




Conforms to ANSI Z400.1-2010 Standard - HPR 2015 - Canada

Protective Clothing	General Hazard	DOT
		

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Hempel's Shopprimer ZS 15899 Base
 Product identity : 1589919840
 Product type : zinc silicate shopprimer (base for multi-component product)

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

Field of application : metal industry, ships and shipyards.
 Ready-for-use mixture : 15890 = 15899 2 vol. / 99751 3 vol. 1589B = 15899 2 vol. / 9975C 3 vol.
 Identified uses : Industrial/Professional use

1.3 Details of the supplier of the safety data sheet

Company details : Hempel (Canada), Inc.
 #111 19097 26th Ave
 Surrey, B.C V3S 3V7
 Phone: 604-536-4275
 Fax: 604-536-4375
 Toll free: 1 800 661 3201
 E-mail Hempel@Hempel.com
 Manufacturer : HEMPEL (USA), Inc., 600 Conroe Park North Drive, Conroe, Texas 77303, USA

1.4 Emergency telephone number (with hours of operation)

For Transportation Emergencies : CHEMTREC: **1-800-424-9300** (Toll-free in the U.S., Canada and the U.S. Virgin Islands) **703-527-3887**
 (24 hours)
 For calls originating elsewhere (Collect calls are accepted). Contract number: CCN10384
 To preserve the effectiveness of arrangements for providing accurate and timely emergency response information, the basic identifying information (shipper name or contract number) must be included on shipping papers.
 If the purchaser of this product is going to be shipping this product to other locations, the purchaser must arrange for its own Emergency Information Provider to respond to transport incidents. Hempel's 24 hour response contract does not cover non-Hempel shipments.
 For all other information : In Canada toll free calling available: 1-800-661-3201 or (604)-273-3200
 (8 AM - 5 PM CST) See Section 4 of the safety data sheet (first aid measures).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification : FLAMMABLE LIQUIDS - Category 3
 SKIN IRRITATION - Category 2
 SERIOUS EYE DAMAGE - Category 1
 CARCINOGENICITY - Category 2
 TOXIC TO REPRODUCTION - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

2.2 Label elements

Hazard pictograms :



Signal word : Danger

SECTION 2: Hazards identification

Hazard statements :	H226 - Flammable liquid and vapor. H315 - Causes skin irritation. H318 - Causes serious eye damage. H351 - Suspected of causing cancer. H361 - Suspected of damaging fertility or the unborn child. H372 - Causes damage to organs through prolonged or repeated exposure. (hearing organs, lungs)
Precautionary statements :	
Prevention :	Obtain special instructions before use. Wear protective gloves. Wear protective clothing. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Do not breathe vapor, mist or spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.
Response :	Immediately call a POISON CENTER or doctor. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage :	Store in a well-ventilated place. Keep cool.
Disposal :	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements :	None known.

2.3 Other hazards

Hazards not otherwise classified : None known.

SECTION 3: Composition/information on ingredients

Product definition : Mixture

Physical state : Liquid.

Product/ingredient name	Identifiers	%	GHS Classification
zinc powder - zinc dust (stabilized) butan-1-ol	7440-66-6 71-36-3	≥25 - ≤50 ≥10 - <20	Not classified. FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
xylene	1330-20-7	≥10 - ≤25	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2
china clay ethylbenzene	1332-58-7 100-41-4	≥5 - ≤10 ≥1 - ≤3	Not classified. FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1
zinc oxide zeolites respirable quartz	1314-13-2 1318-02-1 14808-60-7	≥1 - ≤3 ≥1 - ≤3 <1	Not classified. Not classified. CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
toluene	108-88-3	≤0.3	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 3: Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

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.

