

Conforms to Regulations: (EC) No. 1907/2006(REACH), 1272/2008(CLP) and OSHA final rule 77 Fed.Reg.17574

# Material Safety Data Sheet

Date issued: September 07, 2014

## SECTION 1. GHS PRODUCT IDENTIFIER

- 1.1. **Name of the product:** Fiebing's Pro Oil Dyes (various colors)
- 1.2. **Other means of identification:** Formulae Nos. Black 9328, Saddle tan 9330, Dark Brown 9329, Light brown 9331, Mahogany 9332, Red 9916, Walnut 9906, Green 9927, Yellow 9939, Chocolate 9974, Royal Blue 9999,
- 1.3. **Recommended use of the product and restrictions on use:** For dyeing leather only.
- 1.4. **Details of the supplier:**  
Manufacturer: Fiebing Company, Inc.  
516 South Second Street  
Milwaukee WI – 53204  
Phone: 414 271 5011  
Emergency phone: CHEMTREC  
1-800-424-9300 (US/Canada)  
+01 703-527-3887 (International)

## SECTION 2. HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Classification / risks

According to classification criteria of GHS Part 2 for Flammable Liquids: **Flammable Liquid 2**

According to classification criteria of GHS Part 3 for Acute Toxicity: **Not Classified**

Based on generic cut-off values of GHS 1.5.3.1 for carcinogenicity: **Not Classified**

Based on GHS 3.3.2.9 criteria: **Eye irritant 2** (irritating to eyes)

### 2.2. Label elements

Hazard Pictogram:



Signal word:

DANGER

Hazard Code:

H 225

H 315

H 319

Hazard statement

Highly flammable liquid and vapour

Causes skin irritation

Causes serious eye irritation

- Precaution: P101: If medical advice is needed, have product container or label at hand.  
P102: Keep out of reach of children
- Prevention: P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P280: Wear protective gloves/protective clothing, eye protection/face protection.
- Response: P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.
- Storage: P403 + P235 Store in a well –ventilated place. Keep cool. Keep store locked up
- Disposal: P501 Dispose of contents and containers in accordance with all Local, Regional, National and international regulations.
- Additional Hazards: Not applicable.
- PBT & vPvB: See Section 12.5 for more detailed information on PBT and vPvB.

**SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS****3.1. Mixtures****Classification:**

Ingredient	CAS#	EINECS#	Class	REACH Registration Number	Wt%
2-(2-ethoxyethoxy) ethanol	111-90-0	203-919-7	Eye irrit. 2 H 319 Acute tox.3 H 331	01- 2119475105- 42-005	10 ó 30
Ethanol	64-17-5	200-578-6	Flam. Liq. 2 H 225	05- 2114370565- 44-0000	30 ó 60
Isopropanol	67-63-0	200-661-7	Flam. Liq. 2 H225 Eye irrit. 2 H 319 STOT SE 3 H336	Not available	1 - 5
Oleic Acid	112-80-1	204-007-1	Not classified	Exempt	5 - 10
xylene	1330-20-7	202-422-2(1) 203-396-5(2) 203-576-3(3) 215-535-7(4)	Flam. Liq. 3 H 226 Acute tox. 4 H 312 Acute tox. 4 H 332 Skin Irrit. 2 H 315	Not available	5 - 10
Ethyl acetate	141-78-6	205-500-4	Flam. Liq. 2 H 225 Eye Irrit. 2 H 319 STOT SE 3 H 336	Not available	5 ó 10
2-phenoxyethanol	122-99-6	204-589-7	Acute tox. 4 H 302 Eye Irrit. 2 H 319 Skin irrit.2 H 315	Not available	1 - 5
CI Solvent Brown 42	61725 ó 75-5		Substance not listed in Annex VI-Table 3.1 of 1272-2008 (CLP)	Not available	1.0 ó 3.5
CI Solvent Black 27	12237-22-8	Not available	Substance not listed in Annex VI-Table 3.1 of 1272-2008 (CLP)	Not available	1 - 5
CI Solvent Black 29	61901-87-9	Not available	Substance not listed in Annex VI-Table 3.1 of 1272-2008 (CLP)	Not available	1 - 5
cobalt complex, Solvent orange 11	71839-88-8 & 85203-44-7	Not available	Substance not listed in Annex VI-Table 3.1 of 1272-2008 (CLP)	Not available	1 - 4
Metal complex Solvent Brown 42	61725-75-5	Not available	Substance not listed in Annex VI-Table 3.1 of 1272-2008 (CLP)	Not available	1 - 4
CI Solvent Red 125	12271-00-0	Not available	Substance not listed in Annex VI-Table 3.1 of 1272-2008 (CLP)	Not available	1 - 4
CI Solvent yellow 88	61931-55-3	Not available	Substance not listed in Annex VI-Table 3.1 of 1272-2008 (CLP)	Not available	1 - 4
Pigment Blue 15	147-14-8	205-685-1	Substance not listed in Annex VI-Table 3.1 of 1272-2008 (CLP)	Not available	1 ó 4

