

Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards

MATERIAL SAFETY DATA SHEET

MSDS Revision: 2.1

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MSDS-E-D100L

MSDS Revision Date: 02/14/2011

03 **CHEMICAL RESPONSE CARD:** 1. PRODUCT IDENTIFICATION Product Name: DeoxIT® D100L, D-SERIES RESPONSE 1.2 **TEAM PPE:** Chemical Name See ingredients listed in section 3 1.3 Synonyms DeoxIT® D100L WHMIS: 1 4 Trade Names: DeoxIT® D100L (see list below) 1.5 Product Use: Clean, deoxidize & improve electrical contacts & connectors **HEALTH:** 0 1.6 Manufacturer's Name: CAIG Laboratories, Inc. FLAMMABILITY: 0 1 7 Manufacturer's Address: 12200 Thatcher Court, Poway, CA 92064-6876 PHYSICAL HAZARDS 0 1.8 Business Phone: PERSONAL PROTECTION: +1 (800)-224-4123 **Emergency Phone:** 1.9 CHEMTREC +1 (703) 527-3887 / +1 (800) 424-9300 Other Product Names: DeoxIT® D100L, 2 ml (Part No. D100L-2C, D100L-2CP) DeoxIT® D100L, 2.3 ml (Part No. D100L-58D) DeoxIT® D100L, 7.4 ml (Part No. D100L-2DB) DeoxIT® D100L, 12 ml (Part No. D100L-12C) DeoxIT® D100L, 25 ml (Part No. D100L-25C) DeoxIT® D100L, 59 ml (Part No. D100L-2) DeoxIT® D100L, 236 ml (Part No. D100L-8) DeoxIT® D100L, 354 ml (Part No. D100L-12) DeoxIT® D100L, 472 ml (Part No. D100L-16) DeoxIT® D100L, 944 ml (Part No. D100L-32) DeoxIT® D100L, 30 L (Part No. D100L-8G) 2. HAZARD IDENTIFICATION 2.1 Hazard Identification This product is NOT classified as a HAZARDOUS SUBSTANCE or as DANGEROUS GOODS according to the classification criteria of [NOHSC: 1088 (2004)] and ADG Code (Australia). DeoxIT® D100L is non-volatile, non-hazardous and non-flammable. Routes of Entry: Inhalation: YES Absorption: YES Ingestion: Effects of Exposure: Non-irritating when used as directed. Can cause irritation, tearing, and temporary blurred vision. EYES: SKIN: Non-irritating when used as directed. Prolonged or repeated contact may cause temporary contact dermatitis (localized redness or rash). INGESTION: Not probable. Small amounts if swallowed may cause temporary gastrointestinal irritation. INHALATION: Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary irritating to the eyes, nose, throat, and the respiratory tract; may cause temporary headaches and Symptoms of Overexposure 2.4 Non-irritating when used as directed. Can cause temporary irritation, tearing, and blurred vision. EYES: SKIN: Non-irritating when used as directed. Prolonged or repeated contact may cause temporary contact dermatitis (localized redness or rash). INGESTION: Not probable. Small amounts if swallowed may cause temporary gastrointestinal irritation. INHALATION: Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary irritating to the eyes, nose, throat, and the respiratory tract; may cause headaches and dizziness. 2.5 Acute Health Effects: None reported when used as directed. Mild to moderate temporary irritation. EYES: SKIN: Unlikely when used as directed. Repeated exposure at site of contact may cause temporary contact dermatitis (localized redness or rash). INGESTION: Not probable. Small amount may cause temporary gastrointestinal irritation and central nervous system depression. Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary INHALATION: irritating to the eyes, nose, throat, and the respiratory tract; may cause headaches and dizziness. Chronic Health Effects: None reported by the manufacturer. 2.7 Target Organs: Eyes and skin.

NA = Not Available; ND = Not Determined; NE = Not Established; NF = Not found; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used

NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1998 format.



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MSDS Revision Date: 02/14/2011 Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision: 2.1 3. COMPOSITION & INGREDIENT INFORMATION EXPOSURE LIMITS IN AIR (mg/m³) **ACGIH OSHA** OTHER TLV **STEL** PEL **STEL IDLH** % RTECS No. **EINECS No.** CHEMICAL NAME(S) CAS No. ppm ppm ppm ppm ppm DeoxIT® D100L Trade Secret NA NA 100 NE NE NE NE NE 4. FIRST AID MEASURES First Aid: EYES: Flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If irritation persists, seek immediate medical attention. SKIN: Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt medical attention. Do not wear contaminated clothing until after it has been properly cleaned. INGESTION: Do not induce vomiting! Drink plenty of water. If irritation persists, contact a physician. Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate INHALATION: medical attention. If breathing stops, perform artificial respiration. 4 2 Medical Conditions Aggravated by Exposure: HEALTH 0 None reported by the manufacturer. **FLAMMABILITY** 0 PHYSICAL HAZARDS 0 PROTECTIVE EQUIPMENT Α **EYES** 5. FIREFIGHTING MEASURES 5.1 Flashpoint & Method: > 250 °C (482 °F) 5.2 Autoignition Temperature: NA 5.3 Flammability Limits: Lower Explosive Limit (LEL): ND Upper Explosive Limit (UEL) ND Fire & Explosion Hazards 5.4 Carbon dioxide, carbon monoxide, hydrocarbons. 5.5 Extinguishing Methods CO2, Alcohol foam, Dry Chemical, Water Fog 5.6 Wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Use a water spray to cool containers involved in fire. Do not use direct water stream. Container storage areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Keep containers cool until well after the fire is out to prevent rupture. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. 6. ACCIDENTAL RELEASE MEASURES Ventilate if in enclosed area. Secure spill area, remove or minimize all sources of ignition, and maximize ventilation. Wipe and rinse with water. Deny entry to all unprotected individuals. Individuals involved in the cleanup must wear appropriate personal protective equipment.



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MSDS Revision: 2.1 Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision Date: 02/14/2011 7. HANDLING & STORAGE INFORMATION 7.1 Work & Hygiene Practices: Wash hands thoroughly after using this product and before eating, drinking, or smoking. Remove soiled clothing to prevent prolonged skin contact. Storage & Handling: Use and store in a cool, dry, well-ventilated area. Do not store near or with any incompatible materials listed in section 10. Open containers may change concentrations, keep tightly closed when not in use. Normal shelf life 2-3 years. 7.3 Empty containers may contain product residues. 8. EXPOSURE CONTROLS & PERSONAL PROTECTION 8.1 Ventilation & Engineering Controls: Use with adequate ventilation (e.g., open doors and windows, local exhaust ventilation). Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station). Respiratory Protection: 8.2 None required, when used with adequate ventilation. 8.3 Wear safety glasses with side shields (ANSI Z87) under normal use conditions. 8.4 None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. In such cases, wear rubber or impervious plastic gloves. 8.5 Body Protection: Use as necessary to prevent skin contact. 9. PHYSICAL & CHEMICAL PROPERTIES 9 1 Density: 0.72 Boiling Point: 9.2 > 220 °C (428 °F) 9.3 Melting Point NA 9 4 Evaporation Rate: NA 9.5 Vapor Pressure < 0.01 mm Hg @ 20 °C (68 °F) 9.6 Molecular Weight: 9.7 Appearance & Color: Light red 9.8 Odor Threshold: Ethereal/hydrocarbon odor 9.9 Solubility Not soluble in water 9.10 Ph 9.11 Viscosity: 5.4 - 7.5 cSt @ 104 °F 9.12 VOC (g/L): None 9 13 Other Information: NA 10. STABILITY & REACTIVITY 10.1 Stability: Stable under normal conditions of use (see section 7). 10.2 Hazardous Decomposition Products: Change in color signifies exposure to ultraviolet light or exceeding shelf life. Will not degrade to unstable products. Discard solution. 10.3 Hazardous Polymerization: 10.4 Conditions to Avoid: Use or storage near open flames, sparks, high heat (>100 °F) or other heat sources, and proximity to incompatible substances and heavily trafficked areas. 10.5 Incompatible Substances: Strong oxidizers.



