

### TIO2 PVC DISPERSION

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# SAFETY DATA SHEET

### **TIO2 PVC DISPERSION**

### **Section 1. Identification**

**GHS product identifier** : TIO2 PVC DISPERSION

Chemical name: MixtureCAS number: MixtureOther means of identification: FO20029295

**Product type** : solid

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

**Product use** : Industrial applications. Plastics.

Supplier's details : AVIENT CORPORATION

1675 Navarre Road SW, Massillon,

Ohio USA 44646

1 330 837 8679

**Emergency telephone number** (with hours of operation)

CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or

accident).

### Section 2. Hazards identification

This mixture has not been evaluated as a whole for health effects. All ingredients are bound in a PVC polymer matrix and potential for hazardous exposure as shipped is minimal. PVC resin is manufactured from Vinyl Chloride Monomer (VCM). PVC resin manufacturers take special efforts to strip residual VCM from their resins. Residual VCM in the resin is typically below 8.5 ppm. However, VCM is a known carcinogen. The end-user (fabricator) should take necessary precautions (mechanical ventilation, local exhaust, respiratory protection, etc.) to protect employees from exposure to any vapors or dusts that may be released during heating or fabrication. See Sections 8 and 11 for special precautions. After handling, always wash hands thoroughly with soap and water.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard

Communication Standard (29 CFR 1910.1200).

Classification of the substance or

mixture

COMBUSTIBLE DUSTS

**GHS** label elements

Signal word : Warning

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**Hazard statements** : May form combustible dust concentrations in air.

### **Precautionary statements**

**Prevention** 

Response

Storage

**Disposal** 

Not applicable.Not applicable.Not applicable.Not applicable.Not applicable.

**Supplemental label elements** : Keep container tightly closed.

**Hazards not otherwise classified** : None known.

Not available.

# Section 3. Composition/information on ingredients

Substance/mixture: MixtureChemical name: MixtureOther means of identification: FO20029295

### CAS number/other identifiers

Ingredient name	%	CAS number
Titanium dioxide	>= 50 - <= 75	13463-67-7
Silica, amorphous	>= 3 - <= 5	7631-86-9

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** : Immediately flush eyes with plenty of water, occasionally lifting the

upper and lower eyelids. Check for and remove any contact lenses.

Get medical attention if irritation occurs.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable



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for breathing.

**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. 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.

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

### Potential acute health effects

**Eye contact**: Exposure to airborne concentrations above statutory or recommended

exposure limits may cause irritation of the eyes.

**Inhalation** : Exposure to airborne concentrations above statutory or recommended

exposure limits may cause irritation of the nose, throat and lungs.

Skin contactIngestionNo known significant effects or critical hazards.No known significant effects or critical hazards.

### Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following:

irritation redness

**Inhalation** : Adverse symptoms may include the following:

respiratory tract irritation

coughing

Skin contact: No specific data.Ingestion: No specific data.

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

Notes to physician : Treat symptomatically. Contact poison treatment specialist

immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without

suitable training.

See toxicological information (Section 11)

### Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use dry chemical powder.

**Unsuitable extinguishing media**: Avoid high pressure media which could cause the formation of a



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potentially explosible dust-air mixture.

Specific hazards arising from the chemical

Hazardous thermal decomposition products

May form explosible dust-air mixture if dispersed.

May emit Hydrogen Chloride (HCl).

Decomposition products may include the following materials:

carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides

Special protective actions for firefighters 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and selfcontained 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. 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 environmental pollution (sewers, waterways, soil

or air).

### Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Use spark-proof tools and explosion-

proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste

disposal contractor.

Large spill : Move containers from spill area. Use spark-proof tools and explosion-



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proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. 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. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

# Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

# Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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.

# Section 8. Exposure controls/personal protection



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#### Control parameters

### Occupational exposure limits

Ingredient name	Exposure limits
Titanium dioxide	OSHA PEL 1989 (1989-03-01) TWA 10 mg/m3 Form: Total dust OSHA PEL (1993-06-30) TWA 15 mg/m3 Form: Total dust ACGIH TLV (2022-01-06) TWA 0.2 mg/m3 Form: respirable fraction, nanoscale particles TWA 2.5 mg/m3 Form: respirable fraction, finescale particles
Silica, amorphous	NIOSH REL (1994-06-01) TWA 6 mg/m3

**Appropriate engineering controls** 

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. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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

use dust goggles.



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### **Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved

standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves

cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based

on the task being performed and the risks involved and should be

approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures

should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this

product.

**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.

## Section 9. Physical and chemical properties

#### **Appearance**

Physical state : solid [Very fine powder.]

