Material Safety Data Sheet

MC 2705SL

1. Product and company identification

Material uses : Industrial applications: Lubricants; grease.

Manufacturer : Metalcote Division of Chemtool Incorporated
801 West Rockton Road
Rockton, IL 61072 U.S.A.
Tel: +01 815.957.4140
Fax: +01 815.624.0292

Product code : LIW25500B0

MSDS # : 1245

Validation date : 1/18/2012.

In case of emergency : INFOTRAC
U.S. and Canada - 800.535.5053
Outside the U.S. and Canada - +01 352.323.3500

2. Hazards identification

Emergency overview

Physical state : Solid. [grease]

Color : White.

Odor : Mild. Petroleum oil

Hazard statements : MAY CAUSE EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Precautionary measures : Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Use personal protective equipment as required. Wash thoroughly after handling.

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

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin : Slightly irritating to the skin. No significant irritation expected other than possible mechanical irritation. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Eyes : Slightly irritating to the eyes. No significant irritation expected other than possible mechanical irritation. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Potential chronic health effects

2. Hazards identification

Chronic effects : Contains material that may cause target organ damage, based on animal data.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Target organs : Contains material which may cause damage to the following organs: lungs, upper respiratory tract, skin.

Over-exposure signs/symptoms

Inhalation : No specific data.

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
redness

Eyes : Adverse symptoms may include the following:
irritation
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
Distillates (petroleum), hydrotreated heavy naphthenic (<3% DMSO Extractables by IP346 test method)	64742-52-5	87-93
Zinc oxide - United States - FDA Food additives generally recognized as safe GRAS 21CFR 182.5991, 182.8991	1314-13-2	1-5
Titanium dioxide	13463-67-7	1-5

Canada

Name	CAS number	%
Distillates (petroleum), hydrotreated heavy naphthenic (<3% DMSO Extractables by IP346 test method)	64742-52-5	87-93
Zinc oxide - United States - FDA Food additives generally recognized as safe GRAS 21CFR 182.5991, 182.8991	1314-13-2	1-5
Titanium dioxide	13463-67-7	1-5

Mexico

					Classification		
Name	CAS number	UN number	%	IDLH	H	F	R

3. Composition/information on ingredients

Distillates (petroleum), hydrotreated heavy naphthenic (<3% DMSO Extractables by IP346 test method)	64742-52-5	Not available.	87-93	2500 mg/m³	1	1	0	-
Titanium dioxide	13463-67-7	Not available.	1-5	5000 mg/m³	1	0	0	-
Zinc oxide - United States - FDA Food additives generally recognized as safe GRAS 21CFR 182.5991, 182.8991	1314-13-2	Not available.	1-5	500 mg/m³	1	0	0	-

4. First aid measures

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. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : No specific fire or explosion hazard.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : 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.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
metal oxide/oxides

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.

6. Accidental release measures

Personal precautions : 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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

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 for cleaning up

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

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. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. 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. 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.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
Distillates (petroleum), hydrotreated heavy naphthenic (<3% DMSO Extractables by IP346 test method)	**ACGIH TLV (United States, 2/2010).** TWA: 5 mg/m³ 8 hour(s). Form: Inhalable fraction. See Appendix C, paragraph A. Inhalable Particulate Mass TLVs (IPM–TLVs) for those materials that are hazardous when deposited anywhere in the respiratory tract. **NIOSH REL (United States, 6/2009).** TWA: 5 mg/m³ 10 hour(s). Form: Mist STEL: 10 mg/m³ 15 minute(s). Form: Mist **OSHA PEL (United States, 11/2006).** TWA: 5 mg/m³ 8 hour(s).
Zinc oxide	**NIOSH REL (United States, 6/2009).** CEIL: 15 mg/m³ Form: Dust TWA: 5 mg/m³ 10 hour(s). Form: Dust and fumes STEL: 10 mg/m³ 15 minute(s). Form: Fume

8. Exposure controls/personal protection

	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hour(s). Form: Fume STEL: 10 mg/m³ 15 minute(s). Form: Fume TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction TWA: 10 mg/m³ 8 hour(s). Form: Total dust **OSHA PEL (United States, 11/2006).** TWA: 5 mg/m³ 8 hour(s). Form: Fume TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction TWA: 15 mg/m³ 8 hour(s). Form: Total dust **ACGIH TLV (United States, 2/2010).** TWA: 2 mg/m³ 8 hour(s). Form: Respirable fraction; see Appendix C STEL: 10 mg/m³ 15 minute(s). Form: Respirable fraction; see Appendix C
Titanium dioxide	**ACGIH TLV (United States, 2/2010).** TWA: 10 mg/m³ 8 hour(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 10 mg/m³ 8 hour(s). Form: Total dust **OSHA PEL (United States, 11/2006).** TWA: 15 mg/m³ 8 hour(s). Form: Total dust

