$0.9 \cdot 1$

TIN OXIDE

*Contains no detectable Crystalline Silica

SAFETY DATA SHEET

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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, GHS & 1272/2008/EC Standards SDS Revision: 1.0 SDS Revision Date: 8/24/2017 1. PRODUCT & COMPANY IDENTIFICATION 1.1 Product Name OPI CHROME EFFECTS POWDER - BLUE "PLATE" SPECIAL 1.2 Chemical Name: NA 1.3 NA Synonyms 1.4 CP004 1.5 Product Use Professional or Sundry Use Only 1.6 Distributor's Name: OPI Products, Inc. 13034 Saticoy Street, No. Hollywood, CA 91605 USA 1.7 Distributor's Address: Emergency Phone: CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN 16377) 1.8 Business Phone / Fax: +1 (818) 759-2400 / +1 (818) 759-5776 1.9 2. HAZARDS IDENTIFICATION 2 1 Hazard Identification: This product is classified as a hazardous substance but not as dangerous goods according to the classification criteria of NOHSC: 1088 (1999) and ADG Code (Australia). WARNING! CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION. Classification: Skin Irrit. 2; Eye Irrit. 2B; STOT SE 3 2.2 Label Elements: Hazard Statements (H): H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 – May cause respiratory irritation. Precautionary Statements (P): P261 - Avoid breathing dusts. P264 - Wash thoroughly after handling. P280 - Wear protective gloves/protective clothing/ eye protection/ face protection. P271 -Use only outdoors or in a well-ventilated area. P272 - Contaminated work clothing should not be allowed out of the workplace. P280 - Wear protective gloves. P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 - Call a POISON CENTER/doctor if you feel unwell. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P321 - Specific treatment. See this container label or Section 4 of this SDS. P362+P364 - Take off contaminated clothing and wash before reuse. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of contents/container through licensed treatment, storage or disposal facility (TSDF). 2.3 Other Warnings: The product is a fine powder, and may cause a slipping and falling hazard if spilled. In the event of an exposure or medical inquiry involving this product, please contact a physician or local poison control center, who may seek advice from the U.S. manufacturer, and show them this SDS. KEEP OUT OF REACH OF CHILDREN. NOTE: This product can expose you to chemicals including Titanium Dioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov. 3. COMPOSITION & INGREDIENT INFORMATION EXPOSURE LIMITS IN AIR (mg/m³) ACGIH NOHSC OSHA maa ppm ppm ES-CHEMICAL NAME(S) CAS No. RTECS No. EINECS No. STEL TWA STEL PEAK PEL STEL IDLH OTHER CALCIUM ALUMINUM 65997-17-3 NA 266-046-0 40-70 NA NA NF NF NF NA NA NA **BOROSILICATE** Skin Irrit. 2; Eye Irrit. 2A; Carc. 2; STOT-SE 3; H315, H319, H335, H351 13463-67-7 XR2275000 236-675-5 15-40 NF NF NA 5000 NA RESP NA 5 10 CI 77891 (TITANIUM DIOXIDE) NA 5-10 NA NA 25035-69-2 NA NA NF NF NF NA NA ACRYLATES COPOLYMER 112945-52-5 NA 231-545-4 1-5 (6) NA NF NF NF (6) NA NA SILICA*

Skin Irrit. 2; Eye Irrit. 2, STOT SE 3; H315, H319, H335

242-159-0

1-5

NA NA NF NF NF NA NA NA

18282-10-5 XQ400000

STOT SE 3; H335

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SDS Revision Date: 8/24/2017