SECTION 4: First aid measures

4.1 Description of first aid measures

General :	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).
Eye contact :	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical attention.
Inhalation :	Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately.
Skin contact :	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion :	If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.
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.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact :	Causes serious eye damage.
Inhalation :	No known significant effects or critical hazards.
Skin contact :	Causes skin irritation.
Ingestion :	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact :	Adverse symptoms may include the following: pain watering redness
Inhalation :	No specific data.
Skin contact :	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion :	Adverse symptoms may include the following: stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician :	Not applicable.
Specific treatments :	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media : Recommended: Approved Class D extinguisher or smother with dry sand, dry clay or dry ground limestone.
NOT TO BE USED: WATER. Risk of formation of very flammable and explosive vapours.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. 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 combustion products : Decomposition products may include the following materials: carbon oxides metal oxide/oxides

5.3 Advice 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. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. 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

6.1 Personal precautions, protective equipment and emergency procedures

Avoid all direct contact with the spilled material. Do not use water. Violent reaction may occur. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.2 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.

6.3 Methods and materials for containment and cleaning up

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. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used. Open with care, danger of overpressure.

Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

SECTION 7: Handling and storage

Store in accordance with local regulations for flammable liquids. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids as well as of amines, alcohols and water. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

This product may be applied using several application techniques and methods of handling may be different for each. Application techniques include [but are not limited to] brushing, rolling, and spray application [conventional, HPLV, airless, pleural component or aerosol can]. Avoid the breathing of vapors and, if spraying, do not breath spray mist or aerosols.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

		TWA (8 hours)			STEL (15 mins)			Ceiling			
Product/ingredient name	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations
butan-1-ol	US ACGIH 3/2020	20	-	-	-	-	-	-	-	-	[1]
	AB 6/2018	20	60	-	-	-	-	-	-	-	
	BC 1/2020	15	-	-	-	-	-	30	-	-	
	ON 6/2019	20	-	-	-	-	-	-	-	-	
	QC 7/2019	-	-	-	50	152	-	-	-	-	
	SK 7/2013	-	-	20 PPM	-	-	30 PPM	-	-	-	
xylene	US ACGIH 3/2020	100	434	-	150	651	-	-	-	-	[a]
	AB 6/2018	100	434	-	150	651	-	-	-	-	
	BC 1/2020	100	-	-	150	-	-	-	-	-	
	ON 6/2019	100	-	-	150	-	-	-	-	-	
	QC 7/2019	100	434	-	150	651	-	-	-	-	
	SK 7/2013	-	-	100 PPM	-	-	150 PPM	-	-	-	
china clay	US ACGIH 3/2020	-	2	-	-	-	-	-	-	-	[a]
	AB 6/2018	-	2	-	-	-	-	-	-	-	[b]
	BC 1/2020	-	2	-	-	-	-	-	-	-	[b]
	ON 6/2019	-	2	-	-	-	-	-	-	-	[c]
	QC 7/2019	-	5	-	-	-	-	-	-	-	[d]
	SK 7/2013	-	2	-	-	4	-	-	-	-	[e]
ethylbenzene	US ACGIH 3/2020	20	-	-	-	-	-	-	-	-	[a]
	AB 6/2018	100	434	-	125	543	-	-	-	-	
	BC 1/2020	20	-	-	-	-	-	-	-	-	
	ON 6/2019	20	-	-	-	-	-	-	-	-	
	QC 7/2019	100	434	-	125	543	-	-	-	-	
	SK 7/2013	-	-	100 PPM	-	-	125 PPM	-	-	-	
respirable quartz	US ACGIH 3/2020	-	0.025	-	-	-	-	-	-	-	[a]
	AB 6/2018	-	0.025	-	-	-	-	-	-	-	[f]
	BC 1/2020	-	0.025	-	-	-	-	-	-	-	[b]
	ON 6/2019	-	0.1	-	-	-	-	-	-	-	[c]
	QC 7/2019	-	0.1	-	-	-	-	-	-	-	[d]
	SK 7/2013	-	0.05	-	-	-	-	-	-	-	[e]
toluene	US ACGIH 3/2020	20	-	-	-	-	-	-	-	-	[1]
	AB 6/2018	50	188	-	-	-	-	-	-	-	
	BC 1/2020	20	-	-	-	-	-	-	-	-	
	ON 6/2019	20	-	-	-	-	-	-	-	-	
	QC 7/2019	50	188	-	-	-	-	-	-	-	
	SK 7/2013	-	-	50 PPM	-	-	60 PPM	-	-	-	

[1]Absorbed through skin.