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Prep	pared to OSHA, ACC, ANSI, V	VHMIS, NOHSC & 2001/58 EC Standards MSDS Revision: 2.1 MSDS Revision Date: 02/14/2011								
		11. TOXICOLOGICAL INFORMATION								
1.1	Toxicity Data:	This product has not been tested on animals to obtain toxicological data. There are toxicology data								
	Toxicity Bata.	for the components of this product, which are found in the scientific literature. These data have no								
been presented in this document.										
1.2	Acute Toxicity:	See section 3.5								
1.3	Chronic Toxicity:	See section 3.6								
1.4	Suspected Carcinogen: NE									
1.5	Reproductive Toxicity:	This product is not reported to produce reproductive toxicity 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 produce teratogenic effects in humans.								
	Reproductive Toxicity:	This product is not reported to produce reproductive effects in humans.								
1.6	Irritancy of Product:	See Section 3.3								
1.7	Biological Exposure Indices:	NE								
1.8	Physician Recommendations:	Treat symptomatically.								
		12. ECOLOGICAL INFORMATION								
2.1	Environmental Stability:	This product will slowly volatile from soil. Components of this product will slowly decompose int								
		organic compounds.								
2.2	Effects on Plants & Animals:	There is no specific data available for this product.								
2.3	Effects on Aquatic Life:	Releases of large volumes of this product are expected to be harmful or fatal to overexposed aquati life.								
		13. DISPOSAL CONSIDERATIONS								
3.1	Waste Disposal: Dispose of in accordance	with federal, state or local regulations.								
3.2	Special Considerations:	· · · · · · · · · · · · · · · · · · ·								
	NA									
		14. TRANSPORTATION INFORMATION								
		er, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation on may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.								
4.1	49 CFR (GND):	Tittlay be required by 49 CFR, IATA/ICAO, INIDG and the CIDGR.								
7.1	NOT REGULATED									
4.2	IATA (AIR):									
	NOT REGULATED									
	IMDG (OCN):									
4.3	NOT REGULATED									
4.3	TOT RECOESTIES	TDGR (Canadian GND):								
	TDGR (Canadian GND):									
4.4	TDGR (Canadian GND): NOT REGULATED									
4.4	TDGR (Canadian GND): NOT REGULATED ADR/RID (EU):									
4.4	TDGR (Canadian GND): NOT REGULATED ADR/RID (EU): NOT REGULATED									
4.4	TDGR (Canadian GND): NOT REGULATED ADR/RID (EU): NOT REGULATED SCT (MEXICO):									
4.4	TDGR (Canadian GND): NOT REGULATED ADR/RID (EU): NOT REGULATED SCT (MEXICO): NO REGULADO									
4.4	TDGR (Canadian GND): NOT REGULATED ADR/RID (EU): NOT REGULATED SCT (MEXICO):									



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Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision Date: 02/14/2011 MSDS Revision: 2.1 15. REGULATORY INFORMATION 15.1 SARA Reporting Requirements: 15.2 SARA Threshold Planning Quantity NA 15.3 TSCA Inventory Status: All chemical substances of this product are listed on the TSCA inventory or are otherwise exempt from inventory status. 15.4 CERCLA Reportable Quantity (RQ) 15.5 Other Federal Requirements: NA 15.6 Other Canadian Regulations This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS 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. 15.7 State Regulatory Information: The primary component of this product is not listed on the following state lists: California OSHA; California Proposition 65; Massachusetts Right to Know List of Chemicals; New Jersey Right to Know List 8:59 Appendix A; Pennsylvania Hazardous Substances List 34 323 Appendix A; Wisconsin Hazardous Substances List NR 605.09; Minnesota Hazardous Substances List; and Florida Toxic Substances List. 15.8 67/548/EEC (European Union) Requirements: The primary component of this product is not listed in Annex I of EU Directive 67/548/EEC. 16. OTHER INFORMATION 16.1 Other Information: NA 16.2 Terms & Definitions: See page last page of this MSDS. 16.3 Disclaimer: This Material 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 & CAIG Laboratories, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are 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. Prepared for 16.4 CAIG Laboratories, Inc. 12200 Thatcher Court Poway, CA 92064-6876 +1 (800) CAIG-123 (244-4123) phone +1 (858) 486-8398 fax http://www.caig.com/ Prepared by: ShipMate, Inc. P.O. Box 787 Sisters, OR. 97759-0787 +1 (310) 370-3600 phone +1 (310) 370-5700 fax http://www.shipmate.com/



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DEFINITION OF TERMS

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

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number

EXPOSURE LIMITS IN AIR:

ACGIH American Conference on Governmental Industrial Hygieni			
TLV Threshold Limit Value			
OSHA U.S. Occupational Safety and Health Administration			
PEL Permissible Exposure Limit			
IDLH Immediately Dangerous to Life and Health			

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:

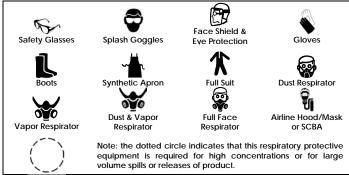
0	Minimal Hazard	
1	1 Slight Hazard	
2	Moderate Hazard	
3	3 Severe Hazard	
4 Extreme Hazard		



PERSONAL PROTECTION RATINGS:

A	\$			
В	S	The second		
С	S.		*	
	D	500		
D			~	
E	♥			





OTHER STANDARD ABBREVIATIONS:

NA	Not Available
NR	No Results
NE	Not Established
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

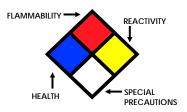
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition	Minimum temperature required to initiate combustion					
Temperature in air with no other source of ignition						
LEL Lower Explosive Limit - lowest percent of vapor in air,						
	volume, that will explode or ignite in the presence of					
	an ignition source					
UEL	Upper Explosive Limit - highest percent of vapor in air,					
	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		
1	Slight Hazard		
2	Moderate Hazard		
3	Severe Hazard		
4	Extreme Hazard		
ACD	Acidic		
ALK	Alkaline		
COR	Corrosive		
w —	Use No Water		
OX	Oxidizer		



TOXICOLOGICAL INFORMATION:

LD ₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals s			
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, TCo, LClo, & LCo				
IARC	International Agency for Research on Cancer			
NTP	National Toxicology Program			
RTECS	Registry of Toxic Effects of Chemical Substances			
BCF	Bioconcentration Factor			
TLm	Median threshold limit			
log Kow or log Koc	Coefficient of Oil/Water Distribution			

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System			
DOT	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	EU European Union (European Union Directive 67/548/EEC)			

EC INFORMATION:

		*	*			×	×
С	E	F	N	0	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful



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WIPES

Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision: 2.1 MSDS Revision Date: 02/14/2011

1.	PRODUCT IDENTIFICATION					CHEMICAL RESPONSE CARD: 03					
1.1	Product Name:	DeoxIT® V	DeoxIT® Wipes, D-SERIES		RESPONSE						
1.2	Chemical Name:	See ingredients listed in section 3		TEAM PPE:							
1.3	Synonyms:	DeoxIT® D100L	DeoxIT® D100L				Ŧ				
1.4	Trade Names:	DeoxIT® D100L	(see list b	elow)			WHMIS:	\bigcirc			
1.5	Product Use:	Clean, deoxic	dize & impr	ove electrical	contacts &	connectors	HEALTH:				0
1.6	Manufacturer's Name:	CAIG Laborat	tories, Inc.				FLAMMABILITY:			0	
1.7	Manufacturer's Address:	12200 Thatche	er Court, Po	oway, CA 9206	4-6876		PHYSICAL HAZARDS:			0	
1.8	Business Phone:	+1 (800)-224-4	123				PERSONAL PROTECTION:				
1.9	Emergency Phone:	CHEMTRE	C +1 (703) 527-3	887 / +	1 (800) 42	4-9300				<u>.</u>
1.10	Other Product Names: CHEMTREC +1 (703) 527-3887 / +1 (800) 424-9300 DeoxIT® WIPES, (Part Nos. D50W, K-D1W-25, K-D1W-50, D1W)										
			2	. HAZARD	IDFNIII	FICATION					
2.1	Hazard Identification:			· IIAZAND	IDLIAIII	ICAHON					
	This product is NOT classified as a HAZARDOUS SUBSTANCE or as DANGEROUS GOODS according to the classification criteria of [NOHSC: 1088 (2004)] and ADG Code (Australia). DeoxIT® D100L is non-volatile, non-hazardous and non-flammable.										
2.2	Routes of Entry:	Inhalation: YES Absorption: YES Ingestion: YES									
2.3	Effects of Exposure: EYES: Non-irritating when used as directed. Can cause irritation, tearing, and temporary blurred vision. Non-irritating when used as directed. Prolonged or repeated contact may cause temporary contact dermatitis (localized redness or rash). INGESTION: INHALATION: Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary irritating to the eyes, nose, throat, and the respiratory tract; may cause temporary headaches and dizziness.										
2.4	Symptoms of Overexposure: EYES: Non-irritating when used as directed. Can cause temporary irritation, tearing, and blurred vision. SKIN: Non-irritating when used as directed. Prolonged or repeated contact may cause temporary contact dermatitis (localized redness or rash). INGESTION: Not probable. Small amounts if swallowed may cause temporary gastrointestinal irritation. INHALATION: Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary irritating to the eyes, nose, throat, and the respiratory tract; may cause headaches and dizziness.										
2.5	Acute Health Effects: EYES: None reported when used as directed. Mild to moderate temporary irritation. Unlikely when used as directed. Repeated exposure at site of contact may cause temporary contact dermatitis (localized redness or rash). INGESTION: INHALATION: Not probable. Small amount may cause temporary gastrointestinal irritation and central nervous system depression. Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary irritating to the eyes, nose, throat, and the respiratory tract; may cause headaches and dizziness.										
2.6	Chronic Health Effects: None reported by the manufacturer.										
2.7	Target Organs:										
	Eyes and skin.										
NA -	Not Available; ND = No	at Determined: NF -	Not Establis	hed:NF = Not for	ınd: C = Ceili	na Limit: See Sec	ction 16 for Additio	nal Definit	ions of Te	erms Used	
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NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1998 format



