



# SAFETY DATA SHEET

## Mixed Drier LF9N

### Section 1. Identification

**GHS product identifier** : Mixed Drier LF9N  
**Other means of identification** : None.  
**Product type** : Liquid.

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

<b>Identified uses</b>
Paint additive.

**Supplier's details** : Metallica Chemicals S.A (Pty) Ltd  
 P.O. Box 414  
 Cato Ridge, 3860  
 South Africa

**Emergency phone:** : +27 (0) 31 782 3155  
 Spill emergency (Drizit): 0800 202 202

### Section 2. Hazards identification

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 3  
 ACUTE TOXICITY: ORAL - Category 4  
 SKIN CORROSION/IRRITATION - Category 2  
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
 RESPIRATORY SENSITIZATION - Category 1  
 SKIN SENSITIZATION - Category 1  
 GERM CELL MUTAGENICITY - Category 2  
 CARCINOGENICITY - Category 1B  
 TOXIC TO REPRODUCTION [Fertility] - Category 1B  
 TOXIC TO REPRODUCTION [Unborn child] - Category 2  
 AQUATIC TOXICITY (ACUTE) - Category 1  
 AQUATIC TOXICITY (CHRONIC) - Category 1

#### SANS 10234: 2007 (GHS) label elements

**Hazard pictograms** :

**Signal word** : Danger

**Hazard statements** : Flammable liquid and vapor.  
 Harmful if swallowed.  
 Causes skin irritation.  
 Causes serious eye damage.  
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 May cause an allergic skin reaction.  
 May cause cancer.  
 May damage fertility.  
 Suspected of causing genetic defects.  
 Suspected of damaging the unborn child.

## Section 2. Hazards identification

Very toxic to aquatic life with long lasting effects.

### Precautionary statements

- General** : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves: >8 hours (breakthrough time): nitrile rubber; 4-8 hours (breakthrough time): nitrile rubber; 1-4 hours (breakthrough time): nitrile rubber; <1 hours (breakthrough time): nitrile rubber. Wear eye or face protection: Recommended: safety glasses with side-shields. In case of inadequate ventilation wear respiratory protection: Recommended: safety glasses with side-shields. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Avoid release to the environment. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
- Response** : Collect spillage. IF exposed or concerned: Get medical attention. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical attention. 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 or physician.
- Storage** : Store locked up. Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Other hazards which do not result in classification** : None identified.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

**Other means of identification** : None.

### CAS number/other identifiers

**CAS number** : Not applicable.

**EC number** : Mixture.

**Product code** : No data available.

Ingredient name	%	CAS number
2-ethylhexanoic acid	20 - 40	149-57-5
Solvent naphtha (petroleum), medium aliph.	20 - 40	64742-88-7
calcium dihydroxide	5 - 10	1305-62-0
Solvent naphtha (petroleum), heavy arom.	1 - 5	64742-94-5
butan-1-ol; n-butanol	1 - 5	71-36-3
cobalt carbonate	1 - 5	513-79-1
calcium di(octanoate)	1 - 5	6107-56-8
2-methylpentane-2,4-diol	1 - 5	107-41-5
zinc oxide	1 - 5	1314-13-2
pentanol isomers	1 - 5	6032-29-7
2-butoxyethanol; butyl cellosolve	1 - 5	111-76-2

### Section 3. Composition/information on ingredients

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** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In the event of any complaints or symptoms, avoid further exposure.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

##### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed. May cause burns to mouth, throat and stomach.

##### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
wheezing and breathing difficulties  
asthma  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 blistering may occur  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
 stomach pains  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

### 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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### **Extinguishing media**

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 metal oxide/oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## Section 7. Handling and storage

- Precautions for safe 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. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- 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. Store locked up. 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