			4. FIRST AID MEASURES	
4.1	First Aid:		If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give water or milk to unconscious person. Contact the nearest Poison Control Center or local emergency number. Provide estimate of the time at which the material was ingested and the amount of the substance that swallowed.	
		Eyes:	If product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes. O and close eyelid(s) to ensure thorough irrigation. If irritation persists seek immediate medical attention.	
			If irritation occurs and product is on the skin, rinse thoroughly with lukewarm water, followed by a thoro washing of the affected area with soap and water. Remove contaminated clothing and wash thoroughefore reuse. If irritation, redness or swelling persists, contact a physician immediately.	
			Remove victim to fresh air.	
4.2	Effects of Exposure:	Eyes: Skin:	May cause irritation in mouth and throat. May cause nausea, vomiting and diarrhea. May cause irritation, redness, stinging and tearing. May cause irritation, redness at the site of contact. Allergic contact dermatitis is possible with prolonge repeated contact.	
			Prolonged exposure may cause irritation in nose and throat with chest discomfort, coughing and difficult breathing. Excessive inhalation of dust may result in sensitization and irritation to respiratory tract. cause asthma-like symptoms in some sensitive individuals.	
4.3	Symptoms of Overexposure:	cause redness	skin overexposure may include redness, itching, and irritation of affected areas. Overexposure in eyes s, itching and watering. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) usepeated exposure.	
4.4	Acute Health Effects:	Moderate irrita	ation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cazziness, headaches and nausea.	
4.5	Chronic Health Effects:	No long-term h	nealth effects are known.	
4.6	Target Organs:	•	espiratory System.	
4.7	Medical Conditions Aggravated by Exposure:	target organs	rematitis, other skin conditions, and disorders of the (eyes, skin, and respiratory system). Preclude from the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individuals that are susceptible to dermatitis, asthmatically as the individual that are susceptible to dermatitis, as the individual that are s	
			5. FIREFIGHTING MEASURES	
		Keep away from excessive heat, open flames, sparks, and other possible sources of ignition.		
	Fire & Explosion Hazards:		m excessive heat, open flames, sparks, and other possible sources of ignition.	
5.2	Extinguishing Methods:	Carbon Dioxid	m excessive heat, open flames, sparks, and other possible sources of ignition. e, Dry Chemical, Water Spray.	
5.1 5.2 5.3	·	Carbon Dioxid Keep containe entering sewer full face, self-	m excessive heat, open flames, sparks, and other possible sources of ignition.	
5.2	Extinguishing Methods:	Carbon Dioxid Keep containe entering sewe full face, self- impervious pro	m excessive heat, open flames, sparks, and other possible sources of ignition. e, Dry Chemical, Water Spray. ers cool until well after the fire is out. Prevent runoff from fire control or dilution from rs, drains, drinking water supply, or any natural waterway. Firefighters should wear contained breathing apparatus (MSHA/NIOSH approved or the equivalent) and	
5.2	Extinguishing Methods:	Carbon Dioxid Keep containe entering sewe full face, self- impervious pro Before cleanir Equipment. For small spil Maximize ven appropriate clc Wash all affec clothing and w For large spills recovery or dis	m excessive heat, open flames, sparks, and other possible sources of ignition. e, Dry Chemical, Water Spray. ers cool until well after the fire is out. Prevent runoff from fire control or dilution from rs, drains, drinking water supply, or any natural waterway. Firefighters should wear contained breathing apparatus (MSHA/NIOSH approved or the equivalent) and otective clothing. 6. ACCIDENTAL RELEASE MEASURES Ing any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective (e.g., < 1 gallon (3.8 L)) wear appropriate personal protective equipment (e.g., goggles, glow tiliation (open doors and windows). Remove spilled material with absorbent material and place obsed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulating cled areas and outside of container with plenty of warm water and soap. Remove any contaminates throughly before reuse. g (e.g., ≥ 1 gallon (3.8 L)), deny entry to all unprotected individuals. Transfer material to containers sposal and solid diking material to separate containers for proper disposal. Remove contaminated cloth wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of municipal several containers was sposal and cleaning runoffs out of municipal several containers.	