Form: [a]Respirable fraction [b]Respirable [c]Respirable fraction. [d]Respirable dust. [e]respirable fraction [f]Respirable particulate

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. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

SECTION 8: Exposure controls/personal protection

8.2 Exposure controls

Appropriate engineering controls

Provide local exhaust and general ventilation systems to maintain airborne concentrations below OSHA, ACGIH, and manufacturer recommended exposure limits. Local exhaust ventilation is preferred because it prevents contaminant dispersion into work areas by controlling it at its source. Use local and general exhaust ventilation to effectively remove and prevent buildup of mists/vapors/fumes generated from the handling of this product.

Note: Local exhaust ventilation is designed to capture an emitted contaminant at or near its source, before the contaminant has a chance to disperse into the workplace air. General exhaust ventilation, also called dilution ventilation, is different from local exhaust ventilation because instead of capturing emissions at their source and removing them from the air, general exhaust ventilation allows the contaminant to be emitted into the workplace air and then dilutes the concentration of the contaminant to an acceptable level (e.g., to the PEL or below).

Individual protection measures

General : Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.

Hygiene measures : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

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: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection : Wear chemical-resistant gloves in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances.

Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice:

Recommended: Silver Shield / Barrier / 4H gloves, polyvinyl alcohol (PVA), Viton®
May be used: nitrile rubber, neoprene rubber, butyl rubber
Short term exposure: natural rubber (latex), polyvinyl chloride (PVC)

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product.

Wear suitable protective clothing. Always wear protective clothing when spraying.

Respiratory protection : If working areas have insufficient ventilation, wear half or totally covering mask equipped with gas filter of type Organic Vapor, when grinding use particle filter of type P95, P99 or P100. When spraying use a combined filter (organic vapor / HEPA or organic vapor / P100 type). Be sure to use approved/certified respirator or equivalent. Always wear an air-fed respirator when spraying in a continuous and prolonged work situation (e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter).

Protective clothing (pictograms) :



Note: Application of paint products by spraying requires additional safety precautions: Full body suit, Full face respirator with air supplied.

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state :	Liquid.
Odor :	Solvent-like
pH :	Testing not relevant or not possible due to nature of the product.
Melting point/freezing point :	419.85°C This is based on data for the following ingredient: Zinc
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Closed cup: 26°C (78.8°F)
Evaporation rate :	Testing not relevant or not possible due to nature of the product.
Flammability :	Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Upper/lower flammability or explosive limits :	0.8 - 11.3 vol %
Vapor pressure :	Testing not relevant or not possible due to nature of the product.
Vapor density :	Testing not relevant or not possible due to nature of the product.
Relative density :	1.932 g/cm ³
Solubility(ies) :	Partially soluble in the following materials: cold water and hot water.
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Testing not relevant or not possible due to nature of the product.
Decomposition temperature :	Testing not relevant or not possible due to nature of the product.
Viscosity :	Testing not relevant or not possible due to nature of the product.
Explosive properties :	Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat. Slightly explosive in the presence of the following materials or conditions: moisture.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight (Included exempt solvent(s)):	28.1 % (w/w)
Water % by weight :	Weighted average: 0 %
VOC content (Coatings) :	4.53 lbs/gal (543.3 g/l)
VOC content (Regulatory) :	4.54 lbs/gal (543.5 g/l)
TOC Content (Volatile) :	Weighted average: 422 g/l
Solvent Gas :	Weighted average: 0.149 m ³ /l

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

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

10.4 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.

10.5 Incompatible materials

SECTION 10: Stability and reactivity

Highly reactive or incompatible with the following materials: oxidizing materials.

Reactive or incompatible with the following materials: reducing materials, organic materials, acids, alkalis and moisture.