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
2-ethylhexanoic acid	<b>ACGIH TLV (United States, 2/2010).</b> TWA: 5 mg/m <sup>3</sup> 8 hour(s). Form: Inhalable fraction
Solvent naphtha (petroleum), medium aliph.	<b>ACGIH (United States).</b> STEL: 200 ppm TWA: 100 ppm
calcium dihydroxide	<b>ACGIH (United States).</b> TWA: 5 mg/m <sup>3</sup>
Solvent naphtha (petroleum), heavy arom.	<b>ACGIH TLV (United States, 2/2010).</b> TWA: 5 mg/m <sup>3</sup> 8 hour(s).
butan-1-ol; n-butanol	<b>ACGIH (United States).</b> TWA: 100 ppm TWA: 525 mg/m <sup>3</sup>
cobalt carbonate	<b>Occupational Health and Safety Act, 1993 (South Africa) STEL:</b> OEL:RL 50 ppm STEL: OEL:RL 150 mg/m <sup>3</sup>
2-methylpentane-2,4-diol	<b>ACGIH TLV (United States, 2/2010).</b> TWA: 0.02 mg/m <sup>3</sup> , (as Co) 8 hour(s). Form: Inorganic
zinc oxide	<b>ACGIH TLV (United States, 2/2010).</b> C: 25 ppm C: 121 mg/m <sup>3</sup>
2-butoxyethanol; butyl cellosolve	<b>ACGIH (United States).</b> TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> <b>ACGIH TLV (United States, 2/2010).</b> TWA: 2 mg/m <sup>3</sup> 8 hour(s). Form: Respirable fraction STEL: 10 mg/m <sup>3</sup> 15 minute(s). Form: Respirable fraction <b>Occupational Health and Safety Act, 1993 (South Africa) TWA:</b> OEL:RL 25 ppm TWA: OEL:RL 120 mg/m <sup>3</sup>

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Appropriate engineering controls** : Use only with adequate ventilation. 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

## Section 8. Exposure controls/personal protection

- 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. Recommended: safety glasses with side-shields
- 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. 0 - 8 hours (breakthrough time): nitrile rubber.
- 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. Recommended: overall
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed 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. Recommended: If operating conditions cause high vapor, mist or dust concentrations or the TLV is exceeded, use NIOSH-certified, supplied-air respirator. Wear a respirator conforming to EN140 with Type A/P2 filter or better.

## Section 9. Physical and chemical properties

- Physical state** : Liquid.
- Color** : Purple.
- Odor** : Characteristic.
- Odor threshold** : No data available.
- pH** : No data available.
- Melting point** : No data available.
- Boiling point** : No data available.
- Flash point** : Closed cup: 37.8 to 61 °C (100 to 141.8°F)
- Evaporation rate** : No data available.
- Flammability (solid, gas)** : No data available.
- Lower and upper explosive (flammable) limits** : No data available.
- Vapor pressure** : No data available.
- Vapor density** : No data available.
- Relative density** : 0.97
- Solubility** : Insoluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water** : No data available.
- Auto-ignition temperature** : No data available.
- Decomposition temperature** : No data available.
- Viscosity** : No data available.

## Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

## Section 10. Stability and reactivity

- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials
- 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
2-ethylhexanoic acid	LD50 Oral	Rat	1600 mg/kg	-
calcium dihydroxide	LD50 Oral	Rat	7340 mg/kg	-
butan-1-ol; n-butanol	LC50 Inhalation Vapor	Rat	24000 mg/m3	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
cobalt carbonate	LD50 Oral	Rat	640 mg/kg	-
calcium di(octanoate)	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
2-methylpentane-2,4-diol	LD50 Oral	Rat	3700 mg/kg	-
2-butoxyethanol; butyl cellosolve	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Oral	Rat	250 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-ethylhexanoic acid	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	450 milligrams	-
calcium dihydroxide	Eyes - Severe irritant	Rabbit	-	10 milligrams	-
Solvent naphtha (petroleum), heavy arom.	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters	-
butan-1-ol; n-butanol	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Eyes - Severe irritant	Rabbit	-	0.005 Milliliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
2-methylpentane-2,4-diol	Skin - Mild irritant	Rabbit	-	465 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
pentanol isomers	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
2-butoxyethanol; butyl cellosolve	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-



## Section 11. Toxicological information

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
calcium dihydroxide	Category 3	Oral	Respiratory tract irritation
butan-1-ol; n-butanol	Category 3	Not determined	Respiratory tract irritation and Narcotic effects
pentanol isomers	Category 3	Not determined	Respiratory tract irritation

### Aspiration hazard

Name	Result
Solvent naphtha (petroleum), medium aliph.	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), heavy arom.	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : No data available.