**SECTION 4. FIRST AID MEASURES****4.1. Description of first aid measures**

- Eye:** In case of eye contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.
- Skin:** If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists. Take off contaminated / soaked clothes and remove it to a safe place.
- Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.
- Inhalation:** If breathing is difficult, remove the victim to fresh air and keep at rest in a Position comfortable for breathing. Get medical advice/attention if you feel Unwell.

**4.2. Most important symptoms and effects, both acute and delayed:** Not determined.

- Eye:** Causes severe eye irritation. Symptoms may include discomfort, redness, excess blinking and tear production with marked redness and swelling of the conjunctiva.
- Skin:** Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
- Inhalation:** May cause respiratory tract irritation.
- Ingestion:** May cause stomach distress, nausea or vomiting.

**4.3. Indication of any immediate medical attention and special treatment needed :**

**Note to physicians:** Symptoms may not appear immediately. If medical advice is needed, have product container or label at hand.

**Specific treatments:** In case of accident or if you feel unwell, seek medical advice immediately. Show The label or MSDS where possible.

**SECTION 5. Firefighting measures****5.1. Extinguishing media**

**Suitable extinguishing media:** carbon dioxide, dry powder, foam; water spray or water fog.

**Unsuitable extinguishing media:** None known.

**5.2. Special hazards arising from the substance or mixture**

**Products of Combustion:** May include, and are not limited to: oxides of carbon, fumes, smoke and asphyxiants.

**5.3. Advice for firefighters:**

Proceed in accordance with procedures applicable for extinguishing chemical fire. Keep containers cool with water spray from a safe distance, and if possible remove them from the endangered area. Keep upwind of the fire. Wear full firefighting turn-out gear and respiratory protection.

**SECTION 6. ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Use individual protection measures – see section 8 of the Safety Data Sheet. Limit the access of bystanders to the endangered area until proper cleaning operations are finished. In the case of great leakage isolate the endangered area. Ensure that breakdown and its results are eliminated by a properly trained staff only. Avoid contact with the eyes, skin and clothes. Do not inhale vapors or mist. If release occurred in closed area, ensure adequate ventilation.

### 6.2. Environmental precautions

If it is possible and safe, stop or limit product release. Limit spreading of the great leakages by embanking the area. Prevent the product from penetrating drains, waters or soil. Notify respective authorities (occupational safety and hygiene, emergency brigades, environmental brigades and organs of administration).

### 6.3. Methods and material for containment and cleaning up

Cover up small spillage with non-flammable, neutral absorbent material (sand, soil, diatomic earth, vermiculite) and collect in an appropriate, closed, labeled waste bin. Clean the contaminated area with water with detergent, and then rinse with water. Dispose off according to the applicable regulations. If necessary, obtain help from specialist companies dealing with waste transport and utilization in order to remove the product/absorbent material contaminated with the product.

**6.4. Reference to other sections:** See also sections 8 and 13 of the Safety Data Sheet.

## SECTION 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

**Handling:** Keep away from heat, sparks, open flames, hot surfaces. No smoking. Ground/bond container and receiving equipment. Avoid contact with the eyes, skin and clothes. Avoid breathing vapor and fog. Keep unused containers tightly closed. Use in a ventilated area. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Use only non-sparking tools.

