

## 1. Identification

**Product identifier** PROTIVATE™ NU4-DRI

**Other means of identification** None.

**Recommended use** Seed Nutrition

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer/Supplier** Koch Agronomic Services, LLC  
 4111 E 37th St N  
 Wichita, KS 67220 US  
 kochmsds@kochind.com  
 1.866.863.5550

**Emergency** For Chemical Emergency  
 Call CHEMTREC day or night  
 USA/Canada - 1.800.424.9300  
 Mexico - 1.800.681.9531  
 Outside USA/Canada - 1.703.527.3887  
 (collect calls accepted)

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Serious eye damage/eye irritation Category 1  
 Specific target organ toxicity, repeated exposure Category 2 (Brain)

**OSHA defined hazards** Combustible dust

### Label elements



**Signal word** Danger

**Hazard statement** May form combustible dust concentrations in air. Causes serious eye damage. May cause damage to organs (Brain) through prolonged or repeated exposure.

### Precautionary statement

**Prevention** Prevent dust accumulation to minimize explosion hazard. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Do not breathe dust. Wear eye protection/face protection. Observe good industrial hygiene practices.

**Response** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish.

**Storage** Store away from incompatible materials.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	CAS number	%
Plant Based Polysaccharide	9005-25-8	< 60
Manganese sulfate monohydrate	10034-96-5	< 10
Zinc sulphate monohydrate	7446-19-7	< 5

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

This Safety Data Sheet is not a guarantee of product specification or NPK value(s). NPK content is on specified sales orders, customer invoices, or product specification sheets obtained from supplier.

Hydrated forms of chemical substances are exempt from the TSCA Inventory as mixtures. See the anhydrous form of the chemical substances for the TSCA Inventory.

#### 4. First-aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact** Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

**Ingestion** Rinse mouth. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed** Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Dusts may irritate the respiratory tract, skin and eyes. Coughing. Prolonged exposure may cause chronic effects.

**Indication of immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

**General information** If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

**Suitable extinguishing media** Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>). Apply extinguishing media carefully to avoid creating airborne dust.

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical** Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions** In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards** May form combustible dust concentrations in air.

#### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Use only non-sparking tools. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect dust using a vacuum cleaner equipped with HEPA filter. Prevent product from entering drains. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water. Retain and dispose of contaminated wash water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage****Precautions for safe handling**

Minimize dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Combustible dust clouds may be created where operations produce fine material (dust). Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA-654). Explosion-proof general and local exhaust ventilation. Do not breathe dust. Do not get this material in contact with eyes. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection****Occupational exposure limits****US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value	Form
Manganese sulfate monohydrate (CAS 10034-96-5)	Ceiling	5 mg/m <sup>3</sup>	
Plant Based Polysaccharide (CAS 9005-25-8)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.
		5 mg/m <sup>3</sup>	Respirable fraction.
Zinc oxide (CAS 1314-13-2)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		5 mg/m <sup>3</sup>	Fume.
		15 mg/m <sup>3</sup>	Total dust.

**US. OSHA Table Z-3 Permissible Exposure Limits (PEL) for Mineral Dusts (29 CFR 1910.1000)**

Components	Type	Value	Form
Plant Based Polysaccharide (CAS 9005-25-8)	TWA	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Zinc oxide (CAS 1314-13-2)	TWA	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

**US. ACGIH Threshold Limit Values (TLV)**

Components	Type	Value	Form
Manganese sulfate monohydrate (CAS 10034-96-5)	TWA	0.1 mg/m <sup>3</sup>	Inhalable fraction.
		0.02 mg/m <sup>3</sup>	Respirable fraction.
Plant Based Polysaccharide (CAS 9005-25-8)	TWA	10 mg/m <sup>3</sup>	
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m <sup>3</sup>	Respirable fraction.
	TWA	2 mg/m <sup>3</sup>	Respirable fraction.

**NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended**

Components	Type	Value
Manganese sulfate monohydrate (CAS 10034-96-5)	IDLH	500 mg/m <sup>3</sup>
Zinc oxide (CAS 1314-13-2)	IDLH	500 mg/m <sup>3</sup>

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
Manganese sulfate monohydrate (CAS 10034-96-5)	STEL	3 mg/m <sup>3</sup>	Fume.
	TWA	1 mg/m <sup>3</sup>	Fume.
Plant Based Polysaccharide (CAS 9005-25-8)	TWA	5 mg/m <sup>3</sup>	Respirable.
		10 mg/m <sup>3</sup>	Total
Zinc oxide (CAS 1314-13-2)	Ceiling	15 mg/m <sup>3</sup>	Dust.
	STEL	10 mg/m <sup>3</sup>	Fume.
	TWA	5 mg/m <sup>3</sup>	Fume.
		5 mg/m <sup>3</sup>	Dust.

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. Use only appropriately classified electrical equipment and powered industrial trucks. Provide eyewash station.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear safety glasses with side shields (or goggles) and a face shield.

**Skin protection****Hand protection**

Wear appropriate chemical resistant gloves.

**Skin protection****Other**

Wear suitable protective clothing. Use of an impervious apron is recommended.

**Respiratory protection**

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties****Appearance**

**Physical state** Solid.

**Form** Powder.

**Color** White

**Odor** Characteristic.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** Not available.

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Combustible dust.

**Upper/lower flammability or explosive limits**

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**Vapor pressure** Not available.

**Vapor density** Not available.

**Relative density** Not available.

**Solubility(ies)**

**Solubility (water)** Not available.

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Other information**

**Explosive properties** Not explosive.

**Oxidizing properties** Not oxidizing.

**10. Stability and reactivity**

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** Material is stable under normal conditions.

**Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.

**Conditions to avoid** Keep away from heat, sparks and open flame. Contact with incompatible materials. Minimize dust generation and accumulation.

**Incompatible materials** Strong oxidizing agents. Acids.

**Hazardous decomposition products** No hazardous decomposition products are known.

**11. Toxicological information****Information on likely routes of exposure**

**Inhalation** Dust may irritate respiratory system. Prolonged inhalation may be harmful.

**Skin contact** Dust or powder may irritate the skin.

**Eye contact** Causes serious eye damage.

**Ingestion** May cause discomfort if swallowed.

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

Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Dusts may irritate the respiratory tract, skin and eyes. Coughing.

**Information on toxicological effects**

**Acute toxicity** Not expected to be acutely toxic.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Manganese sulfate monohydrate (CAS 10034-96-5)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	2150 mg/kg
Plant Based Polysaccharide (CAS 9005-25-8)		
<b>Acute</b>		
<b>Dermal</b>		
LD50		> 5000 mg/kg
<b>Oral</b>		
LD50		> 50000 mg/kg
<b>Chronic</b>		
<b>Other</b>		
NOAEL		> 5000 mg/kg
Zinc oxide (CAS 1314-13-2)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rat	2000 mg/kg
<b>Inhalation</b>		
LC50	Rat	1.68 - 5.7 mg/l, 4 hours
<b>Oral</b>		
LD50	Mouse	2000 - 5000 mg/kg
	Rat	2000 - 5000 mg/kg
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Not listed.		
<b>NTP Report on Carcinogens</b>		
Not listed.		
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)</b>		
Not listed.		
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.	
<b>Specific target organ toxicity - single exposure</b>	Not classified.	
<b>Specific target organ toxicity - repeated exposure</b>	May cause damage to organs through prolonged or repeated exposure.	
<b>Aspiration hazard</b>	Not an aspiration hazard.	
<b>Chronic effects</b>	Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure.	

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Zinc oxide (CAS 1314-13-2)			
<b>Aquatic</b>			
Algae	EC50	Algae	> 0.69 - < 4.55 mg/l, 24 hours > 0.3 - < 1.94 mg/l, 96 hours
	NOEC	Algae	1.071 mg/l, 16 days
<i>Acute</i>			
Crustacea	EC50	Aquatic Invertebrates	> 1.27 - < 1.92 mg/l, 4 hours > 0.155 - < 100 mg/l, 48 hours > 0.14 - < 6 mg/l, 24 hours > 0.072 - < 0.103 mg/l, 96 hours
	LC50	Aquatic Invertebrates	> 0.37 - < 1.19 mg/l, 96 hours
Fish	EC50	Fish	> 2.065 - < 2.966 mg/l, 85 hours
	LC50	Fish	23.06 mg/l, 84 hours 0.33 mg/l, 95 hours > 0.112 - < 8.062 mg/l, 96 hours
Zinc sulphate monohydrate (CAS 7446-19-7)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	0.06 mg/l, 48 hours
Fish	LC50	Hirame, flounder (Paralichthys olivaceus)	< 10 mg/l, 96 hours