Color: WHITEOdor: Not available.Odor threshold: Not available.pH: Not available.Melting point: Not available.

Boiling point Not available.

Flash point Not applicable.

Not applicable.

Burning time: Not available.Burning rate: Not available.Evaporation rate: Not available.Flammability (solid, gas): Not available.

Lower and upper explosive : Lower: Not applicable. (flammable) limits : Upper: Not applicable.

Vapor pressure : Not available.



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Vapor density Not applicable.

**Relative density** Not available. **Solubility** Not available. **Solubility in water** Not available. Partition coefficient: n-Not applicable.

octanol/water

**Auto-ignition temperature** Not applicable.

**Decomposition temperature** Not available. Not available. **SADT** 

**Dynamic:** Not available. Viscosity

**Kinematic:** Not applicable.

### Aerosol product

Not available. **Heat of combustion** 

**Ignition distance** Not available. **Enclosed space ignition - Time** Not available.

equivalent

Enclosed space ignition -

Not available.

**Deflagration density** 

Flame height Not available. Flame duration Not available.

# Section 10. Stability and reactivity

Reactivity No specific test data related to reactivity available for this product or

its ingredients.

Stable under recommended storage and handling conditions (see **Chemical stability** 

Section 7).

Possibility of hazardous reactions Under normal conditions of storage and use, hazardous reactions will

not occur.

Conditions to avoid Avoid the creation of dust when handling and avoid all possible

sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers

and equipment before transferring material. Prevent dust

accumulation.

Avoid contact with acetal homopolymers and acetyl homopolymers **Incompatible materials** 

during processing.

Reactive or incompatible with the following materials:

oxidizing materials



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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
Titanium oxide (TiO2)				
	LC50 Inhalation	Rat - Male	6.82 Mg/l	4 h
	Dusts and mists			
	LD50 Dermal	Rabbit	> 5,000  mg/kg	-

**Conclusion/Summary** : Mixture. Not fully tested.

### **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
Silica	Eyes - Mild irritant	Rabbit	-	24 hrs	-

**Conclusion/Summary** 

Skin: Mixture.Not fully tested.Eyes: Mixture.Not fully tested.Respiratory: Mixture.Not fully tested.

**Sensitization** 

Conclusion/Summary

Skin: Mixture.Not fully tested.Respiratory: Mixture.Not fully tested.

**Mutagenicity** 

**Conclusion/Summary**: Mixture.Not fully tested.

Carcinogenicity

Conclusion/Summary : Mixture.Not fully tested.

### Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium oxide (TiO2)	-	2B	-
Silica	1	3	-



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**Reproductive toxicity** 

**Conclusion/Summary** : Mixture. Not fully tested.

**Teratogenicity** 

Conclusion/Summary : Mixture.Not fully tested.

**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** : Exposure to airborne concentrations above statutory or recommended

exposure limits may cause irritation of the eyes.

**Inhalation** : Exposure to airborne concentrations above statutory or recommended

exposure limits may cause irritation of the nose, throat and lungs.

Skin contact
 Ingestion
 No known significant effects or critical hazards.
 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** : Adverse symptoms may include the following: respiratory tract

irritation, coughing

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** 



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Potential immediate effects : Not available.

Potential delayed effects : Not available.

**Potential chronic health effects** 

**Conclusion/Summary**: Mixture.Not fully tested.

General : Repeated or prolonged inhalation of dust may lead to chronic

respiratory irritation.

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.

Fertility effects : No known significant effects or critical hazards. No known significant

effects or critical hazards.

**Numerical measures of toxicity** 

**Acute toxicity estimates** 

N/A

**Other information**: This mixture has not been evaluated as a whole for health effects.

Exposure effects listed are based on existing health data for the

individual components which comprise the mixture.

# Section 12. Ecological information

#### **Toxicity**

Product/ingredient name	Result	Species	Exposure
Titanium oxide (TiO2)			
	Acute LC50 > 1,000 Mg/l	Fish - Fundulus heteroclitus	96 h
	Marine water		
	Acute LC50 3 Mg/l Fresh water	Crustaceans - Ceriodaphnia	48 h
		dubia	
	Acute LC50 6.5 Mg/l Fresh	Daphnia - Daphnia pulex	48 h
	water	_	

**Conclusion/Summary** : Not available.

Persistence and degradability

**Conclusion/Summary** : Not available.



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### **Bioaccumulative potential**

Not available.

### **Mobility in soil**

Soil/water partition coefficient

(KOC)

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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Acute hazardous waste "P" List: Not listed

United States - RCRA Toxic hazardous waste "U" List: Not listed

# Section 14. Transport information

U.S.DOT 49CFR Ground/Air/Water : Not regulated for transportation.