**General Hygiene:** Essential hygiene rules should be observed. Clean hands with soapy water after work/break in work. Do not use contaminated clothing. Immediately remove contaminated clothing and wash before reuse. Use individual protection measures in accordance with the information contained in Section 8.

**Fire and explosion prevention:** Do not smoke, eliminate possible ignition sources.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage:** Store in tightly sealed and properly labeled containers, in a cool, well ventilated place and away from incompatible materials (See Section 10). Keep out of reach of children.

**7.3. Specific end use(s):** None available.

## SECTION 8. EXPOSURE CONTROL AND PERSONAL PROTECTION EQUIPMENT

### 8.1. Control parameters

### 8.2. Exposure controls

Ingredients	OSHA-PEL/ACGIH-TLV / Others
2-(2-ethoxyethoxy) ethanol	TWA 25 ppm; 140 mg/m <sup>3</sup> US AIHA (WEEL)
Ethanol	TWA 400 ppm OSHA TWA 1000 ppm ACGIH
Isopropanol	TWA 400 ppm; TWA 999 mg/m <sup>3</sup>
Oleic Acid	No data available
Xylene	ACGIH TLV/TWA 100 ppm; 434 mg/m <sup>3</sup> ACGIH TLV/STEL 150 ppm; 651 mg/m <sup>3</sup>
Ethyl acetate	400 ppm TWA; 1400 mg/m <sup>3</sup> TWA OSHA 400 ppm TWA; ACGIH 400 ppm TWA; 1500 mg/m <sup>3</sup> EU
2-phenoxyethanol	No data available
CI Solvent Brown 42	No data available
CI Solvent Black 27	15 mg/m <sup>3</sup> total dust OSHA-PEL (5 mg/m <sup>3</sup> respirable) 10 mg/m <sup>3</sup> total dust ACGIH-TLV (3 mg/m <sup>3</sup> respirable)
CI Solvent Black 29	No data available
CI Solvent Yellow 88	General dust limit (TRGS 900; 09/2001) 3 mg/m <sup>3</sup> (airborne dust); 10 mg/m <sup>3</sup> (inhalable dust)
CI Solvent Orange 11	No data available
CI Solvent Red 125	No data available
Pigment blue 15	No data available

**Appropriate engineering controls:**

General ventilation and/or local fume hood in order to maintain hazardous agent concentration in air below acceptable limits. Local fume hood is preferred, since it enables emission control at source and prevents spreading throughout the working area.

**Personal protective equipment:**

**Eye / face protection:** Tight safety eyeglasses (goggles) in the case of prolonged exposure or the risk of liquid splashing to the eye. It is recommended to equip the workplace with a water shower to flush eyes.

**Skin protection:** Wear impermeable gloves (e.g. perbutane, viton, butyl rubber). It is recommended to change gloves regularly and replace them immediately if any signs of wear or damage (tearing, puncture) or changes in appearance (color, flexibility, shape) occur. Wear protective apron or protective suit made of coated, oil-resistant, anti-slippery shoes.

**Respiratory protection:** In case of exceeding the acceptable limits or inadequate ventilation use the approved respirator equipped with a suitable filter or filter-absorber.

**Thermal hazards:** Not applicable

**General Health and Safety measures:** Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

**Environmental exposure controls:** Consider using precautionary measures in order to protect the area around storage tanks. Handle in accordance with good industrial hygiene and safety practice. Maintain levels below Community environmental protection thresholds.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

- a) Appearance : Thin liquid, various colors
- b) Odor : alcohol
- c) Odor threshold : No data available
- d) pH : Not applicable
- e) Melting point : Not applicable  
Freezing point: < 0° C
- f) Initial boiling point: 77.8 Deg.C (172 Deg.F)  
Boiling range: 77.8 – 100 Deg.C (172 – 212 Deg.F)
- g) Flash point : > 11.7 Deg.C (53 Deg.F)
- h) Evaporation rate : No data available
- i) Flammability: Highly Flammable Liquid
- j) Upper/lower flammability limit or explosive limits: No data available
- k) Vapor pressure : No data available
- l) Vapor density : No data available
- m) Relative density : 0.865 – 0.885 g/cm<sup>3</sup> at 15° C
- n) Solubility : Soluble in water, alcohol
- o) Partition coefficient n-octanol/ water : No data available
- p) Auto-ignition point : No data available
- q) Decomposition temperature : No data available
- r) Viscosity : Not available
- s) Explosive properties : Not available
- t) Oxidizing properties : Not available
- u) TOTAL VOC: 4.95 Lbs/Gal