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6.1 Spil

Ventilate if in enclosed area. Secure spill area, remove or minimize all sources of ignition, and maximize ventilation. Wipe and rinse with water. Deny entry to all unprotected individuals. Individuals involved in the cleanup must wear appropriate personal protective equipment.



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		11. TOXICOLOGICAL INFORMATION					
11.1							
11.2	Acute Toxicity: See section 3.5						
11.3	Chronic Toxicity:	See section 3.6					
11.4	Suspected Carcinogen:	NE					
11.5	Reproductive Toxicity:	This product is not reported to produce reproductive toxicity 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:						
	Reproductive Toxicity:	This product is not reported to produce reproductive effects in humans.					
11.6	Irritancy of Product:	See Section 3.3					
11.7	Biological Exposure Indices:	NE					
11.8	Physician Recommendations:	Treat symptomatically.					
	-	, y ,					
		12. ECOLOGICAL INFORMATION					
12.1	Environmental Stability:	This product will slowly volatile from soil. Components of this product will slowly decompose intorganic compounds.					
12.2	Effects on Plants & Animals:	There is no specific data available for this product.					
12.3	Effects on Aquatic Life:	Releases of large volumes of this product are expected to be harmful or fatal to overexposed aquati life.					
13.1	Ta. DISPOSAL CONSIDERATIONS Waste Disposal: Dispose of in accordance with federal, state or local regulations.						
13.2	Special Considerations: NA						
13.2	1 '	14. TRANSPORTATION INFORMATION					
The	NA basic description (ID Numbe	r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation					
The Ado	basic description (ID Numbe	14. TRANSPORTATION INFORMATION r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation n may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.					
The Ado	basic description (ID Numbe litional descriptive informatio	r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation					
The Ado	basic description (ID Numbe litional descriptive informatio 49 CFR (GND): NOT REGULATED	r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation					
The Adc	basic description (ID Numbe litional descriptive informatio 49 CFR (GND): NOT REGULATED	r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation					
The Adc 14.1 14.2	basic description (ID Numbe litional descriptive informatio 49 CFR (GND): NOT REGULATED IATA (AIR): NOT REGULATED	r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation					
The Adc 14.1 14.2	basic description (ID Numbe litional descriptive informatio 49 CFR (GND): NOT REGULATED	r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation					
The Adc	basic description (ID Numbe litional descriptive informatio 49 CFR (GND): NOT REGULATED IATA (AIR): NOT REGULATED	r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation					
The Adc	basic description (ID Numbe litional descriptive informatio 49 CFR (GND): NOT REGULATED IATA (AIR): NOT REGULATED IMDG (OCN): NOT REGULATED	r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation					
The Adc 14.1 14.2	basic description (ID Numbe itional descriptive informatio 49 CFR (GND): NOT REGULATED IATA (AIR): NOT REGULATED IMDG (OCN): NOT REGULATED TDGR (Canadian GND):	r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation					
The Adc 14.1	basic description (ID Numbe itional descriptive informatio 49 CFR (GND): NOT REGULATED IATA (AIR): NOT REGULATED IMDG (OCN): NOT REGULATED TDGR (Canadian GND): NOT REGULATED	r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportatio					
The Adc 14.1 14.2 14.3 14.4 14.5	basic description (ID Numbe itional descriptive informatio 49 CFR (GND): NOT REGULATED IATA (AIR): NOT REGULATED IMDG (OCN): NOT REGULATED TDGR (Canadian GND): NOT REGULATED ADR/RID (EU):	r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportatio					
The	basic description (ID Numbe itional descriptive informatio 49 CFR (GND): NOT REGULATED IATA (AIR): NOT REGULATED IMDG (OCN): NOT REGULATED TDGR (Canadian GND): NOT REGULATED ADR/RID (EU): NOT REGULATED	r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation					
The Adc 14.1 14.2 14.3 14.4 14.5	basic description (ID Numbe itional descriptive informatio 49 CFR (GND): NOT REGULATED IATA (AIR): NOT REGULATED IMDG (OCN): NOT REGULATED TDGR (Canadian GND): NOT REGULATED ADR/RID (EU): NOT REGULATED SCT (MEXICO):	r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation					



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MSDS-E-D100L-WIPES

Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision Date: 02/14/2011 MSDS Revision: 2.1 15. REGULATORY INFORMATION 15.1 SARA Reporting Requirements: 15.2 SARA Threshold Planning Quantity NA 15.3 TSCA Inventory Status: All chemical substances of this product are listed on the TSCA inventory or are otherwise exempt from inventory status. 15.4 CERCLA Reportable Quantity (RQ) 15.5 Other Federal Requirements: NA 15.6 Other Canadian Regulations This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS 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. 15.7 State Regulatory Information: The primary component of this product is not listed on the following state lists: California OSHA; California Proposition 65; Massachusetts Right to Know List of Chemicals; New Jersey Right to Know List 8:59 Appendix A; Pennsylvania Hazardous Substances List 34 323 Appendix A; Wisconsin Hazardous Substances List NR 605.09; Minnesota Hazardous Substances List; and Florida Toxic Substances List. 15.8 67/548/EEC (European Union) Requirements: The primary component of this product is not listed in Annex I of EU Directive 67/548/EEC. 16. OTHER INFORMATION 16.1 Other Information: NA 16.2 Terms & Definitions: See page last page of this MSDS. 16.3 Disclaimer: This Material 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 & CAIG Laboratories, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are 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. Prepared for: 16.4 CAIG Laboratories, Inc. 12200 Thatcher Court Poway, CA 92064-6876 +1 (800) CAIG-123 (244-4123) phone +1 (858) 486-8398 fax http://www.caig.com/ Prepared by: ShipMate, Inc. P.O. Box 787 Sisters, OR, 97759-0787 +1 (310) 370-3600 phone +1 (310) 370-5700 fax http://www.shipmate.com/



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MSDS-E-D100L-**WIPES**

Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision: 2.1

MSDS Revision Date: 02/14/2011

DEFINITION OF TERMS

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

GENERAL INFORMATION:

CAS No. Chemical Abstract Service Number
--

EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists		
TLV	TLV Threshold Limit Value		
OSHA	SHA U.S. Occupational Safety and Health Administration		
PEL Permissible Exposure Limit			
IDLH	Immediately Dangerous to Life and Health		

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:

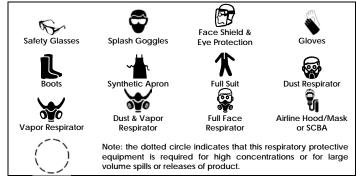
0	Minimal Hazard	
1	Slight Hazard	
2 Moderate Hazard		
3 Severe Hazard		
4 Extreme Hazard		



PERSONAL PROTECTION RATINGS:

Α	\$			
В	Ò			
С	S		*	
D		The same of the sa	*	
E	S	The state of the s		
F	\$		*	





OTHER STANDARD ABBREVIATIONS:

