Material Safety Data Sheet

Zinc Metal Pigment

1 . Chemical product and company identification

Common name : **Zinc Metal Pigment**

Trade name : 4P16 ; 4P32 ; 4P64 ; 4P645 ; MP20 ; Larvik Super Extra ; Larvik Super Fine ; Larvik Standard 5 ; Larvik Standard 7 ; Larvik ZS ; EE/F ; EE/C ; EE/RS ; ZP90 ; Microfine ; GMQ; BZM-1; BZM-2; FMC, MC, MM, ERS

Material uses : Anti-corrosion paint
Manufacture of chemicals.

IPDS Code : 93682668

e-mail address of person responsible for this SDS : info.ipds@umicore.com

Validation date : 5/10/2013. United States

In case of emergency : For transport in the USA and Canada: 1-877 986 4267
For transport in Europe, Central- and South America, Israel and Africa (Non-Arabic speaking countries): +32 3 213 15 70
For transport in the Middle East (Israel excluded) & Arabic speaking Africa: +32 3 213 33 79
For transport in Asia and the Pacific (China excluded): +65 62 64 78 36
For transport in China: 400 88 71 190

Supplier or representative of supplier : Umicore Zinc Chemicals

Rue de Chênée 53
4031 Angleur
BE Belgium
Phone : +32 43666411

2 . Hazards identification

Physical state : Solid. [Very fine powder.]

Odor : Odorless.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview :

CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat. Contains material that can cause target organ damage.

Routes of entry : Not available.

Potential acute health effects

Eyes : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Skin : No known significant effects or critical hazards.

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

Ingestion : No known significant effects or critical hazards.

2 . Hazards identification

Potential chronic health effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / Reproductive toxicity : No known significant effects or critical hazards.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

Additional hazards : Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

SNUR Status :

3 . Composition/information on ingredients

Name	CAS number	%
Zinc. zinc oxide	7440-66-6 1314-13-2	94 - 98 <6

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.

4 . 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 10 minutes. Get medical attention if irritation occurs.

Skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation occurs.

Inhalation : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Ingestion : Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

5 . Fire-fighting measures

Flammability of the product : No specific fire or explosion hazard.

Hazardous combustion products : None.

Extinguishing media

Suitable : Use dry chemical, CO2 or sand.

Not suitable : Do not use water or foam.

5 . Fire-fighting measures

Special exposure hazards : 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. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Special protective equipment for fire-fighters : See Section 11 for more detailed information on health effects and symptoms. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards : Original packaging can be wetted using water for extinguishing surrounding fire in well ventilated areas.
Wetted powder will heat and release gases (hydrogen)
Isolate wetted packaging and powder from combustible materials and dry powder and store in an excellent ventilated area.
Avoid runoff to sewers.

Special remarks on explosion hazards : May present an explosion hazard when material is suspended in air in confined areas or equipment and subjected to spark, heat or flame.

6 . Accidental release measures

Personal precautions : 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. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

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 environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Large spill : Move containers from spill area. Approach release from upwind. Avoid creating dusty conditions and prevent wind dispersal. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, 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.

Small spill : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). 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. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid release to the environment. Refer to special instructions/safety data sheet. 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.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. 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.

Keep away from sources of ignition. Keep away from heat.

7 . Handling and storage

Additional information : Use explosion-proof electrical (ventilating, lighting and material handling) equipment.
Keep area clean and tidy.
Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame).
Keep container dry.