5.2	Extinguishing Methods: Firefighting Procedures:	Carbon Dioxid Keep containe entering sewe full face, self- impervious pro Before cleanir Equipment. For small spil Maximize ven appropriate clc Wash all affec clothing and w For large spills recovery or dis promptly and and open bodi	m excessive heat, open flames, sparks, and other possible sources of ignition. e, Dry Chemical, Water Spray. ers cool until well after the fire is out. Prevent runoff from fire control or dilution from rs, drains, drinking water supply, or any natural waterway. Firefighters should wear contained breathing apparatus (MSHA/NIOSH approved or the equivalent) and otective clothing. 6. ACCIDENTAL RELEASE MEASURES Ing any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective (e.g., < 1 gallon (3.8 L)) wear appropriate personal protective equipment (e.g., goggles, glow tiliation (open doors and windows). Remove spilled material with absorbent material and place obsed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulating cled areas and outside of container with plenty of warm water and soap. Remove any contaminates throughly before reuse. g (e.g., ≥ 1 gallon (3.8 L)), deny entry to all unprotected individuals. Transfer material to containers sposal and solid diking material to separate containers for proper disposal. Remove contaminated cloth wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of municipal several containers was sposal and cleaning runoffs out of municipal several containers.	
5.2	Extinguishing Methods: Firefighting Procedures:	Carbon Dioxid Keep containe entering sewe full face, self- impervious pro Before cleanir Equipment. For small spil Maximize ven appropriate clo Wash all affec clothing and w For large spills recovery or dis promptly and and open bodi 7. Avoid prolongr ventilated loca	me excessive heat, open flames, sparks, and other possible sources of ignition. e, Dry Chemical, Water Spray. ers cool until well after the fire is out. Prevent runoff from fire control or dilution from rs, drains, drinking water supply, or any natural waterway. Firefighters should wear contained breathing apparatus (MSHA/NIOSH approved or the equivalent) and otective clothing. 6. ACCIDENTAL RELEASE MEASURES In any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective (e.g., < 1 gallon (3.8 L)) wear appropriate personal protective equipment (e.g., goggles, glow itiliation (open doors and windows). Remove spilled material with absorbent material and place obsed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulation containers and outside of container with plenty of warm water and soap. Remove any contaminated throughly before reuse. g. (e.g., > 1 gallon (3.8 L)), deny entry to all unprotected individuals. Transfer material to containers sposal and solid diking material to separate containers for proper disposal. Remove contaminated cloth wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of municipal seves of water. HANDLING & STORAGE INFORMATION ed contact with this material. Limit inhalation of the vapors generated by this product. Use in a valid (e.g., local exhaust ventilation, fans). Wash exposed skin thoroughly with plenty of soap & water at the container of the product of the plant o	
5.2 5.3 6.1	Extinguishing Methods: Firefighting Procedures: Spills:	Carbon Dioxid Keep containe entering sewer full face, self- impervious pro- Before cleanir Equipment. For small spill Maximize ven appropriate clo Wash all affectothing and w For large spills recovery or dis promptly and open bodi 7. Avoid prolongeventilated locat using this produced Use and store heat, open fla Section 10. Denot in use.	me excessive heat, open flames, sparks, and other possible sources of ignition. e. Dry Chemical, Water Spray. ers cool until well after the fire is out. Prevent runoff from fire control or dilution from rs, drains, drinking water supply, or any natural waterway. Firefighters should wear contained breathing apparatus (MSHA/NIOSH approved or the equivalent) and otective clothing. 6. ACCIDENTAL RELEASE MEASURES Ing any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective (e.g., goggles, glow dillation (open doors and windows). Remove spilled material with absorbent material and place osed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulation cled areas and outside of container with plenty of warm water and soap. Remove any contaminates thoroughly before reuse. s. (e.g., ≥ 1 gallon (3.8 L)), deny entry to all unprotected individuals. Transfer material to containers sposal and solid diking material to separate containers for proper disposal. Remove contaminated cloth wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of municipal seves of water. HANDLING & STORAGE INFORMATION ed contact with this material. Limit inhalation of the vapors generated by this product. Use in a value of the contact with this material. Limit inhalation of the vapors generated by this product. Use in a value of the contact with this material.	