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

Decomposition products may include the following materials: carbon oxides metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

Direct contact with the eyes can cause irreversible damage, including blindness.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
zinc powder - zinc dust (stabilized)	LC50 Inhalation Dusts and mists	Rat	5.41 mg/l	4 hours
	LD50 Oral	Rat	>2000 mg/kg	-
butan-1-ol	LC50 Inhalation Vapor	Rat	24000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	6350 ppm	4 hours
	LD50 Dermal	Rabbit	>4200 mg/kg	-
ethylbenzene	LD50 Oral	Rat	3523 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
zinc oxide	LC50 Inhalation Dusts and mists	Rat	>5.7 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
zeolites	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>10000 mg/kg	-
toluene	LC50 Inhalation Vapor	Rat	>20 mg/l	4 hours
	LD50 Oral	Rat	636 mg/kg	-

Acute toxicity estimates

Route	ATE value
Oral	7935.35 mg/kg
Dermal	13644.04 mg/kg
Inhalation (gases)	49725.46 ppm
Inhalation (vapors)	111.61 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure
zinc powder - zinc dust (stabilized)	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams
butan-1-ol	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams
	Eyes - Mild irritant	Rabbit	-	24 hours 15 milligrams
ethylbenzene	Respiratory - Mild irritant	Rabbit	-	-
	Eyes - Mild irritant	Rabbit	-	-
zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams
toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams

Carcinogen Classification

SECTION 11: Toxicological information

Product/ingredient name	IARC	NTP	OSHA
xylene	3	-	-
ethylbenzene	2B	-	-
zeolites	3	-	-
respirable quartz	1	Known to be a human carcinogen.	-
toluene	3	-	-

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
butan-1-ol	Category 3		Respiratory tract irritation
toluene	Category 3		Narcotic effects
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs
respirable quartz	Category 1	inhalation	lungs
toluene	Category 2	-	-

Aspiration hazard

Product/ingredient name	Result
ethylbenzene	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses. Very toxic to aquatic life with long lasting effects.

When spilled, this product may act as an oil, causing a film, sheen, emulsion, or sludge at or beneath the surface of a body of water. Oils of any kind can cause: (a) drowning of waterfowl due to lack of buoyancy, loss of insulating capacity of feathers, starvation and vulnerability to predators due to lack of mobility; (b) lethal effect on fish by coating gill surfaces, preventing respiration; (c) potential fish kills resulting from alteration in biochemical oxygen demand; (d) asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom; and (e) adverse aesthetic effects of fouled shoreline and beaches.

Product/ingredient name	Result	Species	Exposure
zinc powder - zinc dust (stabilized)	Acute EC50 0.3 mg/l Marine water	Algae	72 hours
	Acute EC50 0.354 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 0.238 - 0.269 mg/l Fresh water	Fish	96 hours
	Chronic EC10 27.3 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
		- Exponential growth phase	
	Chronic EC10 59.2 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 9 mg/l Fresh water	Aquatic plants - Ceratophyllum demersum	3 days
	Chronic NOEC 178 µg/l Marine water	Crustaceans - Palaemon elegans	21 days
	Chronic NOEC 2.6 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks
	Chronic NOEC 1328 mg/l	Daphnia	96 hours
butan-1-ol	Acute LC50 1.376 mg/l	Fish	96 hours
	Chronic NOEC <1000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
ethylbenzene	LC50 0.169 mg/l	Fish	96 hours
	Acute EC50 0.17 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
zinc oxide		- Exponential growth phase	
	Acute EC50 1 mg/l	Daphnia - Pseudokirchneriella subcapitata - Exponential growth phase	48 hours
zeolites	Acute LC50 24600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute EC50 300 mg/l	Algae	96 hours