8 . Exposure controls/personal protection

Product name	Exposure limits
Zinc.	**ACGIH TLV (United States, 1/2009).** TWA: 10 mg/m³ 8 hours. Form: Inhalable; Particulates (Insoluble) Not Otherwise Specified (PNOS) TWA: 3 mg/m³ 8 hours. Form: Respirable; Particulates (Insoluble) Not Otherwise Specified (PNOS)
zinc oxide	**NIOSH REL (United States, 6/2009).** CEIL: 15 mg/m³ Form: Dust TWA: 5 mg/m³ 10 hours. Form: Dust and fumes STEL: 10 mg/m³ 15 minutes. Form: Fume **OSHA PEL 1989 (United States, 3/1989).** STEL: 10 mg/m³ 15 minutes. Form: Fume TWA: 5 mg/m³ 8 hours. Form: Fume TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours. Form: Fume TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust **ACGIH TLV (United States, 3/2012). Notes: Respirable fraction; see Appendix C, paragraph C. ACGIH 2003 Adoption** STEL: 10 mg/m³ 15 minutes. Form: Respirable fraction TWA: 2 mg/m³ 8 hours. Form: Respirable fraction

Consult local authorities for acceptable exposure limits.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

Eyes : 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 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. 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.
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.

Respiratory : 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.

8 . Exposure controls/personal protection

Personal protective equipment (Pictograms) :

Hygiene measures

General information : Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.

9 . Physical and chemical properties

Physical state and Appearance : Solid. [Very fine powder.]

Color : Gray.

Odor : Odorless.

Boiling/ condensation point : 908°C (1666.4°F)

Melting/freezing point : 420°C (788°F)

Relative density : 7.14

VOC : 0 % (w/w)

Oxidizing properties : Not available.

Solubility : Insoluble in the following materials: cold water.

Flammability of the product : May be combustible at high temperature.

10 . Stability and reactivity

Stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Materials to avoid : Reactive or incompatible with the following materials: oxidizing materials and acids.
Use explosion-proof electrical (ventilating, lighting and material handling) equipment.
Keep area clean and tidy.
Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame).
Keep container dry.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Conditions of reactivity : May present an explosion hazard when material is suspended in air in confined areas or equipment and subjected to spark, heat or flame.
Highly flammable in the presence of the following materials or conditions: oxidizing materials.
Original packaging can be wetted using water for extinguishing surrounding fire in well ventilated areas.
Wetted powder will heat and release gases (hydrogen)
Isolate wetted packaging and powder from combustible materials and dry powder and store in an excellent ventilated area.
Avoid runoff to sewers.

11 . Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Zinc.	LD50 Oral	Rat	>2000 mg/kg	-
zinc oxide	LC50 Inhalation Dusts and mists	Rat	>5700 mg/m³	4 hours
	LD50 Oral	Rat	15000 mg/kg	-
Zinc Metal Pigment	LC50 Inhalation Dusts and mists	Rat	>5.4 mg/l	4 hours
	LD50 Oral	Rat	>2000 mg/kg	-

Chronic toxicity

Product/ingredient name	Result	Species	Dose	Exposure

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation

Not available.

Skin : Non-irritating to the skin.

Eyes : Non-irritating to the eyes.

Respiratory : Based on the read-across from ZnO, the product is not a skin or respiratory sensitizer

Sensitizer

Product/ingredient name	Route of exposure	Species	Result

Not available.

Skin : Not sensitizing

Respiratory : Not sensitizing

Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure

Not available.

Conclusion/Summary : Based on read across from ZnSO4: No data indicating any concern for carcinogenicity. No classification required.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA

Not available.

Mutagenicity

Product/ingredient name	Test	Experiment	Result

Not available.

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure

Not available.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure

Not available.

Conclusion/Summary : Based on read across from ZnO: No classification required.

11 . Toxicological information

Chronic effects on humans : Contains material which causes damage to the following organs: lungs, upper respiratory tract.

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material to humans.

Sensitization

Ingestion : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Eyes : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Skin : No known significant effects or critical hazards.

