SAFETY DATA SHEET

B69VZ18

Section 1. Identification

Product name : ZINC CLAD® DOT Zinc-Rich Coating (Part B)

Accelerator

Product code : B69VZ18
Other means of : Not available.

identification

Product type : Liquid.

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

Paint or paint related material.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY

101 W. Prospect Avenue Cleveland, OH 44115

Emergency telephone number of the company

: US / Canada: (800) 424-9300

Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

Product Information Telephone Number

: US / Canada: (800) 524-5979

Mexico: Not Available

Regulatory Information Telephone Number

: US / Canada: (216) 566-2902

Mexico: Not Available

Transportation Emergency

Telephone Number

: US / Canada: (800) 424-9300

Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

Section 2. Hazards identification

OSHA/HCS status

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

Classification of the substance or mixture

: FLAMMABLE LIQUIDS - Category 3

SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

TOXIC TO REPRODUCTION - Category 1B

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) -

Category 3

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 12%

(dermal), 85.6% (inhalation)

GHS label elements

Hazard pictograms









Signal word : Danger

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Section 2. Hazards identification

Hazard statements

: Flammable liquid and vapor.

Causes skin irritation.

Causes serious eye damage.

May cause respiratory irritation.

May cause drowsiness or dizziness.

May damage fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and 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. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash thoroughly after handling.

Response

: IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or 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 doctor.

Storage

: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. FOR INDUSTRIAL USE ONLY. This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS

Please refer to the SDS for additional information. Keep out of reach of children. Do not transfer contents to other containers for storage.

Hazards not otherwise

classified

: None known.

Section 3. Composition/information on ingredients

Substance/mixture
Other means of

identification

: Mixture

: Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
1-Methoxy-2-propanol	≥50 - ≤75	107-98-2
1-Butanol	≥10 - ≤21	71-36-3
Organotitanate	≤10	5593-70-4
Zinc Chloride	<5	7646-85-7
2-Methoxy-1-propanol	<1	1589-47-5

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

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

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

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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.

Skin contact

: Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of 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. 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. 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 : Can cause central nervous system (CNS) depression. May cause drowsiness or

dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:

pain watering redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness reduced fetal weight increase in fetal deaths skeletal malformations

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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, CO₂, water spray (fog) or foam.

Unsuitable extinguishing

media

: Do not use water jet.

Specific hazards arising from the chemical

: 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. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Hazardous thermal decomposition products

: Decomposition products may include the following materials:

carbon dioxide carbon monoxide halogenated compounds 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 Remark

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

: Flammable liquid.

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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 specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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). 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

Protective measures

Put on appropriate personal protective equipment (see Section 8). 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. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. 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.

Advice on general occupational hygiene

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

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Section 7. Handling and storage

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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient name	CAS#	Exposure limits
1-Methoxy-2-propanol	107-98-2	ACGIH TLV (United States, 1/2023). TWA: 50 ppm 8 hours. TWA: 184 mg/m³ 8 hours. STEL: 100 ppm 15 minutes. STEL: 369 mg/m³ 15 minutes. NIOSH REL (United States, 10/2020). TWA: 100 ppm 10 hours. TWA: 360 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 540 mg/m³ 15 minutes.
1-Butanol	71-36-3	ACGIH TLV (United States, 1/2023). TWA: 20 ppm 8 hours. NIOSH REL (United States, 10/2020). Absorbed through skin. CEIL: 50 ppm CEIL: 150 mg/m³ OSHA PEL (United States, 5/2018). TWA: 100 ppm 8 hours. TWA: 300 mg/m³ 8 hours.
Organotitanate Zinc Chloride	5593-70-4 7646-85-7	None. ACGIH TLV (United States, 1/2023). [Zinc chloride fume] TWA: 1 mg/m³ 8 hours. Form: Fume STEL: 2 mg/m³ 15 minutes. Form: Fume NIOSH REL (United States, 10/2020). [ZINC CHLORIDE FUME] TWA: 1 mg/m³ 10 hours. Form: Fume STEL: 2 mg/m³ 15 minutes. Form: Fume OSHA PEL (United States, 5/2018). TWA: 1 mg/m³ 8 hours. Form: Fume
2-Methoxy-1-propanol	1589-47-5	None.

Occupational exposure limits (Canada)

Ingredient name	CAS#	Exposure limits
Propylene glycol monomethyl ether	107-98-2	CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 100 ppm 8 hours. 15 min OEL: 553 mg/m³ 15 minutes. 8 hrs OEL: 369 mg/m³ 8 hours. 15 min OEL: 150 ppm 15 minutes. CA British Columbia Provincial (Canada, 6/2022). STEL: 100 ppm 15 minutes.