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	**List name**	**ppm**	**mg/m³**	**Other**	**ppm**	**mg/m³**	**Other**	**ppm**	**mg/m³**	**Other**	**Notations**
Titanium dioxide	US ACGIH 2/2010	-	10	-	-	-	-	-	-	-	
	AB 4/2009	-	10	-	-	-	-	-	-	-	[3]
	BC 10/2009	-	3	-	-	-	-	-	-	-	[a]
		-	10	-	-	-	-	-	-	-	[b]
	ON 7/2010	-	10	-	-	-	-	-	-	-	
	QC 6/2008	-	10	-	-	-	-	-	-	-	[c]
Zinc oxide	US ACGIH 2/2010	-	2	-	-	10	-	-	-	-	[d]
	AB 4/2009	-	2	-	-	10	-	-	-	-	[e]
	BC 10/2009	-	2	-	-	10	-	-	-	-	[e]
	ON 7/2010	-	2	-	-	10	-	-	-	-	[d]
	QC 6/2008	-	5	-	-	10	-	-	-	-	[f]
Distillates (petroleum), hydrotreated heavy naphthenic (<3% DMSO Extractables by IP346 test method)	US ACGIH 2/2010	-	5	-	-	-	-	-	-	-	[g]
	ON 7/2010	-	5	-	-	10	-	-	-	-	[h]
	QC 6/2008	-	5	-	-	10	-	-	-	-	[h]

[3]Skin sensitization
Form: [a]Respirable dust [b]Total dust [c]Total dust. [d]Respirable fraction; see Appendix C [e]Respirable [f]fume [g]Inhalable fraction. See Appendix C, paragraph A. Inhalable Particulate Mass TLVs (IPM–TLVs) for those materials that are hazardous when deposited anywhere in the respiratory tract. [h]mist

Mexico

Occupational exposure limits

Ingredient	Exposure limits
Distillates (petroleum), hydrotreated heavy naphthenic (<3% DMSO Extractables by IP346 test method)	**NOM-010-STPS (Mexico, 9/2000).** LMPE-PPT: 5 mg/m³ 8 hour(s). Form: mist LMPE-CT: 10 mg/m³ 15 minute(s). Form: mist
Zinc oxide	**NOM-010-STPS (Mexico, 9/2000).** LMPE-PPT: 10 mg/m³ 8 hour(s). Form: powder LMPE-PPT: 5 mg/m³ 8 hour(s). Form: smoke LMPE-CT: 10 mg/m³ 15 minute(s). Form: smoke
Titanium dioxide	**NOM-010-STPS (Mexico, 9/2000).**

8. Exposure controls/personal protection

	LMPE-PPT: 10 mg/m³, (as Ti) 8 hour(s). LMPE-CT: 20 mg/m³, (as Ti) 15 minute(s).

Consult local authorities for acceptable exposure limits.

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.

Engineering measures : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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.

Personal protection

Respiratory : 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.

Hands : 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.

Eyes : 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 or dusts.

Skin : 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.

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.

9. Physical and chemical properties

Physical state : Solid. [grease]

Flash point : Not available.

Auto-ignition temperature : Not available.

Flammable limits : Not available.

Color : White.

Odor : Mild. Petroleum oil

pH : Not available.

Boiling/condensation point : Not available.

Melting/freezing point : Not available.

Density : 0.9 g/cm^3

Vapor pressure : Not available.

Vapor density : Not available.

Volatility : Not available.

Evaporation rate : Not available.

9. Physical and chemical properties

Viscosity : Not available.

Dispersibility properties : Not available.

Solubility : Insoluble in the following materials: cold water and hot water.

Physical/chemical properties comments : Not available.

10. Stability and reactivity

Chemical stability : The product is stable.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), hydrotreated heavy naphthenic (<3% DMSO Extractables by IP346 test method)	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary : Slightly irritating to the eyes and skin. No significant irritation expected other than possible mechanical irritation. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Chronic toxicity

Conclusion/Summary : Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium dioxide	Skin - Mild irritant	Human	-	-	-
Zinc oxide	Eyes - Mild irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	-	-

Conclusion/Summary

Skin : Slightly irritating to the skin. No significant irritation expected other than possible mechanical irritation. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Eyes : Slightly irritating to the eyes. No significant irritation expected other than possible mechanical irritation. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Respiratory : Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation. Pre-existing respiratory disorders may be aggravated by over-exposure to this product.