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

**Mobility in soil** No data available.

**Other adverse effects** No data available.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

**DOT**

<b>UN number</b>	UN3077
<b>UN proper shipping name</b>	Environmentally hazardous substances, solid, n.o.s. (Zinc oxide, Manganese sulfate monohydrate)
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	9
<b>Packing group</b>	III

**Environmental hazards****Marine pollutant** Yes**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

DOT (Road/Rail): Non-bulk shipments of this material are non-regulated for domestic ground transportation when they meet the requirements of 49 CFR 171.4(c).

**Special provisions** 8, 146, 335, A112, B54, IB8, IP3, N20, T1, TP33**Packaging exceptions** 155**Packaging non bulk** 213**Packaging bulk** 240**IATA****UN number** UN3077**UN proper shipping name** Environmentally hazardous substance, solid, n.o.s. (Zinc oxide, Manganese sulfate monohydrate)**Transport hazard class(es)****Class** 9**Subsidiary risk** -**Packing group** III**Environmental hazards** Yes**ERG Code** 9L**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**IMDG****UN number** UN3077**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Manganese sulfate monohydrate)**Transport hazard class(es)****Class** 9**Subsidiary risk** -**Packing group** III**Environmental hazards****Marine pollutant** Yes**EmS** F-A, S-F**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.**15. Regulatory information****US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Manganese sulfate monohydrate (CAS 10034-96-5) Listed.

Zinc oxide (CAS 1314-13-2) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Toxic Substances Control Act (TSCA)**

All components of the mixture on the TSCA 8(b) inventory are designated "active".

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes**Classified hazard categories** Serious eye damage or eye irritation  
Specific target organ toxicity (single or repeated exposure)

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Lead	7439-92-1	0 - 0.05
Manganese sulfate monohydrate	10034-96-5	< 10
Zinc oxide	1314-13-2	< 15
Zinc sulphate monohydrate	7446-19-7	< 5

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Manganese sulfate monohydrate (CAS 10034-96-5)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**US state regulations****US. Massachusetts RTK - Substance List**

Plant Based Polysaccharide (CAS 9005-25-8)

Zinc oxide (CAS 1314-13-2)

Zinc sulphate monohydrate (CAS 7446-19-7)

**US. New Jersey Worker and Community Right-to-Know Act**

Manganese sulfate monohydrate (CAS 10034-96-5)

Zinc oxide (CAS 1314-13-2)

Zinc sulphate monohydrate (CAS 7446-19-7)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Manganese sulfate monohydrate (CAS 10034-96-5)

Plant Based Polysaccharide (CAS 9005-25-8)

Zinc oxide (CAS 1314-13-2)

Zinc sulphate monohydrate (CAS 7446-19-7)

**US. Rhode Island RTK**

Plant Based Polysaccharide (CAS 9005-25-8)

Zinc oxide (CAS 1314-13-2)

**California Proposition 65**

**WARNING:** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision****Issue date** 21-December-2023**Revision date** -

**Version #**

01

**Further information**

Refer to:  
OSHA 3371-08 2009, Hazard Communication Guidance for Combustible Dusts  
NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids

**NFPA ratings**



**Disclaimer**

NOTICE: The information contained in this document is based on data considered to be accurate as of the preparation date of this Safety Data Sheet (SDS) and was prepared pursuant to applicable Government regulation(s). This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the above data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided about any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. Purchasers and users of the product are responsible for determining that this product is suitable for the intended use and application. No responsibility can be assumed by vendor for any damage or injury resulting from failure to adhere to recommended uses, or from any hazards inherent to the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product should explicitly advise their employees, agents, contractors and customers who will use the product of this SDS.