### 9.2. Other information

No data available

## SECTION 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

No dangerous reaction known under conditions of normal use

### 10.2. Chemical stability

The mixture is stable under normal storage conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use

**10.4. Conditions to avoid:**

High temperature, incompatible materials.

**10.5. Incompatible materials**

Strong oxidizers

**10.6. Hazardous decomposition products**

May include and are not limited to: oxides of carbon, fumes, smoke and asphyxiants.

**SECTION 11. TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects****Likely routes of exposure:** Eye, skin, ingestion**Acute health effects:**

**Eye:** Causes severe eye irritation. Symptoms may include discomfort, redness, excess blinking and tear production with marked redness and swelling of the conjunctiva.

**Skin:** Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

**Inhalation:** May cause respiratory tract irritation.

**Ingestion:** May cause stomach distress, nausea or vomiting.

**Acute toxicity:**

Ingredient	LD 50	LC 50
2-(2-ethoxyethoxy) ethanol	Oral: 10,502 mg/kg rat Dermal: 9,143 mg/kg rabbit	Inhalation: 4 h > 50 mg/L rat
Ethanol	Oral: 7060 mg/kg rat	Inhalation: 124.7 mg/L 4 H, rat
Isopropanol	Oral: 4396 mg/kg rat Dermal: 12800 mg/kg rat	Inhalation: 72.6 mg/L 4 H, rat
Oleic Acid	Oral: > 25000 mg/kg rat	No data available
Xylene	Oral: 4300 mg/kg rat Dermal: > 1700 mg/kg rat	Inhalation: 5000 ppm 4 H, rat Inhalation: 47635 mg/L 4 H, rat
Ethyl acetate	Oral: 5620 mg/kg rat Dermal: > 20 mL/kg rabbit	Inhalation: 200000 mg/m <sup>3</sup> 4 H, rat
2-phenoxyethanol	Oral: 1260 mg/kg rat Dermal: 14422 mg/kg rat	No data available
CI Solvent Brown 42	Oral: 3350 mg/kg	No data available
CI Solvent Black 27	Oral: > 5000 mg/kg	No data available
CI Solvent Black 29	Oral: 5000 mg/kg Dermal: > 2000 mg/kg	No data available
CI Solvent yellow 88	Oral: > 5000 mg/kg	Inhalation: >9000 mg/m <sup>3</sup> rat
CI Solvent Red 125	Oral: > 5000 mg/kg	No data available
CI Solvent Orange 11	Oral: > 5000 mg/kg Dermal: > 2000 mg/kg	No data available
Pigment blue 15	Oral: 15000 mg/kg rat Dermal: > 3000 mg/kg	No data available

Up to 2% of the mixture consists of ingredient (s) of unknown toxicity

**Skin corrosion/irritation:**

Classification criteria have not been met based on the available data.

**Serious eye damage/irritation:**

Causes eye irritation

**Respiratory or skin sensitization:**

Classification criteria have not been met based on the available data.

**Germ cell mutagenicity:**

Classification criteria have not been met based on the available data.

**Carcinogenicity:** This product is not classified as carcinogen.

**Reproductive toxicity:**

Developmental: This product does not contain known reproductive or developmental toxins.

**STOT – single exposure:**

Classification criteria have not been met based on the available data.

**STOT – repeated exposure:**

Classification criteria have not been met based on the available data.

**Aspiration hazard:**

Classification criteria have not been met based on the available data.