11. Toxicological information

Sensitizer

Conclusion/Summary

Skin : No specific information is available in our database regarding the skin sensitizing properties of this product. Sensitization not suspected for humans.

Respiratory : Sensitization not suspected for humans.

Carcinogenicity

Conclusion/Summary : There are no data available on the preparation itself. Carcinogenicity not suspected for humans.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Zinc oxide Titanium dioxide	A4 A4	- 2B	- -	- -	- -	- -

Mutagenicity

Conclusion/Summary : There are no data available on the preparation itself. Mutagenicity not suspected for humans.

Teratogenicity

Conclusion/Summary : There are no data available on the preparation itself. Teratogenicity not suspected for humans.

Reproductive toxicity

Conclusion/Summary : There are no data available on the preparation itself. Not considered to be dangerous to humans, according to our database.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), hydrotreated heavy naphthenic (<3% DMSO Extractables by IP346 test method)	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary : Slightly irritating to the eyes and skin. No significant irritation expected other than possible mechanical irritation. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Chronic toxicity

Conclusion/Summary : Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium dioxide	Skin - Mild irritant	Human	-	-	-
Zinc oxide	Eyes - Mild irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	-	-

Conclusion/Summary

Skin : Slightly irritating to the skin. No significant irritation expected other than possible mechanical irritation. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

11. Toxicological information

Eyes : Slightly irritating to the eyes. No significant irritation expected other than possible mechanical irritation. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Respiratory : Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation. Pre-existing respiratory disorders may be aggravated by over-exposure to this product.

Sensitizer

Conclusion/Summary

Skin : No specific information is available in our database regarding the skin sensitizing properties of this product. Sensitization not suspected for humans.

Respiratory : Sensitization not suspected for humans.

Carcinogenicity

Conclusion/Summary : There are no data available on the preparation itself. Carcinogenicity not suspected for humans.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Zinc oxide	A4	-	-	-	-	-
Titanium dioxide	A4	2B	-	-	-	-

Mutagenicity

Conclusion/Summary : There are no data available on the preparation itself. Mutagenicity not suspected for humans.

Teratogenicity

Conclusion/Summary : There are no data available on the preparation itself. Teratogenicity not suspected for humans.

Reproductive toxicity

Conclusion/Summary : There are no data available on the preparation itself. Not considered to be dangerous to humans, according to our database.

Mexico

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), hydrotreated heavy naphthenic (<3% DMSO Extractables by IP346 test method)	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary : Slightly irritating to the eyes and skin. No significant irritation expected other than possible mechanical irritation. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Chronic toxicity

Conclusion/Summary : Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation.

Irritation/Corrosion

Product/ingredient name	Result	Score	Score	Exposure	Observation

11. Toxicological information

Titanium dioxide Zinc oxide	Skin - Mild irritant Eyes - Mild irritant Skin - Mild irritant	Human Rabbit Rabbit	- - -	- - -	- - -

Conclusion/Summary

Skin : Slightly irritating to the skin. No significant irritation expected other than possible mechanical irritation. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Eyes : Slightly irritating to the eyes. No significant irritation expected other than possible mechanical irritation. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Respiratory : Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation. Pre-existing respiratory disorders may be aggravated by over-exposure to this product.

Sensitizer

Conclusion/Summary

Skin : No specific information is available in our database regarding the skin sensitizing properties of this product. Sensitization not suspected for humans.

Respiratory : Sensitization not suspected for humans.

Carcinogenicity

Conclusion/Summary : There are no data available on the preparation itself. Carcinogenicity not suspected for humans.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Zinc oxide Titanium dioxide	A4 A4	- 2B	- -	- -	- -	- -

Mutagenicity

Conclusion/Summary : There are no data available on the preparation itself. Mutagenicity not suspected for humans.

Teratogenicity

Conclusion/Summary : There are no data available on the preparation itself. Teratogenicity not suspected for humans.

Reproductive toxicity

Conclusion/Summary : There are no data available on the preparation itself. Not considered to be dangerous to humans, according to our database.

12. Ecological information

Ecotoxicity : Not readily biodegradable.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure

12. Ecological information

Titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
	Acute LC50 >1000000 ug/L Marine water	Fish - Fundulus heteroclitus	96 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
Zinc oxide	Acute LC50 98 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 1.1 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 0.4 mg/L Fresh water	Daphnia - Daphnia magna - Neonate	48 hours

Conclusion/Summary : There are no data available on the preparation itself.