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Section 8. Exposure controls/personal protection TWA: 50 ppm 8 hours. CA Ontario Provincial (Canada, 6/2019). TWA: 50 ppm 8 hours. STEL: 100 ppm 15 minutes. CA Quebec Provincial (Canada, 6/2022). TWAEV: 100 ppm 8 hours. TWAEV: 369 mg/m³ 8 hours. STEV: 150 ppm 15 minutes. STEV: 553 mg/m³ 15 minutes. CA Saskatchewan Provincial (Canada, 7/2013). STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours. CA Alberta Provincial (Canada, 6/2018). Normal butyl alcohol 71-36-3 8 hrs OEL: 60 mg/m³ 8 hours. 8 hrs OEL: 20 ppm 8 hours. CA British Columbia Provincial (Canada, 6/2022). TWA: 15 ppm 8 hours. C: 30 ppm CA Ontario Provincial (Canada, 6/2019). TWA: 20 ppm 8 hours. CA Quebec Provincial (Canada, 6/2022). Absorbed through skin. STEV: 50 ppm 15 minutes. STEV: 152 mg/m³ 15 minutes. CA Saskatchewan Provincial (Canada, 7/2013). STEL: 30 ppm 15 minutes. TWA: 20 ppm 8 hours. Zinc Chloride 7646-85-7 CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 1 mg/m³ 8 hours. Form: Fume 15 min OEL: 2 mg/m³ 15 minutes. Form: CA British Columbia Provincial (Canada, 6/2022). TWA: 1 mg/m³ 8 hours. Form: Fume

2-Methoxy-1-propanol 1589-47-5

STEL: 2 mg/m³ 15 minutes. Form: Fume TWA: 1 mg/m³ 8 hours. Form: Fume CA Quebec Provincial (Canada, 6/2022). TWAEV: 1 mg/m³ 8 hours. Form: fume

STEL: 2 mg/m³ 15 minutes. Form: Fume CA Ontario Provincial (Canada, 6/2019). TWA: 1 mg/m³ 8 hours. Form: Fume STEL: 2 mg/m³ 15 minutes. Form: Fume CA Saskatchewan Provincial (Canada,

STEV: 2 mg/m³ 15 minutes. Form: fume

CA British Columbia Provincial (Canada, 6/2022).

TWA: 20 ppm 8 hours. STEL: 40 ppm 15 minutes.

7/2013).

Occupational exposure limits (Mexico)

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	CAS#	Exposure limits
1-Methoxy-2-propanol	107-98-2	NOM-010-STPS-2014 (Mexico, 4/2016). STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.
1-Butanol	71-36-3	NOM-010-STPS-2014 (Mexico, 4/2016). Absorbed through skin. TWA: 20 ppm 8 hours.
Zinc Chloride	7646-85-7	NOM-010-STPS-2014 (Mexico, 4/2016). TWA: 1 mg/m³ 8 hours. Form: Fumes STEL: 2 mg/m³ 15 minutes. Form: Fumes

Biological exposure indices (United States)

No exposure indices known.

Biological exposure indices (Canada)

No exposure indices known.

Biological exposure indices (Mexico)

No exposure indices known.

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

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: 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. When there is a risk of ignition from static electricity, wear antistatic protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

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Section 8. Exposure controls/personal protection

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Flash point

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not available.

Boiling point, initial boiling : 117°C (242.6°F)

point, and boiling range

: Closed cup: 32°C (89.6°F) [Tagliabue Closed Cup]

Evaporation rate : 0.66 (butyl acetate = 1)
Flammability : Flammable liquid.

Lower and upper explosion limit/flammability limit

: Lower: 1.4% Upper: 13.74%

Vapor pressure : 1.5 kPa (10.9 mm Hg)

Relative vapor density : 2.55 [Air = 1]

Relative density : 0.93

Solubility(ies)

3 (3)	
Media	Result
cold water	Not soluble

Partition coefficient: n-

octanol/water

: Not applicable.

octanon water

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt)

Molecular weight : Not applicable.

Heat of combustion : 27.806 kJ/g

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.

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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. Do not allow vapor to accumulate in low or confined areas.

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
1-Methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	6600 mg/kg	-
1-Butanol	LC50 Inhalation Vapor	Rat	24000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
Organotitanate	LD50 Oral	Rat	3122 mg/kg	-
Zinc Chloride	LD50 Oral	Rat	350 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
1-Methoxy-2-propanol	Eyes - Mild irritant	Rabbit	-	24 hours 500	-
, , ,				mg	
	Skin - Mild irritant	Rabbit	-	500 mg	-
1-Butanol	Eyes - Severe irritant	Rabbit	-	0.005 MI	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2	-
				mg	
	Skin - Moderate irritant	Rabbit	-	24 hours 20	-
				mg	
Zinc Chloride	Skin - Severe irritant	Rabbit	-	120 hours 1	-
				%	

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

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Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
1-Methoxy-2-propanol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
1-Butanol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
Organotitanate	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
Zinc Chloride	Category 3	-	Respiratory tract irritation
2-Methoxy-1-propanol	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name		Route of exposure	Target organs
1-Methoxy-2-propanol	Category 2	-	-
1-Butanol	Category 2	-	-

Aspiration hazard

Not available.