SECTION 12: Ecological information

toluene	Acute EC50 >100 mg/l	Daphnia	48 hours
	Acute LC50 >680 mg/l	Fish	96 hours
	Chronic NOEC <500000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
butan-1-ol	OECD 301D Ready Biodegradability - Closed Bottle Test	92 % - 20 days	-	-
xylene	-	>60 % - Readily - 28 days	-	-
ethylbenzene	-	>70 % - Readily - 28 days	-	-
toluene	-	100 % - Readily - 14 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
butan-1-ol	-	-	Readily
xylene	-	-	Readily
ethylbenzene	-	-	Readily
zinc oxide	-	-	Not readily
toluene	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
butan-1-ol	1	3.16	low
xylene	3.12	8.1 - 25.9	low
ethylbenzene	3.6	-	low
zinc oxide	2.2	60960	high
zeolites	-	0.59 - 0.95	low
toluene	2.73	90	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : No known data available in our database.

Mobility : No known data available in our database.

12.5 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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 and Section 8 for additional handling information and protection of employees.

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. 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

Transport may take place according to national regulation or TDG for transport by road and by train, IMDG for transport by sea, IATA for Air shipment.

	14.1 UN no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env*	14.5 Additional information
DOT Code	UN1263	PAINT. (zinc powder - zinc dust (stabilized))	3 -	 	III	Yes. ERG : 128 The marine pollutant mark is not required when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes. Reportable quantity (xylene, zinc powder - zinc dust (stabilized)) 878.73 lbs / 398.94 kg [54.549 gal / 206.49 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
TDG Code	UN1263	PAINT. (zinc powder - zinc dust (stabilized))	3 -	 	III	Yes. Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.
IMDG Code	UN1263	PAINT. (Zinc)	3 -	 	III	Yes. The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-E, S-E
IATA Code	UN1263	PAINT	3 -		III	Yes. The environmentally hazardous substance mark may appear if required by other transportation regulations.

Code : Classification
PG* : Packing group
Env.* : Environmental hazards

14.6 Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations : All components are active or exempted.

Canada

Canadian lists :

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); xylene (all isomers); ethylbenzene; n-butyl alcohol

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.

CEPA Toxic Substances (Schedule I): Particulate Matter (spray mist – during spray application), Volatile organic compounds (evaporating solvents).

Inventory list :

At least one component is not listed in DSL but all such components are listed in NDSL.

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 the Controlled Products Regulations.

SECTION 16: Other information

Remarks : Warning! If you scrape, sand, or remove old paint, you may release lead dust. LEAD is TOXIC.

Validation : Validated by US - HSE Products Coordinator on 28 November 2020

GHS Classification

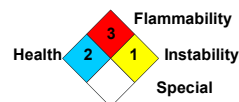
Procedure used to derive the classification.

Classification	Justification
FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 CARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method

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

Health	* 3
Fire hazard	3
Physical hazards	1
Personal protection	X

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



Personal Protective Equipment (PPE) shown in this section is a suggestion. Since conditions vary from one work location to another consult the facility safety & health program. Customer or end user is responsible to evaluate worker exposure conditions at the site of application and determine the appropriate PPE suitable for workers at that particular facility or location.

Abbreviations and acronyms :

ANSI = American National Standards Institute
HCS = Hazardous Communication System
TSCA = Toxic Substances Control Act
CFR = Code of federal Regulations
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
OSHA = United States Occupational Health and Safety Administration
NIOSH = National Institute for Occupational Safety and Health
ACGIH = American Conference of Industrial Hygienists
IARC = International Agency for Research on Cancer.
NTP = National Toxicology Program
ATE = Acute Toxicity Estimate

OECD = Organisation for Economic Co-operation and Development
BCF = Bioconcentration Factor
DOT = United States Department of Transportation
ERG = Emergency Response Guide
TDG = Transport of Dangerous Goods, Canada
SCT = Transportation & Communications Ministry, Mexico
IMDG = International Maritime Dangerous Goods
IATA = International Air Transport Association
WHMIS = Workplace Hazardous Material Information System
CEPA = Canadian Environmental Protection Act
NOM = Norma Oficial Mexicana
IDLH = Immediate Danger to Life and Health

Notice to reader

Indicates information that has changed from previously issued version.

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.