NA	Not Available
NR	No Results
NE	Not Established
ND	Not Determined
ML Maximum Limit	
SCBA	Self-Contained Breathing Apparatus

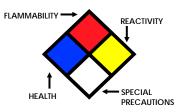
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition	Minimum temperature required to initiate combustion
Temperature	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
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
w —	Use No Water
OX	Oxidizer



TOXICOLOGICAL INFORMATION:

LD ₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals s
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
TC, TCo, LCio, & LCo	toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TLm	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)		

EC INFORMATION:

		*	*			×	×
С	E	F	N	0	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful



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MSDS-E-DN5MS-

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards MSDS Revision: 3.1 MSDS Revision Date: 01/29/2011

	PRODUCT IDENTIFICATION				CHEMICAL RESPONSE CARD: 01					
	Product Name:	DeoxIT® D-Serie	es, DN5MS-15, 5%	Spray, 1	14 g	RESPONSE	\blacksquare	m		
	Chemical Name:	See ingredients list	ed in section 2			TEAM PPE:	lacksquare	100		
	Synonyms:	DeoxIT®, DN5MS-15, 5% Spray		\A/I IN /II C		T				
	Trade Names:	DeoxIT®, DN5MS-15	5, 5% Spray			WHMIS:	$\langle\!\langle\rangle$			
	Product Use:	Clean, deoxidize &	improve electrical o	contacts &	connectors	HEALTH:			1	
	Manufacturer's Name:	CAIG Laboratories	, Inc.			FLAMMABILITY:				1
	Manufacturer's Address:	12200 Thatcher Co	ourt, Poway, CA 9206	64-6876		PHYSICAL HAZARDS:			0	
	Business Phone:	+1 (800)-224-4123				PERSONAL	PROTEC	CTION:		В
	Emergency Phone:	CHEMTREC +	1-800-424-930	00/+1-7	03-527-38	387				
)	Other Product Names:	NA								
	1008 (2004) and A Overexposure may from exposure. Va	sified as a HAZARDOU DG Code (Australia). cause dizziness and pors displace air and	Colorless, volatile I loss of concentratio can cause asphyxia	liquid with on. At high ation in cor	ethereal and ner levels, CNS	faint sweetish depression an	odor. N d cardia	lon-flamr ic arrhyth	nable m imia ma	ater y re:
	products may inclu	de Hydrofluoric Acid	(HF) and carbonyl ha	alides.						
_	Routes of Entry: Effects of Exposure: FYFS:	Mild to moderate irrita	Inhalation:	YES	Absorption:	YES	Inge	stion:	\	'ES
	Effects of Exposure: EYES: I SKIN: I INGESTION: (Mild to moderate irrita rritant and potential edness or rash).	ition. skin sensitizer. Prol on and central nervol	longed or	repeated cor	ntact may cau			•	
	Effects of Exposure: EYES: ISKIN: INGESTION: INHALATION: Symptoms of Overexposure EYES: ISKIN: INGESTION: INGE	rritant and potential edness or rash). Gastrointestinal irritatic Central nervous syster	tion. skin sensitizer. Prolon and central nervolon depressant. Irritatir, and watering. laracterized by localid diarrhea.	longed or us system ong to the u	repeated cor depression. pper respirator	ntact may cau ry tract. and itching.	se conta	act derm	atitis (lo	caliz
	Effects of Exposure: EYES: ISKIN: INGESTION: INHALATION: CONTRACT OF THE PROPERTY OF THE PROPE	rritant and potential edness or rash). Gastrointestinal irritatic Central nervous systemalid irritation, redness, Contact dermatitis, chalausea, vomiting, and Mouth, nose, and throadlid to moderate irritarritant and potential edness or rash).	ntion. skin sensitizer. Prolon and central nervolon depressant. Irritatir , and watering. haracterized by localid diarrhea. at irritation, dizziness, skin sensitizer. Prol	longed or us system on ng to the up ized red or nausea, light	repeated cordepression. pper respirator puffy dry skin ght-headedne	ntact may cau ry tract. and itching.	se conta	act derm	atitis (lo	caliz
	Effects of Exposure: EYES: ISKIN: INGESTION: INHALATION: INGESTION: INHALATION: INHALATION	rritant and potential edness or rash). Gastrointestinal irritation central nervous system recontact dermatitis, chalausea, vomiting, and Mouth, nose, and throughlid to moderate irritant and potential	on and central nervoin depressant. Irritatire, and watering, arracterized by local diarrhea, at irritation, dizziness, tion.	longed or us system on ng to the up ized red or nausea, light	repeated cordepression. puffy dry skinght-headedne repeated cordepression.	ry tract. and itching. ess, drunkennes	se conta	act derm	atitis (lo	caliz
	Effects of Exposure: EYES: ISKIN: INGESTION: INHALATION: INHALATIO	rritant and potential edness or rash). Gastrointestinal irritatic central nervous systemes. Mild irritation, redness, Contact dermatitis, chalausea, vomiting, and Mouth, nose, and throughlid to moderate irritant and potential edness or rash). Gastrointestinal irritation	on and central nervoin depressant. Irritatire diarrhea. at irritation, skin sensitizer. Prolon and central nervoin depressant. Irritatire diarrhea. at irritation, dizziness, skin sensitizer. Prolon and central nervoin depressant. Irritatire tion.	longed or us system on ized red or nausea, lind longed or us system on to the up	repeated cordepression. pper respirator puffy dry skin ght-headedne repeated cordepression. pper respirator	ntact may cau ry tract. and itching. ess, drunkennes ntact may cau ry tract.	se conta	ss of coo	atitis (lo	caliz
	Effects of Exposure: EYES: ISKIN: INGESTION: INHALATION: INHALATION: INHALATION: INHALATION: INHALATION: INHALATION: INHALATION: INHALATION: INGESTION: INGESTION: INHALATION:	rritant and potential edness or rash). Gastrointestinal irritation central nervous system of the contral nervous system of the contact dermatitis, challausea, vomiting, and fouth, nose, and through of the contral and potential edness or rash). Gastrointestinal irritation central nervous system of the contral nervous system of the cont	on and central nervoin depressant. Irritatire, and watering, aracterized by localid diarrhea, at irritation, skin sensitizer. Prolon and central nervoin depressant. Irritatire, skin sensitizer. Prolon and central nervoin depressant. Irritatire, skin sensitizer. Prolon and central nervoin depressant.	longed or us system of ng to the up lized red or nausea, light longed or us system of ng to the up longed or us system of us system of us system of	repeated cordepression. puffy dry skinght-headedne repeated cordepression. pper respirator repeated cordepression.	ry tract. and itching. ess, drunkennes ntact may cau ry tract.	se conta	ss of coo	atitis (lo	caliz



Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MATERIAL SAFETY DATA SHEET

MSDS Revision: 3.1

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MSDS Revision Date: 01/29/2011

MSDS-E-DN5MS-

3. COMPOSITION & INGREDIENT INFORMATION EXPOSURE LIMITS IN AIR (mg/m3) ACGIH **NOHSC OSHA** ppm ppm OTHER ppm ES-ES-ES-**EINECS No.** % TLV STEL PEAK TLV CHEMICAL NAME(S) CAS No. RTECS No. TWA STEL **IDLH** STEL 460-73-1 419-170-6 300 NF NF 300 1,1,1,3,3-PENTAFLUOROPROPANE UNK ≤ 75 NE NF NE NE HYDROCARBON PROPELLANT: ≤ 20 **ISOBUTANE** 75-28-5 TZ4300000 200-857-2 NA NE NE NF NF NF NE NE NE **PROPANE** 74-98-6 TX2275000 200-827-9 NΑ NE NE NF NF NF 1000 NE NE ISOPROPYL ALCOHOL 67-63-0 NT8050000 200-661-7 ≤ 3 400 NE 983 500 1230 400 NE 2000 TRADE SECRET DeoxIT® D100L NΑ NA ≤ 5 NE NE NF NF NF NE NE NE 4. FIRST AID MEASURES First Aid Flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure EYES: complete flushing. If irritation persists, seek immediate medical attention. Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt SKIN: medical attention. Do not wear contaminated clothing until after it has been properly cleaned. INGESTION: Drink plenty of water. If irritation persists, contact a physician. Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate INHALATION: medical attention. If breathing stops, perform artificial respiration. Medical Conditions Aggravated by Exposure: 4.2 1 HEALTH None reported by the manufacturer.

