : Treat symptomatically and supportively. If necessary, veterinary advice may be obtained by calling the Medical Emergency number in Section 1.

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 : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

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

Hazardous thermal decomposition products : Decomposition products may include the following materials:
nitrogen oxides
sulfur oxides
phosphorus oxides
ammonia

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.

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. 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 adverse impacts (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Put on appropriate personal protective equipment (see Section 8). Move containers from spill area. Recover the material and use it for the intended purpose.
or
Place spilled material in a designated, labeled waste container. 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 dust.

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. May form steep piles that can collapse without warning when transported or stored in bulk. This may damage equipment and endanger workers. The risk of cliffing and sudden collapse increases if product is loaded or stored when hot or in high humidity conditions. Avoid forming steep slopes when removing product. If product has caked, cliffed, or has adhered to the storage or transport container, stay out of the potential engulfment zone in case the material collapses. Do not enter bins, railcars or trucks without conducting a risk assessment and following all confined space entry requirements. Ensure that consideration is given to fall protection and mobile equipment securement if applicable. Carefully loosen the set product from outside the container using mechanical vibration, sledge hammers, or other devices.

Ensure that bulk bags or smaller packaged products stored in tiers are stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, rolling, or collapse. Use caution when opening truck or railcar doors as product may have shifted during transport.

Must be stored in a dry location. Absorbs moisture on long-term storage under high

Section 7. Handling and storage

humidity conditions. Store away from incompatible materials (see Section 10). When product is stored in sealable containers, keep container tightly closed and sealed until ready for use. Sealable containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
ammonium dihydrogenorthophosphate	**OSHA PEL** (United States). TWA: 5 mg/m³, (Particulates not otherwise regulated (PNOR)) 8 hours. Form: Respirable fraction TWA: 15 mg/m³, (Particulates not otherwise regulated (PNOR)) 8 hours. Form: Total dust **CA Quebec Provincial.** (Canada). TWA: 10 mg/m³, (Particulates not otherwise regulated (PNOR)) 8 hours. Form: Total dust
calcium sulfate, dihydrate	**ACGIH TLV (United States, 3/2020).** TWA: 10 mg/m³ 8 hours. Form: Inhalable fraction **British Columbia Provincial:** (Canada, 1/2020). TWA: 10 mg/m³ 8 hours. Form: Inhalable **CA Ontario Provincial (Canada, 6/2019).** TWA: 10 mg/m³ 8 hours. Form: Inhalable particulate matter. **CA Alberta Provincial:** (Canada, 6/2018). 8 hrs OEL: 10 mg/m³ 8 hours.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Ensure proper process control to avoid discharge (temperature, pressure concentration, pH value, time).

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: safety glasses with side-shields.

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.

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.

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 : Solid. [Granular solid.]

Color : Black to Brown to Light green

Odor : Odorless.

Odor threshold : Not available.

pH : 4 to 6 [Conc. (% w/w): 10%]

Melting point/freezing point : 190°C (374°F)

Boiling point, initial boiling point, and boiling range : Decomposes

Flash point : Not applicable.

Evaporation rate : Not available.

Flammability : Non-flammable substance.

Lower and upper explosion limit/flammability limit : Not applicable.

Vapor pressure : <0 kPa (<0 mm Hg)

Relative vapor density : Not applicable.

Relative density : 2.2 [Variable.]

Bulk density : 60 to 69 lb/ft3; 961 to 1105 kg/m3

Solubility : Soluble in the following materials: cold water and hot water.

Solubility in water : 328 g/l

Partition coefficient: n-octanol/water : <1

Auto-ignition temperature : Not applicable.

Decomposition temperature : >190°C (>374°F)

Viscosity : Not applicable.

Particle characteristics

Median particle size : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

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 : Absorbs moisture on long-term storage under high humidity conditions. Keep away from incompatible materials.

Incompatible materials : Acids, alkalis, oxidizing agents, halogenated compounds. Hydrogen peroxide. Chlorinated hydrocarbon. Fluorine. Nitric acid. Sulfuric acid.

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
ammonium dihydrogenorthophosphate	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	-
ammonium sulfate	LD50 Oral	Rat	2840 mg/kg	-
calcium sulfate, dihydrate	LD50 Oral	Rat - Female	>2000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
calcium sulfate, dihydrate	Skin - Edema	Rabbit	0	-	72 hours
	Eyes - Edema of the conjunctivae	Rabbit	0	-	72 hours
	Eyes - Cornea opacity	Rabbit	0	-	72 hours
	Eyes - Iris lesion	Rabbit	0	-	72 hours

Conclusion/Summary

Skin : No known significant effects or critical hazards.

Eyes : May cause irritation due to mechanical action.

Respiratory : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Sensitization

Not available.

Conclusion/Summary

Skin : No known significant effects or critical hazards.

Respiratory : No known significant effects or critical hazards.

Mutagenicity

Section 11. Toxicological information

Product/ingredient name	Test	Experiment	Result
ammonium dihydrogenorthophosphate	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.

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	-

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	-

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

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

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

Potential acute health effects

Eye contact : May cause irritation due to mechanical action.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact : May cause irritation due to mechanical action.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

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

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
redness

Ingestion : No specific data.

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

Section 11. Toxicological information

Short term exposure

Potential immediate effects : See above.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : See above.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

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

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

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

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
(MAP) MONOAMMONIUM PHOSPHATE ammonium dihydrogenorthophosphate ammonium sulfate	2500 2500 2840	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
ammonium dihydrogenorthophosphate	Acute EC50 >97.1 mg/l Acute LC50 1790 mg/l Fresh water Acute LC50 >85.9 mg/l Fresh water	Aquatic plants Daphnia Fish	72 hours 72 hours 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

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

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
ammonium dihydrogenorthophosphate	<1	-	low

Section 12. Ecological information

Mobility in soil

Soil/water partition coefficient (K_{OC}) : 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. 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

	TDG	DOT	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Marine pollutant	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

Canadian lists

Canadian NPRI : The following components are listed: Total of ammonia (NH3 — CAS RN 7664-41-7) and the ammonium ion (NH4+ — CAS RN 14798-03-9) in solution, expressed as ammonia.; ammonia (total)

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Section 15. Regulatory information

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.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): Not determined.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Thailand : All components are listed or exempted.

Turkey : All components are listed or exempted.

United States : All components are active or exempted.

Viet Nam : All components are listed or exempted.

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined
Clean Water Act (CWA) 307: cadmium

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 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

No products were found.

Section 15. Regulatory information

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	ammonium dihydrogenorthophosphate ammonium sulfate	7722-76-1 7783-20-2	80 - 90 3 - 5
Supplier notification	ammonium dihydrogenorthophosphate ammonium sulfate	7722-76-1 7783-20-2	80 - 90 3 - 5

Aqueous ammonia from ammonium salts and other sources, dissociable in water; 10 percent of the total aqueous ammonia is reportable under this listing.

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

Massachusetts : The following components are listed: AMMONIUM SULFATE

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : The following components are listed: SULFURIC ACID DIAMMONIUM SALT

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.

Section 16. Other information

History

Date of issue/Date of revision : 4/6/2022

Date of previous issue : 3/26/2021

Version : 2.2

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
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

Not classified.

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

Section 16. Other information

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.