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Physician Recommendations:

Treat symptomatically.

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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, GHS & 1272/2008/EC Standards SDS Revision: 1.0 SDS Revision Date: 8/24/2017 8. EXPOSURE CONTROLS & PERSONAL PROTECTION NOHSC OTHER Exposure Limits: OSHA ppm (mg/m³) CHEMICAL NAME(S) TI V STEL ES-TWA PFAK PFI STEL IDLH STFI **SILICA** (10)NA NF NF NF (6) NA NA CI 77891 (TITANIUM DIOXIDE) NF NF RESP 10 NA NA 5000 NA Ventilation & Engineering 8.2 When working with large quantities of product, provide adequate ventilation (e.g., local exhaust ventilation, fans). Ensure Controls: that an eyewash station, sink or washbasin is available in case of exposure to eyes. 8.3 Respiratory Protection: No special respiratory protection is required under typical circumstances of use or handling. instances where vapors or sprays of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia. 8.4 Eye Protection: Avoid eye contact. Use approved safety glasses or goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). If anticipated that prolonged & repeated skin contact will occur during use of this product, wear latex or 8.5 Hand Protection: rubber gloves for routine industrial use. If necessary, refer to U.S. OSHA 29 CFR §1910.138, the appropriate standards of Canada, of the E.C. member states. Body Protection: No special body protection is required under typical circumstances of use and handling. If necessary, refer to appropriate standards of Canada, the E.C. member states, or U.S. OSHA 9. PHYSICAL & CHEMICAL PROPERTIES Appearance: Light blue powder 9.2 Odor Mild acrylic odor, in bulk 9.3 Odor Threshold: NA 9.4 pH: NA 9.5 Melting Point/Freezing Point: NA 9.6 Initial Boiling Point/Boiling NA NA 9.7 Flashpoint Upper/Lower Flammability 9.8 NA 9.9 Vapor Pressure: NA 9.10 Vapor Density: NA Relative Density: 9.11 NA 9.12 Insoluble in water 9.13 Partition Coefficient (log Pow): NA 9.14 **Autoignition Temperature** NA 9.15 Decomposition Temperature: NA 9 16 Viscosity: NA Other Information: 9.17 NA 10. STABILITY & REACTIVITY 10.1 Stability: This product is stable 10.2 Hazardous Decomposition Oxides of carbon and nitrogen. Products 10.3 Hazardous Polymerization: Will not occur. 10.4 Conditions to Avoid Open flames, sparks, high heat and direct sunlight. 10.5 Incompatible Substances: None known. 11. TOXICOLOGICAL INFORMATION Absorption: YES 11.1 Routes of Entry: YES 11.2 Toxicity Data: This product has NOT been tested on animals to obtain toxicology data. There are toxicology data for the components of the product, which are found in scientific literature. This data has not been presented in this document. Acute Toxicity See Section 4.4 11.4 Chronic Toxicity See Section 4.5 Titanium Dioxide: IARC Group 2B (possible human carcinogen); ACGIH A4 (not classified as a human carcinogen). 11.5 Suspected Carcinogen: Silica: IARC Group 3 which are not carcinogenic to humans. 11.6 Reproductive Toxicity This product is not reported to produce reproductive effects in humans. Mutagenicity This product is not reported to produce mutagenic effects in humans. Embryotoxicity This product is not reported to produce embryotoxic effects in humans. Teratogenicity: This product is not reported to cause teratogenic effects in humans. Reproductive Toxicity: This product is not reported to cause reproductive effects in humans Irritancy of Product: 11.7 See Section 4.2 Biological Exposure Indices 11.8 NE

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Other Requirements:

NA

15.8

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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, GHS & 1272/2008/EC Standards SDS Revision: 1.0 SDS Revision Date: 8/24/2017 12. ECOLOGICAL INFORMATION Environmental Stability: 12.1 This product will slowly volatile from soil. Components of this product will slowly decompose into organic compounds. 12.2 Effects on Plants & Animals: There are no specific data available for this product. 12.3 Effects on Aquatic Life: There are no specific data available for this product. However, releases of large volumes may be harmful or fatal to overexposed aquatic life. Aquatic toxicity data for components of this product are available, but are not presented in this Safety Data Sheet. DISPOSAL CONSIDERATIONS Dispose of in accordance with Federal, state and local regulations. 13.1 Waste Disposal: 13.2 Special Considerations: 14. TRANSPORTATION INFORMATION The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG, SCT, ADGT, ADR and the CTDGR 49 CFR (GND): NOT REGULATED 14.2 IATA (AIR): NOT REGULATED IMDG (OCN): 14.3 NOT REGULATED 14.4 TDGR (Canadian GND): **NOT REGULATED** ADR/RID (EU): 14.5 **NOT REGULATED** 14.6 SCT (MEXICO) NOT REGULATED 14.7 ADGR (AUS): NOT REGULATED 15. REGULATORY INFORMATION 15.1 SARA Reporting This product does not contain any substances subject to SARA Title III, section 313 reporting requirements. Requirements 15.2 SARA TPQ: There are no specific Threshold Planning Quantities for the components of this product. 15.3 TSCA Inventory Status: The components of this product are listed on the TSCA Inventory as appropriate 15.4 CERCLA Reportable Quantity: This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR Subchapter G, 15.5 Other Federal Requirements (Cosmetics). 15.6 Other Canadian Regulations: This product has been classified according to the hazard criteria of the CPR and the Safety Data Sheet contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List. WHMIS D2b (Other Toxic Effects) 15.7 State Regulatory Information: Titanium Dioxide is found on the following state criteria lists: California Hazardous Substances List (CA). None of the ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DÉ), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI). WARNING: This product can expose you to chemicals including Titanium Dioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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		16. OTHER INFORMATION		
16.1	Other Information:	CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION. Use only as directed. Discontinue use if irritation develops. Avoid breathing dusts. Wash thoroughly after handling. Wear protective gloves/protective clothing/ eye protection/ face protection. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Specific treatment. See this container label or Section 4 of this SDS. Take off contaminated clothing and wash before reuse. Store in a well-ventilated place. Keep container tightly closed. Store locked up. KEEP OUT OF REACH OF CHILDREN. WARNING: This product can expose you to chemicals including Titanium Dioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.		
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.		
16.3	Disclaimer:	This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & OPI's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.		
16.4	Prepared for:	OPI Products, Inc. 13034 Saticoy Street No. Hollywood, CA 91605 USA Tel: +1 (818) 759-2400 Fax: +1 (818) 759-5776 http://www.opi.com		
16.5	Prepared by:	ShipMate, Inc. P.O. Box 787 Sisters, Oregon 97759-0787 USA Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 http://www.shipmate.com		