5. FIREFIGHTING MEASURES

5.1	Flashpoint & Method:
	ND. Level 1 aerosol

ND. Level I aerosor

5.2 Autoignition Temperature:

412 °C (774 °F) - 1,1,1,3,3-Pentafluoropropane

5.3 Flammability Limits: Lower Explosive Limit (LEL): NA Upper Explosive Limit (UEL): NA

5.4 Fire & Explosion Hazards:

Carbon dioxide, carbon monoxide, hydrocarbons.

5.5 Extinguishing Methods:

CO₂, Alcohol foam, Dry Chemical, Water Fog

5.6 Firefighting Procedures

Wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Use a water spray to cool containers involved in fire. Do not use direct water stream. Container storage areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Keep containers cool until well after the fire is out to prevent rupture. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway.



1

0

В

FLAMMABILITY

EYES

PHYSICAL HAZARDS

SKIN

PROTECTIVE EQUIPMENT



9.11

9.12

Other Information: VOC Content

ND

268 grams/liter

MATERIAL SAFETY DATA SHEET

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MSDS-E-DN5MS-15

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards MSDS Revision: 3.1 MSDS Revision Date: 01/29/2011 6. ACCIDENTAL RELEASE MEASURES Secure spill area and deny entry to all unprotected individuals. Individuals involved in the cleanup should wear appropriate personal protective equipment. Area may become slippery. Absorb product onto porous material, such as sand, clay, diatomaceous earth or commercial absorbent material. Place into leak-proof, U.S. DOT-approved containers. If necessary, cover all drains and dike well ahead of the spill to prevent runoff into sewers, drains, and all waterways. Contact appropriate local or provincial authorities for assistance and/or reporting requirements. 7. HANDLING & STORAGE INFORMATION 7.1 Work & Hygiene Practices: Wash hands thoroughly after using this product and before eating, drinking, or smoking. Remove soiled clothing to prevent prolonged skin contact. 7.2 Storage & Handling: Store at temperatures between 59 °F and 95 °F (15 °C and 35 °C) in a dry, well-ventilated location. Keep away from heat, sparks, open flame, and other sources of ignition. Normal shelf-life: 2-3 years. 7.3 Empty containers may contain product residues. 8. EXPOSURE CONTROLS & PERSONAL PROTECTION 8.1 Ventilation & Engineering Controls Use with adequate ventilation (e.g., open doors and windows, local exhaust ventilation). Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station). 8.2 None required, when used with adequate ventilation. 8.3 Wear safety glasses with side shields (ANSI Z87) under normal use conditions. 8.4 None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. In such cases, wear rubber or impervious plastic gloves. **Body Protection** Use as necessary to prevent skin contact. 9. PHYSICAL & CHEMICAL PROPERTIES 9 1 Density: 9.2 Boiling Point: 15 °C (59 °F) - 1,1,1,3,3-Pentafluoropropane 9.3 Melting Point: NA 9.4 **Evaporation Rate** NA 9.5 Vapor Pressure: 50 +/- 5 psig @ 20 °C 9.6 Molecular Weight: NA 9.7 Appearance & Color Light red, aerosol 9.8 Odor Threshold: Ethereal/hydrocarbon odor 9.9 Solubility: Not soluble in water 9 10 NA



Page 4 of 7

MSDS-E-DN5MS-15

rdous Decomposition Productions In Color signifies and our Polymerization: not occur. ditions to Avoid:	ditions of use (see section 7). ets: exposure to ultraviolet light or exceeding shelf life. Will not degrade to unstable products. Discard solution.
ble under normal conductors Decomposition Productors Decomposition Prod	ots:
rdous Decomposition Productions In Color signifies and our Polymerization: not occur. ditions to Avoid:	cts:
ange in color signifies ardous Polymerization: not occur. ditions to Avoid:	
not occur. ditions to Avoid:	
not occur.	oxposure to unitation light of exceeding short line. Will not degrade to unstable products. Bisedia solution.
or storage near one	
vily trafficked areas.	n flames, sparks, high heat (>100 °F) or other heat sources, and proximity to incompatible substances and
mpatible Substances:	
ng oxidizers.	
	11. TOXICOLOGICAL INFORMATION
ity Data:	And Demonstrate Control (robbit)
	ane: Acute Dermal (rabbit) – $LD_{50} > 2,000$ mg/kg; Cardiac Sensitization (dogs) – No effects noted at 35,000 duction of cardiac arrhythmias in the presence of injected adrenalin was 44,000 ppm. Acute Inhalation (rat)
	. No lethality at 200,000 ppm. Evidence of transient anesthetic effect. Acute Inhalation (mouse): 4-hr. LC50
	v at 100,000 ppm. Evidence of transient underactivity during exposure.
e Toxicity:	
section 2.5	
nic Toxicity:	
section 2.6	
ected Carcinogen:	
oductive Toxicity:	
•	ed to produce reproductive toxicity in humans.
igenicity:	This product is not reported to produce mutagenic effects in humans.
yotoxicity:	This product is not reported to produce embryotoxic effects in humans. This product is not reported to produce teratogenic effects in humans.
ogenicity: oductive Toxicity:	This product is not reported to produce reproductive effects in humans.
ncy of Product:	This product is not reported to produce reproductive checks in thanhans.
Section 2.3	
gical Exposure Indices:	
cian Recommendations:	
at symptomatically.	
	12. ECOLOGICAL INFORMATION
onmental Stability:	
·	platile from soil. Components of this product will slowly decompose into organic compounds.
cts on Plants & Animals:	
	available for this product.
	ane: Partition Coefficient: Log P_{OW} = 1.35 @ 21.5°C; Acute toxicity to Daphnia magna (Limit Test): NOEC > 7.9 mg/L. Acute toxicity to Rainbow Trout (Limit Test): NOEC > 10 mg/L; 96 hr. EC ₅₀ > 81.8 mg/L
	13. DISPOSAL CONSIDERATIONS
e Disposal:	e with federal, state or local regulations.
ose of its accordance	s with rederal, state of local regulations.
1,3) m	,3-Pentafluoroprop pg/L; 48 hr. EC ₅₀ > 9 isposal:



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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 3.1

MSDS Revision Date: 01/29/2011

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, ADGR and the CTDGR.

14.1	49 CFR (Ground):
	CONSUMER COMMODITY, ORM-D
14.2	IATA (Air):
	ID8000, CONSUMER COMMODITY, 9 (≤ 820 ml)
	UN1950, AEROSOLS, 2.2 (> 820 ml)
14.3	IMDG (Ocean):
	UN1950, AEROSOLS, 2.2, LTD QTY (≤ 1.0 L)
14.4	TDGR (Canada):
	MARK PACKAGE "LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE"
	(≤ 1.0 L)
14.5	ADR/RID (EU):
	UN1950, AEROSOLS, 2, 5 A, ADR, LTD QTY (X ≤ 1.0 L)
14.6	SCT (Mexico):
	UN1950, AEROSOLS, 2.2, CANTIDAD LIMITADA
14.7	ADGR (Australia):
	UN1950, AEROSOLS, 2.2, LTD QTY







15	DECIII	ATORY	INFORMAT	ION
1 : 1	RELILI	$\mathbf{A} \cup \mathbf{R} \cup \mathbf{R}$	HULL IKIVIA	

NA

15.2 SARA Threshold Planning Quantity:

N/

15.3 TSCA Inventory Status:

All chemical substances of this product are listed on the TSCA inventory or are otherwise exempt from inventory status.

15.4 CERCLA Reportable Quantity (RQ):

NA

15.5 Other Federal Requirements:

Contains HFC-245fa, a greenhouse gas, a substance which may contribute to global warming. Regulated under Section 612 (SNAP) of the Clean Air Act and 40 CFR Part 82, subpart G.

15.6 Other Canadian Regulation:

This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS 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.





15.7 State Regulatory Information:

The primary component of this product is not listed on the following state lists: California OSHA; California Proposition 65; Massachusetts Right to Know List of Chemicals; New Jersey Right to Know List 8:59 Appendix A; Pennsylvania Hazardous Substances List 34 323 Appendix A; Wisconsin Hazardous Substances List NR 605.09; Minnesota Hazardous Substances List; and Florida Toxic Substances List.