International Air ICAO/IATA

: Consult mode specific transport rules

International Water : Consult mode specific transport rules

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IMO/IMDG

# Section 15. Regulatory information

U.S. Federal regulations

**United States - TSCA 12(b) - Chemical export notification:** None of the components are listed.

United States - TSCA 4(a) - Final Test Rules: Not listed
United States - TSCA 4(a) - ITC Priority list: Not listed
United States - TSCA 4(a) - Proposed test rules: Not listed
United States - TSCA 4(f) - Priority risk review: Not listed
United States - TSCA 5(a)2 - Final significant new use rules: Not listed

United States - TSCA 5(a)2 - Proposed significant new use rules: Not listed

United States - TSCA 5(e) - Substances consent order: Not listed United States - TSCA 6 - Final risk management: Not listed United States - TSCA 6 - Proposed risk management: Not listed United States - TSCA 8(a) - Chemical risk rules: Not listed United States - TSCA 8(a) - Dioxin/Furane precusor: Not listed United States - TSCA 8(a) - Chemical Data Reporting (CDR): Not determined

United States - TSCA 8(a) - Preliminary assessment report (PAIR): Listed Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-,branched

United States - TSCA 8(c) - Significant adverse reaction (SAR): Not listed

United States - TSCA 8(d) - Health and safety studies: Not listed United States - EPA Clean water act (CWA) section 307 - Priority pollutants: Listed 2-Ethylhexanoic acid zinc salt

Phenol

Vinyl chloride monomer

United States - EPA Clean water act (CWA) section 311 -

Hazardous substances: Listed

United States - EPA Clean air act (CAA) section 112 - Accidental

release prevention - Flammable substances: Not listed

United States - EPA Clean air act (CAA) section 112 - Accidental

release prevention - Toxic substances: Not listed

**United States - Department of commerce - Precursor chemical:** 

Not listed

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) Clean Air Act Section 602 Class I Listed

Not listed



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**Substances** 

Clean Air Act Section 602 Class II : Not listed

Substances

**DEA List I Chemicals (Precursor**: Not listed

Chemicals)

**DEA List II Chemicals (Essential**: Not listed

Chemicals)

### US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

### **SARA 311/312**

Classification : COMBUSTIBLE DUSTS

### **Composition/information on ingredients**

Name	%	Classification
Titanium oxide (TiO2)	>= 50 - <= 75	CARCINOGENICITY - Category 2
Ethene, chloro-, homopolymer	>= 10 - <= 25	COMBUSTIBLE DUSTS
Silica	>= 3 - <= 5	EYE IRRITATION - Category 2B

### **SARA 313**

### Form R - Reporting requirements

Product name	CAS number	%
Aluminum oxide	1344-28-1	>= 1 - < 5

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:

Titanium dioxide Silica, amorphous Aluminum oxide

New York : None of the components are listed.

New Jersey : The following components are listed:

Titanium dioxide

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Ethene, chloro-, homopolymer

Aluminum oxide

**Pennsylvania**: The following components are listed:

Titanium dioxide

Silica, amorphous

Aluminum oxide

### California Prop. 65

WARNING: This product can expose you to chemicals including Titanium dioxide, which is known to the State of California to cause cancer, and Diisodecyl phthalate (mixed isomers), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Titanium dioxide	-	-
Diisodecyl phthalate (mixed isomers)	-	Yes.

**United States inventory (TSCA 8b)** : All components are active or exempted.

**Canada inventory** : All components are listed or exempted.

### **International regulations**

### **Inventory list**

Australia : Not determined.

Canada : All components are listed or exempted.

China : Not determined.

Eurasian Economic Union

Japan

Russian Federation inventory: Not determined.

Japan inventory (CSCL): Not determined.

Japan inventory (ISHL): Not determined.

New Zealand: Not determined.Philippines: Not determined.Republic of Korea: Not determined.

Taiwan : Not determined. Not determined.

Thailand : Not determined.
Turkey : Not determined.

**United States** : All components are active or exempted.

Viet Nam : Not determined.

### Section 16. Other information

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



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Health	/	0
Flammability		3
Physical hazards		0

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 and the associated label are not required on SDSs or products leaving a facility 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 trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### History

Date of printing: 01/10/2025Date of issue/Date of revision: 01/01/2025Date of previous issue: 04/13/2012

Version : 1.1

**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** : Not available.

#### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Particularly this information may not be valid for such material used in conjunction with any other materials or in any process, unless specified in the text.