Persistence/degradability

Conclusion/Summary : This product has not been tested for biodegradation. Not readily biodegradable. This product is not expected to bioaccumulate through food chains in the environment.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
	Acute LC50 >1000000 ug/L Marine water	Fish - Fundulus heteroclitus	96 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
Zinc oxide	Acute LC50 98 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 1.1 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 0.4 mg/L Fresh water	Daphnia - Daphnia magna - Neonate	48 hours

Conclusion/Summary : There are no data available on the preparation itself.

Persistence/degradability

Conclusion/Summary : This product has not been tested for biodegradation. Not readily biodegradable. This product is not expected to bioaccumulate through food chains in the environment.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
	Acute LC50 >1000000 ug/L Marine water	Fish - Fundulus heteroclitus	96 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
Zinc oxide	Acute LC50 98 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours

12. Ecological information

	Acute LC50 1.1 ppm Fresh water Chronic NOEC 0.4 mg/L Fresh water	Fish - Oncorhynchus mykiss Daphnia - Daphnia magna - Neonate	96 hours 48 hours

Conclusion/Summary : There are no data available on the preparation itself.

Persistence/degradability

Conclusion/Summary : This product has not been tested for biodegradation. Not readily biodegradable. This product is not expected to bioaccumulate through food chains in the environment.

13. Disposal considerations

Waste disposal : 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Carcinogen
Target organ effects

U.S. Federal regulations : **TSCA 6 proposed risk management**: Lead
TSCA 8(a) IUR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.
TSCA 12(b) annual export notification: Lead

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Zinc oxide; Titanium dioxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Zinc oxide: Immediate (acute) health hazard, Delayed (chronic) health hazard; Titanium dioxide: Immediate (acute) health hazard

Clean Water Act (CWA) 307: Zinc oxide; Lead; Cadmium (Non-pyrophoric); zinc bis(dipentyldithiocarbamate)

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

	Product name	CAS number	Concentration %
Form R - Reporting requirements	Zinc oxide	1314-13-2	1-5
	Lead - impurity in zinc	7439-92-1	<0.0001
Supplier notification	Zinc oxide	1314-13-2	1-5

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

Connecticut Carcinogen Reporting : None of the components are listed.

Connecticut Hazardous Material Survey : None of the components are listed.

Florida substances : None of the components are listed.

Illinois Chemical Safety Act : None of the components are listed.

Illinois Toxic Substances Disclosure to Employee Act : None of the components are listed.

Louisiana Reporting : None of the components are listed.

Louisiana Spill : None of the components are listed.

Massachusetts Spill : None of the components are listed.

15. Regulatory information

Massachusetts Substances : The following components are listed: TITANIUM DIOXIDE; ZINC OXIDE FUME

Michigan Critical Material : None of the components are listed.

Minnesota Hazardous Substances : None of the components are listed.

New Jersey Spill : None of the components are listed.

New Jersey Toxic Catastrophe Prevention Act : None of the components are listed.

New Jersey Hazardous Substances : The following components are listed: TITANIUM DIOXIDE; TITANIUM OXIDE (TiO2); ZINC OXIDE

New York Acutely Hazardous Substances : None of the components are listed.

New York Toxic Chemical Release Reporting : None of the components are listed.

Pennsylvania RTK Hazardous Substances : The following components are listed: TITANIUM OXIDE (TIO2); ZINC OXIDE (ZNO)

Rhode Island Hazardous Substances : None of the components are listed.

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.
WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Lead - impurity in zinc Cadmium (Non-pyrophoric) - impurity in zinc	Yes. Yes.	Yes. Yes.	15 µg/day (ingestion) 0.05 µg/day (inhalation)	Yes. 4.1 µg/day (ingestion)

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

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

Canadian lists

Canadian NPRI : The following components are listed: Zinc

CEPA Toxic substances : None of the components are listed.

Canada inventory: DSL/NDSL : All components are listed or exempted.

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.

Mexico

Classification :

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.

15. Regulatory information

Europe inventory : All components are listed or exempted.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

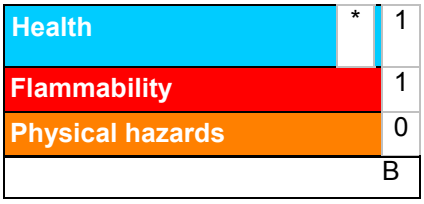
Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : MAY CAUSE EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

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



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 are not required on MSDSs 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 mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

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

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Version : 2

Prepared by : Regulatory Department, Chemtool Inc.

Indicates information that has changed from previously issued version.

16. Other information

Notice to reader

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