15.8 67/548/EEC (European Union) Requirements:

The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC.





http://www.shipmate.com/

MATERIAL SAFETY DATA SHEET

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MSDS-E-DN5MS-15

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards MSDS Revision: 3.1 MSDS Revision Date: 01/29/2011 16. OTHER INFORMATION Other Information: 16.1 NA 16.2 Terms & Definitions: See page 7 of this MSDS. 16.3 This Material 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 & CAIG Laboratories, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are 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: CAIG Laboratories, Inc. 12200 Thatcher Court Poway, CA 92064-6876 +1 (800) CAIG-123 (244-4123) phone +1 (858) 486-8398 fax http://www.caig.com/ 16.5 Prepared by: ShipMate, Inc. **ShipMate** P.O. Box 787 Sisters, OR 97759-0787 310-370-3600 phone 310-370-5700 fax



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MSDS-E-DN5MS-

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 3.1

MSDS Revision Date: 01/29/2011

DEFINITION OF TERMS

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

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number

EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
TLV	Threshold Limit Value
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
IDLH	Immediately Dangerous to Life and Health

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.

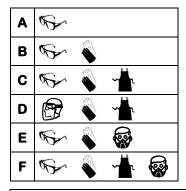
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

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



PERSONAL PROTECTION RATINGS:







OTHER STANDARD ABBREVIATIONS:

NA	Not Available
NR	No Results
NE	Not Established
NF	Not Found
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

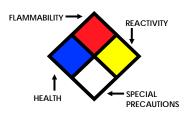
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition	Minimum temperature required to initiate combustion					
Temperature	e in air with no other source of ignition					
LEL Lower Explosive Limit - lowest percent of vapor in air,						
	volume, that will explode or ignite in the presence of					
	an ignition source					
UEL	Upper Explosive Limit - highest percent of vapor in air,					
	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
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
w —	Use No Water
OX	Oxidizer



TOXICOLOGICAL INFORMATION:

LD ₅₀ Lethal Dose (solids & liquids) which kills 50% of the exposed animals s					
LC ₅₀	Lethal concentration (gases) which kills 50% of the exposed animal				
ppm Concentration expressed in parts of material p million parts					
TD ₁₀ 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				
TC, TCo, LClo, & LCo	toxic effects				
IARC	International Agency for Research on Cancer				
NTP	National Toxicology Program				
RTECS	Registry of Toxic Effects of Chemical Substances				
BCF	Bioconcentration Factor				
TLm	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)			

EC INFORMATION:

		No.	*			X	X
С	E	F	N	0	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful



Page 1 of 6
MSDS-E-F100L-L

PIEL	daled to Osha, ACC	, ANSI, WHIVIIS, NOHSC & 2	2001/30 LC 3tanda	aius ivis	D3 REVISION, 2.	I IVISL	23 KEVISIO	n Date: 02	/ 14/20	<u> </u>
1.	PRODUCT IDE	NTIFICATION				CHEMICAL	. RESPC	ONSE CA	RD:	03
1.1	Product Name:	DeoxIT® Fader, F-Series, F100L-L (formerly FaderLube and CaiLube MCL)				RESPONSE				
1.2	Chemical Name:	See ingredients listed in section 3				TEAM PPE:				
1.3	Synonyms:	DeoxIT® Fader F100L								
1.4	Trade Names:	DeoxIT® Fader F100L (se	see list below)			WHMIS:	(!)			
1.5	Product Use:	Lubricant for conducti	controls	HEALTH:				0		
1.6	Manufacturer's Name:	CAIG Laboratories, Inc				FLAMMABILITY:				0
1.7	Manufacturer's Address:	12200 Thatcher Court,		1-6876		PHYSICAL H		S:		0
1.8	Business Phone:	+1 (800)-224-4123				PERSONAL I				
1.9	Emergency Phone:	CHEMTREC +1	(703) 527-3	887 / +	1 (800) 42			-		
1.10	DeoxIT® Fader, 2 ml (Part No. F100L-L2C) DeoxIT® Fader, 7.4 ml (Part No. F100L-L2DB) DeoxIT® Fader, 12 ml (Part No. F100L-L12C) DeoxIT® Fader, 25 ml (Part No. F100L-L2C) DeoxIT® Fader, 59 ml (Part No. F100L-L2) DeoxIT® Fader, 236 ml (Part No. F100L-L8) DeoxIT® Fader, 472 ml (Part No. F100L-L16) DeoxIT® Fader, 944 ml (Part No. F100L-L32) DeoxIT® Fader, 30 L (Part No. F100L-L8G)									
	T		2. HAZARD	IDENTIF	ICATION					
2.1		classified as a HAZARDOU DG Code (Australia). Dec							eria of	[NOHSC:
2.2	Routes of Entry:	Int	halation:	YES	Absorption:	YES	Inges	tion:	Υ	ES
2.3	Effects of Exposure: EYES: Non-irritating when used as directed. Can cause irritation, tearing, and temporary blurred vision. SKIN: Non-irritating when used as directed. Prolonged or repeated contact may cause temporary contact dermatitis (localized redness or rash). INGESTION: INHALATION: Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary irritating to the eyes, nose, throat, and the respiratory tract; may cause temporary headaches and									
2.4	Symptoms of Overexposure: EYES: Non-irritating when used as directed. Can cause temporary irritation, tearing, and blurred vision. SKIN: Non-irritating when used as directed. Prolonged or repeated contact may cause temporary contact dermatitis (localized redness or rash). INGESTION: Not probable. Small amounts if swallowed may cause temporary gastrointestinal irritation. INHALATION: Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary irritating to the eyes, nose, throat, and the respiratory tract; may cause headaches and dizziness.									
2.5	Acute Health Effects: EYES: None reported when used as directed. Mild to moderate temporary irritation. SKIN: Unlikely when used as directed. Repeated exposure at site of contact may cause temporary contact dermatitis (localized redness or rash). INGESTION: INHALATION: Not probable. Small amount may cause temporary gastrointestinal irritation and central nervous system depression. Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary irritating to the eyes, nose, throat, and the respiratory tract; may cause headaches and dizziness.									
2.6	Chronic Health Effects: None reported by	the manufacturer.								
2.7	Target Organs: Eyes and skin.									

NA = Not Available; ND = Not Determined; NE = Not Established; NF = Not found; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used



Page 2 of 6

MSDS-E-F100L-L

Prep	Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision: 2.1 MSDS Revision Date: 02/14/2011										
		3. CON	/POSITIOI	V & INGRE	DIFNT	INFOF	RMATIC	NC			
	3. COMPOSITION & INGREDIENT INFORMATION EXPOSURE LIMITS IN AIR (mg/m³)										
						4.0	GIH	SURE LIIVII		(mg/m²)	OTLIED
								DEI	OSHA	IDIII	OTHER
	CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	TLV ppm	STEL	PEL ppm	STEL	IDLH ppm	
Deox			NE NE	NE NE							
Воох	11 10001110011	nado dodior			100	112	112	142	112	142	
			4 FI	RST AID IV	IFΔSIII	RFS					
4.1	First Δid:		7. 11	KSI AID IV	ILAJO	KLJ					
7.1	First Aid: EYES: Flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If irritation persists, seek immediate medical attention. SKIN: Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt medical attention. Do not wear contaminated clothing until after it has been properly cleaned. INGESTION: Do not induce vomiting! Drink plenty of water. If irritation persists, contact a physician. Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate medical attention. If breathing stops, perform artificial respiration.										
4.2	Medical Conditions Aggravated by	y Exposure:					HEA	ITH			0
	None reported by the mar	nufacturer.						MMAB	II ITV		0
									HAZAF	פחפ	0
							EYES	HECH	/E EQU	IPMEN	T A
							LIES		l		
			5. FIRE	FIGHTING	MEAS	SURES					
5.1	Flashpoint & Method:										
5.2	> 250 °C (482 °F) Autoignition Temperature:										
5.2	NA										
5.3	Flammability Limits:		Lower Explo	sive Limit (LEL)		ND	Uppe	r Explosive	e Limit (UE	EL):	ND
5.4	Fire & Explosion Hazards:			, ,		•		•			•
	Carbon dioxide, carbon m	nonoxide, hyd	rocarbons.								
5.5	Extinguishing Methods:										
	CO ₂ , Alcohol foam, Dry Cl	hemical, Wate	er Fog							0	
5.6	Wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Use a water spray to cool containers involved in fire. Do not use direct water stream. Container storage areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Keep containers cool until well after the fire is out to prevent rupture. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway.										
		,	A COIDE	NITAL DELE	. V C L W	/L V CI !!	DEC				
, ,	C-III-	6.	. ACCIDE	NTAL RELE	:ASE I	/IEA5U	KE3				
6.1	Ventilate if in enclosed area. Secure spill area, remove or minimize all sources of ignition, and maximize ventilation. Wipe and rinse with water. Deny entry to all unprotected individuals. Individuals involved in the cleanup must wear appropriate personal protective equipment.										