**SECTION 12. ECOLOGICAL INFORMATION****12.1. Toxicity:**

**Acute/Chronic toxicity:** Not considered to be harmful to aquatic life

Ingredient	
2-(2-ethoxyethoxy) ethanol	96 h LC-50 bluegill sunfish > 10000 mg/L 96 h LC-50 tidewater silverside > 10000 mg/L 24 h LC-50 goldfish > 5000 mg/l
Oleic Acid	96 h LC 50 Pimephalis promelas: 205 mg/L (static)
Ethanol	96 h LC50 Pimephales promelas: > 100 mg/L (static) 24 h EC50 Daphnia magna: 10800 mg/L
Isopropanol	96 h LC50 Desmodesmus subspicatus: > 1000 mg/L 48 h EC50 Daphnia magna: 1:3299 mg/L
Xylene	96 h LC50 Lepomis macrochirus: 19 mg/L 48 h LC50 Gsammarus lacustris: 0.6 mg/L
Ethyl acetate	48 h LC50 Desmodesmus subspicatus: > 330 mg/L 48 h EC50 Daphnia magna: 560 mg/L (static)
2-phenoxyethsanol	48 h EC50 Daphnia magna: > 500 mg/L 96 h LC50 Pimephales promelas: 337 ó 352 mg/L (flow through) 96 h LC50 Pimephales promelas: 366 mg/L (static) 96 h LC50 Leuciscus idus: 220 ó 460 mg/L (static) 72 h EC50 Desmodesmus subspicatus: > 500 mg/L
CI Solvent Brown 42	Toxicity to microorganisms: EC50 (3 h): > 100 mg/L
CI Solvent Black 27	No data available



CI Solvent Black 29	Toxicity to fish: LC50 (96 h) 1 - 10 mg/l, Cyprinus carpio Aquatic invertebrates: EC0 (24 h) > 1,000 mg/l, Daphnia magna nominal concentration. Aquatic plants: EC50 (72 h) > 100 mg/l, Scenedesmus subspicatus (OECD Guideline 201) based on loading rate. Microorganisms/Effect on activated sludge: EC50 (3 h) > 100 mg/l, activated sludge (DIN EN ISO 8192-OECD 209-88/302/EEC, P. C) based on loading rate
CI Solvent Yellow 88	Fish toxicity LC 50: 10 mg/L Activated sludge (Bacteria toxicity) EC 50: > 100 mg/L
CI Solvent Red 125	Fish: C.1 Brachydanio rerio/LC50 (96 h): > 100 mg/L Toxicity to microorganisms: EC50 (3 h): > 100 mg/L
CI Solvent Orange 11	LC50: 0,10-0,12 mg/l (96h, Cyprinus carpio) (OECD 203). EC50: > 1000 mg/l (24h, Daphnia magna) (OECD 202)
CI pigment Blue 15	Low order of toxicity to aquatic environment No toxic effects occur within the range of water solubility.  Poorly biodegradable under conditions prevailing in surface water or in effluent treatment plants.  Due to the low solubility in water and in octanol accumulation of the substance in organisms is not expected.

Contains up to 2% of components with unknown hazard to the aquatic life.

#### 12.2. Persistence and degradability

Not available

#### 12.3. Bioaccumulative potential

Not available

#### 12.4. Mobility in soil

Not available

#### 12.5. Results of PBT and vPvB assessment

**PBT results:** A PBT assessment has not yet been carried out under REACH for the constituents. However, there are no indications that this product contains substances likely to be classified as PBT.

**vPvB results:** A vPvB assessment has not yet been carried out under REACH for the constituents. However, there are no indications that this product contains substances likely to be classified as vPvB.

#### 12.6. Other adverse effects

Not available

### SECTION 13. Disposal considerations

#### 13.1. Waste treatment methods

**Disposal method:** This material must be disposed of in accordance with all local, state, provincial and federal regulations. The generation of waste should be avoided and minimized wherever possible.

**Other disposal recommendations:** Not available

### SECTION 14. TRANSPORT INFORMATION

**US DOT:** UN 1987 alcohols n.o.s. solution (ethanol/isopropanol)  
(exception 173.150 may apply)

**TDG:** UN 1987 alcohols n.o.s. solution (ethanol/isopropanol)

**14.1. UN number:** UN 1987

**14.2. UN Proper shipping name:** alcohols n.o.s. solution (ethanol/isopropanol)

**14.3. Transport hazard class(es):** 3

**14.4. Packing group: II****14.5. Environmental hazards:** Not available**14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:**

Do not handle until all safety precautions have been read and understood.