### Potential acute health effects

**Eye contact** : Causes serious eye damage.  
**Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
**Skin contact** : Causes skin irritation. May cause an allergic skin reaction.  
**Ingestion** : Harmful if swallowed. May cause burns to mouth, throat and stomach.

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

**Eye contact** : Adverse symptoms may include the following:  
 pain  
 watering  
 redness

**Inhalation** : Adverse symptoms may include the following:  
 wheezing and breathing difficulties  
 asthma  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 blistering may occur  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
 stomach pains  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : No data available.

**Potential delayed effects** : No data available.

#### Long term exposure

## Section 11. Toxicological information

**Potential immediate effects** : No data available.

**Potential delayed effects** : No data available.

### Potential chronic health effects

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : Suspected of causing genetic defects.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : May damage fertility.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	1739.7 mg/kg
Dermal	12201.7 mg/kg
Inhalation (vapors)	359.9 mg/l

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
calcium dihydroxide	Acute LC50 33884.4 ug/L Fresh water	Fish - Clarias gariepinus - Fingerling	96 hours
butan-1-ol; n-butanol	Acute EC50 1983000 to 2072000 ug/L Fresh water	Daphnia - Daphnia magna - 6 to 24 hours	48 hours
	Acute LC50 100 to 500 mg/L Fresh water	Fish - Lepomis macrochirus - 0.1 g	96 hours
2-methylpentane-2,4-diol	Acute EC50 2800000 ug/L Fresh water	Crustaceans - Ceriodaphnia reticulata - Larvae - <24 hours	48 hours
	Acute EC50 3200000 ug/L Fresh water	Daphnia - Daphnia magna - Larvae - <24 hours	48 hours
zinc oxide	Acute LC50 8000000 ug/L Marine water	Fish - Alburnus alburnus - 8 cm	96 hours
	Acute EC50 0.042 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 98 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
2-butoxyethanol; butyl cellosolve	Acute LC50 1.1 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 >1000 mg/L Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours
	Acute LC50 800000 ug/L Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 1250000 ug/L Marine water	Fish - Menidia beryllina - 40 to 100 mm	96 hours

### Persistence and degradability

No specific data.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
butan-1-ol; n-butanol	Fresh water 2 to 29 days	2 day(s)	Readily
2-methylpentane-2,4-diol	Fresh water 28 to 100 days	< 28 day(s)	Readily

### Bioaccumulative potential

## Section 12. Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2-ethylhexanoic acid	2.64	-	low
butan-1-ol; n-butanol	0.9	3	low
2-methylpentane-2,4-diol	0.58	-	low
2-butoxyethanol; butyl cellosolve	0.83	-	low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : No data available.

**Mobility** : No data 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. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. 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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	SANS 10228:2012	IMDG	IATA
<b>UN number</b>	UN1263	UN1263	UN1263
<b>UN proper shipping name</b>	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL. Marine pollutant (cobalt carbonate, zinc oxide)	Paint related material
<b>Transport hazard class(es)</b>	3  	3  	3  
<b>Packing group</b>	III	III	III
<b>Environmental hazards</b>	Yes.	Yes.	Yes.

## Section 14. Transport information

Additional information		<b>Emergency schedules (EmS)</b> F-E, _S-E_	<b>Passenger and Cargo Aircraft</b> Quantity limitation: 60 L Packaging instructions: 355 <b>Cargo Aircraft Only</b> Quantity limitation: 220 L Packaging instructions: 366 <b>Limited Quantities - Passenger Aircraft</b> Quantity limitation: 10 L Packaging instructions: Y344
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## Section 15. Regulatory information

**Safety, health and environmental regulations specific for the product** : No known specific national and/or regional regulations applicable to this product (including its ingredients).

## Section 16. Other information

### History

Date of printing : 05/03/2015.

Date of issue/Date of revision : 05/03/2015.

Date of previous issue : 16/12/2011

Version : 2

**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 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 UN = United Nations

**References** : Supplier Safety Data Sheet.  
 Toxnet.

✔ Indicates information that has changed from previously issued version.

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