

DAP Diammonium Phosphate 18-46-0

Section 1. Identification

GHS product identifier : DAP Diammonium Phosphate 18-46-0
Other means of identification : Product code(s): 1527-25542; 1528-25542; 1689-25542
 Historic MSDS #: 03026
Product type : Solid.

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

| Identified uses | |
|---------------------------------------|------------------------|
| Fertilizers. Fire protection systems. | |
| Uses advised against | Reason |
| None. | Non-hazardous product. |

Supplier's details : Agrium Canada Partnership (A Subsidiary of Nutrien Ltd.)
 13131 Lake Fraser Drive, S.E.
 Calgary, Alberta, Canada, T2J 7E8

 Agrium U.S. Inc. (A Subsidiary of Nutrien Ltd.)
 5296 Harvest Lake Drive
 Loveland, CO 80538

 Company phone number (North America):
 1-800-403-2861 (Customer Service)

Emergency telephone number (with hours of operation) : Agrium North American 24 Hr 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. Hazards 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. This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS label elements

Hazard pictograms : **Not Applicable.**
No Applicable.
Non applicable.

Signal word : No signal word.

Hazard statements : Not applicable. 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.

Section 2. Hazards identification

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 : Not available.

| Ingredient name | % | CAS number |
|------------------------------------|---------|------------|
| Diammonium hydrogenorthophosphate | 70 - 85 | 7783-28-0 |
| Ammonium dihydrogen orthophosphate | 8 - 17 | 7722-76-1 |
| Ammonium sulfate | 1 - 4 | 7783-20-2 |

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 as hazardous to health or the environment 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** : May cause irritation due to mechanical action. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. If irritation persists, get medical attention.
- Inhalation** : Remove person to fresh air and keep comfortable for breathing. 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** : Wash with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- 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** : 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.

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

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.

Remark : Contain and collect the water used to fight the fire for later treatment and disposal.

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.

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. Vacuum or sweep up material and place 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. Recycle to process, if possible.
or
Vacuum or sweep up material and place in a designated, 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). Do not ingest. After handling, always wash hands thoroughly with soap and water.

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.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. May form steep piles that can collapse without warning when stored in bulk. Avoid forming steep slopes when removing product. 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 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. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

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

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.

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. If operating conditions cause high dust concentrations to be produced, use dust 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.

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. Cotton or cotton/synthetic overalls or coveralls are normally suitable.

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 : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Contact your personal protective equipment manufacturer to verify the compatibility of the equipment for the intended purpose. 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

Appearance

Physical state : Solid.

Color : Not available.

Odor : Odorless.

Odor threshold : Not available.

pH : Not available.

Section 9. Physical and chemical properties

| | |
|---|--|
| Melting point | : 189.85°C (373.7°F) |
| Boiling point | : Not available. |
| Flash point | : [Product does not sustain combustion.] |
| Evaporation rate | : Not applicable. |
| Flammability (solid, gas) | : Non-flammable. |
| Lower and upper explosive (flammable) limits | : Not applicable. |
| Vapor pressure | : 0 kPa (0 mm Hg) [room temperature] |
| Vapor density | : Not available. |
| Relative density | : 1.6 |
| Solubility | : Easily soluble in the following materials: hot water. Soluble in the following materials: cold water. |
| Solubility in water | : >100 g/l |
| Partition coefficient: n-octanol/water | : Not available. |
| Auto-ignition temperature | : Not available. |
| Decomposition temperature | : 155°C (311°F) |
| Viscosity | : Not available. |
| <u>Aerosol product</u> | |

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 | : No specific data. |
| Incompatible materials | : Incompatible with halogens, hydrogen peroxide, chlorinated hydrocarbons, fluorine, nitric acid, oxidizing agents and 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 |
|------------------------------------|---------------------------------|-------------------------|-------------|----------|
| 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 | - |
| Ammonium dihydrogen orthophosphate | LC50 Inhalation Dusts and mists | Rat - Male, Female | >5 mg/l | 4 hours |
| | LD50 Oral | Rat - Male, Female | >2000 mg/kg | - |
| Ammonium sulfate | LD50 Oral | Mouse - Male, Female | 3040 mg/kg | - |
| | LD50 Oral | Rat | 2840 mg/kg | - |
| | LD50 Oral | Rat - Male, Female | >2000 mg/kg | - |

Conclusion/Summary : Very low toxicity to humans or animals.