Information on the likely

routes of exposure

: Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or

dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression.

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:

respiratory tract irritation

coughing

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness reduced fetal weight increase in fetal deaths skeletal malformations

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Section 11. Toxicological information

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 : Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General: May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity: May damage the unborn child.

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

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	3047.89 mg/kg
Dermal	21340.72 mg/kg

Section 12. Ecological information

Toxicity

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Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
1-Butanol	Acute EC50 1983 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 1730000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Zinc Chloride	Acute EC50 34 µg/l Fresh water	Algae - <i>Chlorella vulgaris</i> - Exponential growth phase	72 hours
	Acute EC50 26 μg/l Marine water	Algae - Navicula incerta	96 hours
	Acute EC50 1.8 mg/l Fresh water	Aquatic plants - Lemna aequinoctialis	96 hours
	Acute LC50 32 μg/l Fresh water	Crustaceans - Ceriodaphnia reticulata	48 hours
	Acute LC50 100 μg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 18 µg/l Fresh water	Fish - Oncorhynchus mykiss - Fry	96 hours
	Chronic EC10 58 µg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Juvenile (Fledgling, Hatchling, Weanling)	21 days
	Chronic NOEC 20 µg/l Marine water	Algae - <i>Chlorella sp.</i> - Exponential growth phase	72 hours
	Chronic NOEC 1000 μg/l Fresh water	Crustaceans - <i>Procambarus</i> clarkii - Intermolt	21 days
	Chronic NOEC 31.5 µg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i> - Juvenile (Fledgling, Hatchling, Weanling)	30 days

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
1-Butanol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Zinc Chloride	-	60960	High

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. 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.

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Accelerator

Section 14. Transport information

DOT	TDG	Marrian	IATA	1 =
Classification	Classification	Mexico Classification	IATA	IMDG
UN2924	UN2924	UN2924	UN2924	UN2924
FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy- 2-propanol)	FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy- 2-propanol)	FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy- 2-propanol)	FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy- 2-propanol)	FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy- 2-propanol). Marine pollutant (Zinc Chloride)
3 (8)	3 (8)	3 (8)	3 (8)	3 (8)
PLANAGE CHIEF				
			8	***************************************
III	III	III	III	III
No.	No.		hazardous substance mark	Yes.
	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.40-2.42 (Class 8).		environmentally hazardous substance mark may appear if required by other transportation	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-E, S-C
ERG No.	ERG No.	ERG No.		
132	132	132		
	FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy- 2-propanol) 3 (8) III No.	FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) 3 (8) III No. Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.40-2.42 (Class 8). ERG No. FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) OS. (Zinc Chloride, 1-Methoxy-2-propanol) III No. Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.40-2.42 (Class 8). ERG No. ERG No.	UN2924 FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) 3 (8) 3 (8) 3 (8) Whose the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.40-2.42 (Class 8). ERG No. FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) Chloride, 1-Methoxy-2-propanol) 3 (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) S (8) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-propanol) FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Zinc Chloride, 1-Methoxy-2-	UN2924 I LAMMABLE LIQUID, CORROSIVE, N. O. S. (Zinc Chloride, 1-Methoxy-2-propanol) S (Zinc Chloride, 1-Met

Special precautions for user :

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances

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and on all actions in case of emergency situations.

Transport in bulk according: Not available.

to IMO instruments

Proper shipping name : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

Not applicable.

International regulations

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

International lists

: Australia inventory (AIIC): Not determined. China inventory (IECSC): Not determined. Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined. Korea inventory (KECI): Not determined.

New Zealand Inventory of Chemicals (NZIoC): Not determined.

Philippines inventory (PICCS): Not determined.

Taiwan Chemical Substances Inventory (TCSI): Not determined.

Thailand inventory: Not determined. Turkey inventory: Not determined. Vietnam inventory: Not determined.

Section 16. Other information

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



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

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

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Section 16. Other information

Classification	Justification	
FLAMMABLE LIQUIDS - Category 3	On basis of test data	
SKIN CORROSION/IRRITATION - Category 2	Calculation method	
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	Calculation method	
TOXIC TO REPRODUCTION - Category 1B	Calculation method	
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract	Calculation method	
irritation) - Category 3		
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) -	Calculation method	
Category 3		
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method	

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Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973

as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available SGG = Segregation Group UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

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