**14.7. Special precautions for users** Do not handle until safety precautions have been read and understood.**SECTION 15. REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

This Safety Data Sheet classification and labeling have been determined according to Regulations: (EC) No. 1907/2006(REACH), 1272/2008(CLP) and OSHA final rule 77 Fed.Reg.17574.

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by Controlled Products Regulations.

TSCA (USA): In compliance

SARA Title III (USA)

Section 302 EHS TPQ (Lbs): None listed

Section 304 RQ (Lbs): None listed

Section 313: Xylene, Isopropanol

**CERCLA RQ (Lbs):** Xylene 100 Lbs; Ethyl acetate 5000 Lbs**California Proposition 65:**

This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**NFPA:** Health: 2  
Fire: 3  
Reactivity: 0

**HMIS:** Health: 2  
Fire: 3  
Reactivity: 0

**Global Inventories:**

USA TSCA: Listed

Canada DSL/NDSL: Listed except CI Solvent Black 27

**15.2: Chemical safety assessment**

A chemical safety assessment has not been carried out for this product.

**SECTION 16. OTHER INFORMATION****Date of preparation:** September 07, 2014**Version:** 1.0**Revision date:** September 07, 2014**Revised changes:****Classification for the mixtures were derived using GHS Classification criteria**

<b>Classification</b>	<b>Classification procedure</b>
Flammable Liquid 2 (Flam. Liq. 2)	On the basis of data
Severe Eye Irritant 2 (Eye irrit. 2)	Concentration limit
Skin irritation 2 (Skin irrit. 2)	Concentration limit

**Relevant H and P phrases:**

- H225 Highly flammable Liquid and Vapour
  - H315 Causes skin irritation
  - H319 Causes serious eye irritation
  - H302 Harmful if swallowed
  - H312 Harmful in contact with skin
  - H332 Harmful if inhaled
  - H336 May cause drowsiness or dizziness
- 
- P101 If medical advice is needed, have product container or label at hand
  - P102: Keep out of reach of children
  - P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking
- 
- P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P403 + P235: Store in a well-ventilated place. Keep cool.
  - P501 Dispose of contents and containers in accordance with all local, regional, national and international regulations.

**Abbreviations and acronyms in the Safety Data Sheet**

- CAS No. Chemical Abstracts Service Number
- EINECS No. European Commission Number
- REACH No. Registration, Evaluation, Authorization and Restriction of Chemicals Number
- TLV-TWA Threshold Limit Value
- TLV-STEL Threshold Limit Value, Short Term Exposure Limit
- TLV-C Ceiling exposure limit
- vPvB very Persistent, very Bioaccumulative (substance)
- PBT Persistent, bioaccumulative, and toxic (substance)
- LD<sub>50</sub> Dose that will kill 50% of the test animals
- LC<sub>50</sub> Concentration that will kill 50% of the test animals
- STOT Specific Target Organ Toxicity
- RID Regulations Concerning the International Carriage of Dangerous Goods by Rail
- ADR Agreement on Dangerous Goods by Road
- IMDG International Maritime Transport of Dangerous Goods
- IATA International Air Transport Association

**The list of applicable phrases or precautionary statements not specified in whole in sections 2-15 of the Safety Data Sheet.**

None.

**Advice on training for employees:**

Employees who use the product should be trained on risks for health, hygiene, use of individual protection, accident preventive actions, rescue actions, etc.

**Disclaimer:** This MSDS is not a quality certificate for the product. All data presented in this sheet are to be taken only as a help in safe handling in transport, distribution, use and storage. Persons handling the product should be informed about risks and precautionary measures. Information in the Safety Data Sheet relates to the above mentioned products and their specified uses only. They may be obsolete or insufficient for this product used in conjunction with other materials or in different applications than those specified in the Safety Data Sheet. The user is obliged to follow all applicable standards and regulations and is also responsible for inappropriate use of information contained in this sheet or for an inappropriate use of the product. In the case of special applications evaluate exposure and develop the appropriate procedure and training programs in order to ensure safety at work.