Page 3 of 6

MSDS-E-F100L-L

MSDS Revision: 2.1 Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision Date: 02/14/2011 7. HANDLING & STORAGE INFORMATION 7.1 Work & Hygiene Practices: Wash hands thoroughly after using this product and before eating, drinking, or smoking. Remove soiled clothing to prevent prolonged skin contact. Storage & Handling: Use and store in a cool, dry, well-ventilated area. Do not store near or with any incompatible materials listed in section 10. Open containers may change concentrations, keep tightly closed when not in use. Normal shelf life 2-3 years. 7.3 Empty containers may contain product residues. 8. EXPOSURE CONTROLS & PERSONAL PROTECTION 8.1 Ventilation & Engineering Controls: Use with adequate ventilation (e.g., open doors and windows, local exhaust ventilation). Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station). Respiratory Protection: 8.2 None required, when used with adequate ventilation. 8.3 Wear safety glasses with side shields (ANSI Z87) under normal use conditions. 8.4 None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. In such cases, wear rubber or impervious plastic gloves. 8.5 Body Protection: Use as necessary to prevent skin contact. 9. PHYSICAL & CHEMICAL PROPERTIES 9 1 Density: 0.72 Boiling Point: 9.2 > 200 °C (392 °F) 9.3 Melting Point NA 9 4 Evaporation Rate: NA 9.5 Vapor Pressure < 0.01 mm Hg @ 20 °C (68 °F) 9.6 Molecular Weight: 9.7 Appearance & Color: Light amber 9.8 Odor Threshold: Ethereal/hydrocarbon odor 9.9 Solubility Not soluble in water 9.10 Ph 9.11 Viscosity: 5.1 - 7.0 cSt @ 104 °F 9.12 VOC (g/L): None 9 13 Other Information: NA 10. STABILITY & REACTIVITY 10.1 Stability: Stable under normal conditions of use (see section 7). 10.2 Hazardous Decomposition Products: Change in color signifies exposure to ultraviolet light or exceeding shelf life. Will not degrade to unstable products. Discard solution. 10.3 Hazardous Polymerization: 10.4 Conditions to Avoid: Use or storage near open flames, sparks, high heat (>100 °F) or other heat sources, and proximity to incompatible substances and heavily trafficked areas. 10.5 Incompatible Substances: Strong oxidizers.



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MSDS-E-F100L-L

Prep	pared to OSHA, ACC, ANSI, W	/HMIS, NOHSC & 2001/58 EC Standards MSDS Revision: 2.1 MSDS Revision Date: 02/14/2011							
		44. TOVIOGLOGICAL INFORMATION							
	1	11. TOXICOLOGICAL INFORMATION							
11.1	Toxicity Data:	This product has not been tested on animals to obtain toxicological data. There are toxicology data for the components of this product, which are found in the scientific literature. These data have not been presented in this document.							
11.2	Acute Toxicity:	See section 3.5							
11.3	Chronic Toxicity:	See section 3.6							
11.4	Suspected Carcinogen:	NE NE							
11.5	Reproductive Toxicity:	This product is not reported to produce reproductive toxicity 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 produce teratogenic effects in humans.							
	Reproductive Toxicity:	This product is not reported to produce reproductive effects in humans.							
11.6	Irritancy of Product:	See Section 3.3							
11.7	Biological Exposure Indices:	NE NE							
11.8	Physician Recommendations:	Treat symptomatically.							
		12. ECOLOGICAL INFORMATION							
12.1	Environmental Stability:	This product will slowly volatile from soil. Components of this product will slowly decompose into organic compounds.							
12.2	Effects on Plants & Animals:	There is no specific data available for this product.							
12.3	Effects on Aquatic Life:	Releases of large volumes of this product are expected to be harmful or fatal to overexposed aquatic life.							
		13. DISPOSAL CONSIDERATIONS							
13.1	Waste Disposal: Dispose of in accordance v	vith federal, state or local regulations.							
13.2	Special Considerations:								
		14. TRANSPORTATION INFORMATION							
Thol	hasia description (ID Number								
		r, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. In may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.							
14.1	49 CFR (GND):	That be required by 17 crit, in the te, inibo and the orbot.							
	NOT REGULATED								
14.2	IATA (AIR):								
	NOT REGULATED								
14.3	IMDG (OCN): NOT REGULATED								
14.4	TDGR (Canadian GND):								
14.5	NOT REGULATED ADR/RID (EU):								
14.0	NOT REGULATED								
14.6	SCT (MEXICO):								
	NO REGULADO								
14.7	ADGR (AUS):								
	NOT REGULATED								



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MSDS-E-F100L-L

Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision Date: 02/14/2011 MSDS Revision: 2.1 15. REGULATORY INFORMATION 15.1 SARA Reporting Requirements: 15.2 SARA Threshold Planning Quantity NA 15.3 TSCA Inventory Status: All chemical substances of this product are listed on the TSCA inventory or are otherwise exempt from inventory status. 15.4 CERCLA Reportable Quantity (RQ) 15.5 Other Federal Requirements: NA 15.6 Other Canadian Regulations This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS 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. 15.7 State Regulatory Information: The primary component of this product is not listed on the following state lists: California OSHA; California Proposition 65; Massachusetts Right to Know List of Chemicals; New Jersey Right to Know List 8:59 Appendix A; Pennsylvania Hazardous Substances List 34 323 Appendix A; Wisconsin Hazardous Substances List NR 605.09; Minnesota Hazardous Substances List; and Florida Toxic Substances List. 15.8 67/548/EEC (European Union) Requirements: The primary component of this product is not listed in Annex I of EU Directive 67/548/EEC. 16. OTHER INFORMATION 16.1 Other Information: NA 16.2 Terms & Definitions: See page last page of this MSDS. 16.3 Disclaimer: This Material 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 & CAIG Laboratories, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are 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. Prepared for 16.4 CAIG Laboratories, Inc. 12200 Thatcher Court Poway, CA 92064-6876 +1 (800) CAIG-123 (244-4123) phone +1 (858) 486-8398 fax http://www.caig.com/ Prepared by: ShipMate, Inc. P.O. Box 787 Sisters, OR. 97759-0787 +1 (310) 370-3600 phone +1 (310) 370-5700 fax http://www.shipmate.com/



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MSDS-E-F100L-L

Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision: 2.1

MSDS Revision Date: 02/14/2011

DEFINITION OF TERMS

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

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number
---------	----------------------------------

EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
TLV	Threshold Limit Value
OSHA	U.S. Occupational Safety and Health Administration
PEL Permissible Exposure Limit	
IDLH	Immediately Dangerous to Life and Health

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.						

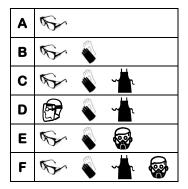
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

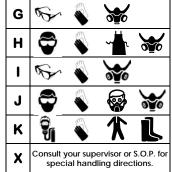
HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

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



PERSONAL PROTECTION RATINGS:







OTHER STANDARD ABBREVIATIONS:

NA	Not Available
NR	No Results
NE	Not Established
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

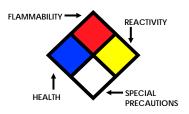
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition	Minimum temperature required to initiate combustion
Temperature	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,
	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
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
w —	Use No Water
OX	Oxidizer



TOXICOLOGICAL INFORMATION:

LD ₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals s
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, TCo, LClo, & LCo	
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TLm	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	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)	

EC INFORMATION:

		*	*			×	×
С	E	F	N	0	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful



MSDS Revision: 3.1

Page 1 of 7

MSDS Revision Date: 01/29/2011

PERSONAL PROTECTION:

MSDS-E-FN5MS-H15

В

1. PRODUCT IDENTIFICATION

1.1 Product Name:

DeoxIT® Fader, FN5MS-H15, 5% Spray, 14 g (formerly FaderLube and CaiLube MCL)

RESPONSE TEAM PPE:

1.2 Chemical Name:
See ingredients listed in section 2

Synonyms: DeoxIT® Fader, FN5MS-H15, 5% Spray WHMIS: 1.4 Trade Names: DeoxIT® Fader, FN5MS-H15, 5% Spray 1.5 Product Use: Clean, deoxidize & improve electrical contacts & connectors **HEALTH:** 1 1.6 Manufacturer's Name CAIG Laboratories, Inc. FLAMMABILITY: 1 1.7 Manufacturer's Address: PHYSICAL HAZARDS: 0 12200 Thatcher Court, Poway, CA 92064-6876 18 **Business Phone**

1.9 Emergency Phone: CHEMTREC +1-800-424-9300/+1-703-527-3887

Other Product Names: NA

2. HAZARD IDENTIFICATION

2.1 Hazard Identification:

This product is Classified as a HAZARDOUS SUBSTANCE and as DANGEROUS GOODS according to the classification criteria of NOHSC: 1008 (2004) and ADG Code (Australia). Colorless, volatile liquid with ethereal and faint sweetish odor. Non-flammable material. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphyxiation in confined spaces. At high temperatures (>250°C), decomposition products may include Hydrofluoric Acid (HF) and carbonyl halides.