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SDS Revision: 1.0

SDS Revision Date: 8/24/2017

DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No.	No. Chemical Abstract Service Number		
RTECS No.	TECS No. Registry of Toxic Effects of Chemical Substances Number		
EINECS No. European Inventory of Existing Commercial Chemical Substances Number			

EXPOSURE LIMITS IN AIR:

ACGIH	ACGIH American Conference on Governmental Industrial Hygienists	
IDLH	Immediately Dangerous to Life and Health	
NOHSC	National Occupational Health and Safety Commission (Australia)	
OSHA U.S. Occupational Safety and Health Administration		
PEL Permissible Exposure Limit		
STEL Short Term Exposure Limit		
TLV Threshold Limit Value		
TWA Time Weighted Average		

FIRST AID MEASURES:

CPR	Cardiopulmonary resuscitation - method in which a person whose heart has	
	stopped receives manual chest compressions and breathing to circulate blood	
	and provide oxygen to the body.	

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard	
1 Slight Hazard		
2	Moderate Hazard	
3	Severe Hazard	
4	Extreme Hazard	



PERSONAL PROTECTION RATINGS:

Α				
В				
С			THE THE	
D	(Fr	(E)	THE STATE OF THE S	
Е				
F			THE STATE OF THE S	

G				
Н			H.	
ı				
J			F	
K	F		(
Х	Consult y special h	our supe andling d	rvisor or irections.	SOPs for



OTHER STANDARD ABBREVIATIONS:

Carc	Carcinogenic	
Irrit	Irritant	
NA	Not Available	
NR	No Results	
ND	Not Determined	
NE	Not Established	
NF	Not Found	
SCBA	SCBA Self-Contained Breathing Apparatus	
Sens	s Sensitization	
STOT RE	STOT RE Specific Target Organ Toxicity – Repeat Exposure	
STOT SE	Chasifia Target Organ Tavisity Cingle Evacure	

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILI	FLAMMABILITY LIMITS IN AIR:		
Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition		
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source		
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source		

HAZARD RATINGS:

0	Minimal Hazard	FLAMMABILITY
1	Slight Hazard	\ \ \ \
2	Moderate Hazard	REACTIVITY
3	Severe Hazard	
4	Extreme Hazard	
ACD	Acidic	\sim 2
ALK	Alkaline	
COR	Corrosive	/ \ \ \ \
₩	Use No Water	HEALTH 🔪
ОХ	Oxidizer	SPECIAL
TREFOIL	Radioactive	PRECAUTIONS

TOXICOLOGICAL INFORMATION:

LD ₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC ₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD _{io}	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD _{io} , LD _{io} , & LD _o or	Lowest dose (or concentration) to cause lethal or toxic effects
TC, TC _o , LC _{io} , & LC _o	
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL _m	Median threshold limit
log Kow or log Koc	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System					
DOT	U.S. Department of Transportation					
TC	Transport Canada					
EPA	U.S. Environmental Protection Agency					
DSL	Canadian Domestic Substance List					
NDSL	Canadian Non-Domestic Substance List					
PSL	Canadian Priority Substances List					
TSCA	U.S. Toxic Substance Control Act					
EU	European Union (European Union Directive 67/548/EEC)					
WGK	Wassergefährdungsklassen (German Water Hazard Class)					

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

0	®	(2)	(3)	\odot	(4)		
Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

CLP/GHS (1272/2008/EC) PICTOGRAMS:

	③	③	\Diamond			(! >		*
GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environment