12 . Ecological information

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Zinc.	-	Acute EC50 0.572 mg/l Marine water	Algae - Green algae - Ulva pertusa	96 hours
	-	Acute EC50 354 µg/l Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute LC50 238 to 269 µg/l Fresh water	Fish - Fathead minnow - Pimephales promelas - Newly or recently hatched	96 hours
	-	Acute LC50 0.41 mg/l Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	-	Chronic EC10 27.3 µg/l Fresh water	Algae - Green algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	-	Chronic EC10 59.2 µg/l Fresh water	Daphnia - Water flea - Daphnia magna	21 days
	-	Chronic NOEC 72.9 µg/l Fresh water	Algae - Green algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	-	Chronic NOEC 9 mg/l Fresh water	Aquatic plants - Coontail - Ceratophyllum demersum	3 days
	-	Chronic NOEC 178 µg/l Marine water	Crustaceans - Rockpool prawn - Palaemon elegans	21 days

12 . Ecological information

	-	Chronic NOEC 2.6 µg/l Fresh water	Fish - common carp - Cyprinus carpio	4 weeks
zinc oxide	(growth rate)	Acute EC50 0. 17 mg/l	Algae - Selenastrum Capricornutum	72 hours
	OECD	Acute EC50 1 mg/l Fresh water	Daphnia - Water flea - Daphnia magna - Neonate	48 hours
	-	Acute LC50 320 ppm Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
	-	Acute LC50 1.1 to 2.5 ppm Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	-	Chronic NOEC 0.017 mg/l Fresh water	Algae - Green algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours

Biodegradability

Product/ingredient name	Test	Result	Dose	Inoculum
Not available.				

Environmental precautions : Water polluting material. May be harmful to the environment if released in large quantities.

Mobility : Not available.

Other adverse effects : No known significant effects or critical hazards.

13 . Disposal considerations

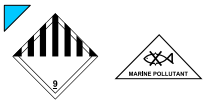
Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
This product is recyclable. Consideration of disposal via this route should be given.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

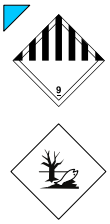
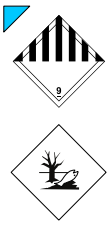
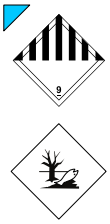
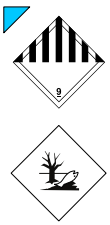
The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN3077	Environmentally hazardous substance, solid, n.o.s. (Zinc., mixture) RQ(zinc powder - zinc dust stabilised master C (transport class 4 removed))	9	III		**Reportable quantity** 1041.7 lbs / 472.92 kg The classification of the product is due solely to the presence of one or more US DOT-listed 'Hazardous substances' that are subject to reportable quantity requirements and only applies to shipments of packages greater than, or equal to, the product reportable quantity. Package sizes less than the product reportable quantity are not regulated as hazardous materials. **Limited quantity** Yes. **Special provisions** 8, 146, 335, B54, IB8, IP3, N20, T1, TP33
TDG Classification	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N. O.S. (Zinc., zinc oxide). Marine pollutant (Zinc., zinc oxide)	9	III		**Explosive Limit and Limited Quantity Index** 5 **Special provisions** 16

14 . Transport information

Mexico Classification	UN3077	SUBSTANCIA SOLIDA POTENCIALMENTE PELIGROSA PARA EL MEDIO AMBIENTE, N.E.P. (Zinc., zinc oxide). Marine pollutant (Zinc., zinc oxide)	9	III		**Special provisions** 179, 274
ADR/RID Class	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc., zinc oxide)	9	III		**Hazard identification number** 90 **Limited quantity** 5 kg **Special provisions** 274 335 601 **Tunnel code** (E)
IMDG Class	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc., zinc oxide). Marine pollutant (Zinc., zinc oxide)	9	III		**Emergency schedules (EmS)** F-A, S-F
IATA-DGR Class	UN3077	Environmentally hazardous substance, solid, n.o.s. (Zinc., zinc oxide)	9	III		**Passenger and Cargo Aircraft** Quantity limitation: 400 kg Packaging instructions: 956 **Cargo Aircraft Only**Quantity limitation: 400 kg Packaging instructions: 956 **Limited Quantities - Passenger Aircraft**Quantity limitation: 30 kg Packaging instructions: Y956

Remarks : The product qualities covered by this MSDS have been tested according to the criteria for classes 4. 1, 4.2 and 4.3. The test results show that these qualities don't meet the criteria for classification as dangerous goods in the classes 4.1, 4.2 or 4.3 for transport: BAM, 2005 Report II.2-916/04.