Section 11. Toxicological information

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|------------------------------------|--------|---------|-------|----------|-------------|
| Diammonium hydrogenorthophosphate | Skin | Rabbit | 0 | 72 hours | - |
| Ammonium dihydrogen orthophosphate | Eyes | Rabbit | 0 | 72 hours | - |
| | Skin | Rabbit | 0 | - | - |
| Ammonium sulfate | Eyes | Rabbit | 0 | - | - |
| | Skin | Rabbit | 0 | 20 hours | 24 hours |
| | Eyes | Rabbit | 0 | - | 72 hours |

Conclusion/Summary

- Skin** : Non-irritating to the skin.
Eyes : Non-irritating to the eyes.
Respiratory : Non-irritating (EU).

Sensitization

| Product/ingredient name | Route of exposure | Species | Result |
|------------------------------------|-------------------|------------|-----------------|
| Diammonium hydrogenorthophosphate | Skin | Mouse | Not sensitizing |
| Ammonium dihydrogen orthophosphate | Skin | Mouse | Not sensitizing |
| Ammonium sulfate | Skin | Guinea pig | Not sensitizing |

Conclusion/Summary

- Skin** : Non-sensitizer to skin.
Respiratory : Non-sensitizer to lungs.

Mutagenicity

| Product/ingredient name | Test | Experiment | Result |
|------------------------------------|--|--|----------|
| Diammonium hydrogenorthophosphate | 471 Bacterial Reverse Mutation Test | Subject: Bacteria | Negative |
| Ammonium dihydrogen orthophosphate | OECD 471 Bacterial Reverse Mutation Test | Subject: Bacteria | Negative |
| Ammonium sulfate | OECD 476 | Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic | Negative |
| | OECD 473 | Experiment: In vitro Subject: Mammalian-Animal Cell: Germ | Negative |

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

Carcinogenicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|------------------------|--------------------|------------|--------------------------|
| Ammonium sulfate | Negative - Oral - TCLo | Rat - Male, Female | 1288 mg/kg | 2 years; 7 days per week |

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

Classification

| Product/ingredient name | OSHA | IARC | NTP |
|-------------------------|-------|------|-----|
| Ammonium sulfate | None. | - | - |

Reproductive toxicity

| Product/ingredient name | Maternal toxicity | Fertility | Development toxin | Species | Dose | Exposure |
|------------------------------------|-------------------|-----------|-------------------|--------------------|----------------------|----------|
| Diammonium hydrogenorthophosphate | Negative | Negative | Negative | Rat - Male, Female | Oral: 1500 mg/kg | - |
| Ammonium dihydrogen orthophosphate | Negative | Negative | Negative | Rat - Male, Female | Oral: >1500 mg/kg | - |
| Ammonium sulfate | Negative | Negative | - | Mouse - Male, | Oral: | - |

Section 11. Toxicological information

| | | | | | | |
|--|--|--|--|--------|------------|--|
| | | | | Female | 5000 mg/kg | |
|--|--|--|--|--------|------------|--|

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

Teratogenicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|------------------------------------|-----------------|-----------------------|-------------|----------|
| Ammonium dihydrogen orthophosphate | Negative - Oral | Rat - Male, Female | >1500 mg/kg | - |
| Ammonium sulfate | Negative - Oral | Rat - Male, Female | 1500 mg/kg | - |

Conclusion/Summary : No teratogenic effect.