Remarks : DOT classification applies only if at least one RQ relevant substance equals or exceeds it's RQ-threshold. Only substances indicated by a quantity in lbs/kg are RQ relevant. The RQ is limited to pieces of the metal having a diameter smaller than 100 micrometers (0.004 inches)

15 . Regulatory information

HCS Classification : Target organ effects

U.S. Federal regulations :
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.
SARA 302/304: No products were found.
SARA 311/312 Hazards identification: Delayed (chronic) health hazard
Clean Water Act (CWA) 307: Zinc.; zinc oxide

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements :	Zinc.	7440-66-6	94 - 98
	zinc oxide	1314-13-2	<6
Supplier notification :	Zinc.	7440-66-6	94 - 98
	zinc oxide	1314-13-2	<6

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

State regulations :
Connecticut Carcinogen Reporting: None of the components are listed.
Connecticut Hazardous Material Survey: None of the components are listed.
Florida substances: None of the components are listed.
Illinois Chemical Safety Act: None of the components are listed.
Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed.
Louisiana Reporting: None of the components are listed.
Louisiana Spill: None of the components are listed.
Massachusetts Spill: None of the components are listed.
Massachusetts Substances: The following components are listed: ZINC; ZINC OXIDE FUME
Michigan Critical Material: None of the components are listed.
Minnesota Hazardous Substances: None of the components are listed.
New Jersey Hazardous Substances: The following components are listed: ZINC; ZINC OXIDE
New Jersey Spill: None of the components are listed.
New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.
New York Acutely Hazardous Substances: The following components are listed: Zinc
New York Toxic Chemical Release Reporting: None of the components are listed.
Pennsylvania RTK Hazardous Substances: The following components are listed: ZINC; ZINC OXIDE (ZNO)
Rhode Island Hazardous Substances: None of the components are listed.

Canada inventory : All components are listed or exempted.

EU regulations

Hazard symbol or symbols :

Risk phrases : R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases : S60- This material and its container must be disposed of as hazardous waste.
S61- Avoid release to the environment. Refer to special instructions/safety data sheet.

15 . Regulatory information

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: At least one component is not listed.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): At least one component is not listed.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): At least one component is not listed.

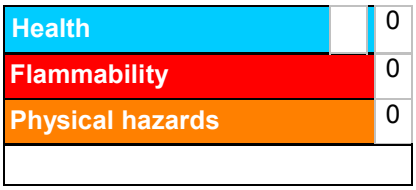
Canada : **CEPA Toxic substances**: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: Zinc (and its compounds); Zinc (and its compounds)
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

USA : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.

16 . Other information

Label requirements : CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

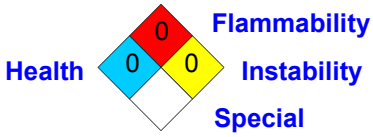
Hazardous Material Information System (U.S.A.) :



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



Date of issue : 5/10/2013.
Date of previous issue : 10/31/2012.
Version : 16.01

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained in this Material Safety Data Sheet is accurate and reliable on presently available resources. However, neither the seller nor any of its subsidiaries assumes any responsibility or liability whatsoever for the accuracy or completeness of the information contained herein.

This Material Safety Data Sheet shall not constitute a guarantee for any specific product features. Final determination of suitability of this material is the sole responsibility of the user.

All materials may present unknown hazards and should be used and handled with caution and following reasonable safety procedures. Consequently the buyer assumes all risks in connection with the use and handling of this material.