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 : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
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 : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

| Product/ingredient name | Result | Species | Dose | Exposure |
|------------------------------------|--------------------|-----------------------|-----------|---------------------------|
| Diammonium hydrogenorthophosphate | Chronic NOAEL Oral | Rat - Male, Female | 250 mg/kg | - |
| Ammonium dihydrogen orthophosphate | Chronic NOAEL Oral | Rat - Male, Female | 250 mg/kg | - |
| Ammonium sulfate | Chronic NOAEL Oral | Rat - Male, Female | 256 mg/kg | 52 weeks; 7 days per week |

General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|-----------------------------------|--|----------|
| Diammonium hydrogenorthophosphate Ammonium dihydrogen orthophosphate Ammonium sulfate | Acute LC50 1700 mg/l Fresh water | Fish - Cirrhinus mrigala/L. Rohita - Fry | 96 hours |
| | LC50 >85.9 mg/l Fresh water | Fish | 96 hours |
| | Acute LC50 2.6 mg/l Fresh water | Crustaceans - Ceriodaphnia dubia - Young | 48 hours |
| | Acute LC50 14000 µg/l Fresh water | Daphnia - Daphnia magna - Young | 48 hours |

Conclusion/Summary : Practically non-toxic to aquatic organisms.

Persistence and degradability

Not available.

Conclusion/Summary : According to EC criteria: Readily biodegradable

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-----------------------------------|-------------------|------------|------------------|
| Diammonium hydrogenorthophosphate | - | - | Readily |

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : 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

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

U.S. Federal Regulations: : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
This material is listed.

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 304 RQ : Not applicable.

SARA 311/312 Classification : Not applicable.

SARA 313

| | Product name | CAS number | % |
|--|----------------------------------|------------|-----|
| Form R - Reporting requirements | DAP Diammonium Phosphate 18-46-0 | 7783-28-0 | 100 |
| Supplier notification | DAP Diammonium Phosphate 18-46-0 | 7783-28-0 | 100 |

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

Section 15. Regulatory information

Not listed.

[International regulations](#)

[International lists](#)

[National inventory](#)

- Canada** : All components are listed or exempted.
Europe : This material is listed or exempted.

Section 16. Other information

[History](#)

Date of issue/Date of revision : 6/13/2018

Date of previous issue : 1/1/2018

Version : 1.5

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)
 UN = United Nations

References : Transportation of Dangerous Goods Act and Clear Language Regulations, current edition at time of SDS preparation, Transport Canada;
 Hazardous Products Act and Regulations, current revision at time of SDS preparation, Health Canada;
 Domestic Substances List, current revision at time of SDS preparation, Environment Canada;
 29 CFR Part 1910, current revision at time of SDS preparation, U.S. Occupational Safety and Health Administration;
 40 CFR Parts 1-799, current revision at time of SDS preparation, U.S. Environmental Protection Agency;
 49 CFR Parts 1-199, current revision at time of SDS preparation, U.S. Department of Transport;
 Mexican Official Standard NOM-018-STPS-2015, Harmonised System for the Identification and Communication of Hazards and Risks by Hazardous Chemicals in the Workplace;
 Mexican Official Standard NOM-002-SCT / 2011, List of the most commonly transported hazardous substances and materials;
 Threshold Limit Values for Chemical Substances, current edition at time of SDS preparation, American Conference of Governmental Industrial Hygienists;
 NFPA 400, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
 NFPA 704, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
 Corrosion Data Survey, Sixth Edition, 1985, National Association of Corrosion Engineers;
 ERG 2016, Emergency Response Guidebook, U.S. Department of Transport, Transport Canada, and the Secretariat of Transportation and Communications of Mexico
 Hazardous Substances Data Bank, current revision at time of SDS preparation, National Library of Medicine, Bethesda, Maryland
 Integrated Risk Information System, current revision at time of SDS preparation, U.S. Environmental Protection Agency, Washington, D.C.
 Pocket Guide to Chemical Hazards, current revision at time of SDS preparation, National Institute for Occupational Safety and Health, Cincinnati, Ohio ;
 Agency for Toxic Substances and Disease Registry Databank, current revision at time of SDS preparation, U.S. Department of Health and Human Services, Atlanta, Georgia
 National Toxicology Program, Report on Carcinogens, Division of the National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina.
 Registry of Toxic Effects of Chemical Substances. National Institute for Occupational Safety and Health, Cincinnati, Ohio
 The Fertilizer Institute, Product Toxicology Testing Program Results, TFI, Washington ,

Section 16. Other information

D.C., 2003

✔ Indicates information that has changed from previously issued version.

Notice to reader

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.**