2.2	Routes of Entry:	Inhalation:	YES	Absorption:	YES	Ingestion:	YES

2.3 Effects of Exposure:

EYES: Mild to moderate irritation.

SKIN: Irritant and potential skin sensitizer. Prolonged or repeated contact may cause contact dermatitis (localized

redness or rash).

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

+1 (800)-224-4123

INGESTION: Gastrointestinal irritation and central nervous system depression.

INHALATION: Central nervous system depressant. Irritating to the upper respiratory tract.

2.4 Symptoms of Overexposure

EYES: Mild irritation, redness, and watering.

SKIN: Contact dermatitis, characterized by localized red or puffy dry skin and itching.

INGESTION: Nausea, vomiting, and diarrhea.

INHALATION: Mouth, nose, and throat irritation, dizziness, nausea, light-headedness, drunkenness, and loss of coordination.

2.5 Acute Health Effects:

EYES: Mild to moderate irritation.

SKIN: Irritant and potential skin sensitizer. Prolonged or repeated contact may cause contact dermatitis (localized

redness or rash).

INGESTION: Gastrointestinal irritation and central nervous system depression.

INHALATION: Central nervous system depressant. Irritating to the upper respiratory tract.

2.6 Chronic Health Effects:

EYES: Mild to moderate irritation.

SKIN: Irritant and potential skin sensitizer. Prolonged or repeated contact may cause contact dermatitis (localized

redness or rash).

INGESTION: Gastrointestinal irritation and central nervous system depression.

INHALATION: Central nervous system depressant. Irritating to the upper respiratory tract.

2.7 Target Organs:

Eyes, skin and respiratory system.

NA = Not Available; ND = Not Determined; NE = Not Established; NF; Not found; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-2004 format.

MSDS for MCM: #200-445



natural waterway.

MATERIAL SAFETY DATA SHEET

Page 2 of 7

MSDS-E-FN5MS-H15

MSDS Revision Date: 01/29/2011 MSDS Revision: 3.1 Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards 3. COMPOSITION & INGREDIENT INFORMATION EXPOSURE LIMITS IN AIR (mg/m³) ACGIH **NOHSC OSHA** ppm ppm OTHER ppm ES-ES-ES-**EINECS No.** % TLV STEL PEAK TLV CHEMICAL NAME(S) CAS No. RTECS No. TWA STEL **IDLH** STEL 460-73-1 419-170-6 300 NF NF 300 NE 1,1,1,3,3-PENTAFLUOROPROPANE UNK ≤ 75 NE NF NE HYDROCARBON PROPELLANT: ≤ 20 **ISOBUTANE** 75-28-5 TZ4300000 200-857-2 NA NE NE NF NF NF NE NE NE **PROPANE** 74-98-6 TX2275000 200-827-9 NΑ NE NE NF NF NF 1000 NE NE ISOPROPYL ALCOHOL 67-63-0 NT8050000 200-661-7 ≤ 3 400 NE 983 500 1230 400 NE 2000 TRADE SECRET DeoxIT® Fader F100L-H NΑ NA ≤ 5 NE NE NF NF NF NE NE NE 4. FIRST AID MEASURES First Aid Flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure EYES: complete flushing. If irritation persists, seek immediate medical attention. Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt SKIN: medical attention. Do not wear contaminated clothing until after it has been properly cleaned. INGESTION: Drink plenty of water. If irritation persists, contact a physician. Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate INHALATION: medical attention. If breathing stops, perform artificial respiration. Medical Conditions Aggravated by Exposure: 4.2 1 HEALTH None reported by the manufacturer. 1 **FLAMMABILITY** PHYSICAL HAZARDS 0 PROTECTIVE EQUIPMENT В **EYES** SKIN 5. FIREFIGHTING MEASURES 5.1 Flashpoint & Method ND. Level 1 aerosol. 5.2 Autoignition Temperature: 412 °C (774 °F) - 1,1,1,3,3-Pentafluoropropane 5.3 Flammability Limits: Lower Explosive Limit (LEL): NΑ Upper Explosive Limit (UEL): NA 5.4 Fire & Explosion Hazards: Carbon dioxide, carbon monoxide, hydrocarbons. 5.5 Extinguishing Methods: CO₂, Alcohol foam, Dry Chemical, Water Fog 5.6 0 Wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Use a water spray to cool containers involved in fire. Do not use direct water stream. Container storage areas

exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Keep containers cool until well after the fire is out to prevent rupture. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any



9.8

9.9

9 10

9.11

9.12

Odor Threshold:

Other Information: VOC Content

Solubility:

MATERIAL SAFETY DATA SHEET

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MSDS-E-FN5MS-H15

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards MSDS Revision: 3.1 MSDS Revision Date: 01/29/2011 6. ACCIDENTAL RELEASE MEASURES Secure spill area and deny entry to all unprotected individuals. Individuals involved in the cleanup should wear appropriate personal protective equipment. Area may become slippery. Absorb product onto porous material, such as sand, clay, diatomaceous earth or commercial absorbent material. Place into leak-proof, U.S. DOT-approved containers. If necessary, cover all drains and dike well ahead of the spill to prevent runoff into sewers, drains, and all waterways. Contact appropriate local or provincial authorities for assistance and/or reporting requirements. 7. HANDLING & STORAGE INFORMATION 7.1 Work & Hygiene Practices: Wash hands thoroughly after using this product and before eating, drinking, or smoking. Remove soiled clothing to prevent prolonged skin contact. 7.2 Storage & Handling: Store at temperatures between 59 °F and 95 °F (15 °C and 35 °C) in a dry, well-ventilated location. Keep away from heat, sparks, open flame, and other sources of ignition. Normal shelf-life: 2-3 years. 7.3 Empty containers may contain product residues. 8. EXPOSURE CONTROLS & PERSONAL PROTECTION 8.1 Ventilation & Engineering Controls Use with adequate ventilation (e.g., open doors and windows, local exhaust ventilation). Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station). 8.2 None required, when used with adequate ventilation. 8.3 Wear safety glasses with side shields (ANSI Z87) under normal use conditions. 8.4 None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. In such cases, wear rubber or impervious plastic gloves. **Body Protection** Use as necessary to prevent skin contact. 9. PHYSICAL & CHEMICAL PROPERTIES 9 1 Density: 9.2 Boiling Point: 15 °C (59 °F) - 1,1,1,3,3-Pentafluoropropane 9.3 Melting Point: NA 9.4 **Evaporation Rate** NA 9.5 Vapor Pressure: 50 +/- 5 psig @ 20 °C 9.6 Molecular Weight: NA 9.7 Appearance & Color Light amber, aerosol

Ethereal/hydrocarbon odor

Not soluble in water

268 grams/liter

NA

ND



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MSDS-E-FN5MS-H15

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards MSDS Revision: 3.1 MSDS Revision Date: 01/29/2011 10. STABILITY & REACTIVITY Stable under normal conditions of use (see section 7). Hazardous Decomposition Products: Change in color signifies exposure to ultraviolet light or exceeding shelf life. Will not degrade to unstable products. Discard solution. Hazardous Polymerization: 10.3 Will not occur. 10.4 Conditions to Avoid: Use or storage near open flames, sparks, high heat (>100 °F) or other heat sources, and proximity to incompatible substances and heavily trafficked areas. 10.5 Incompatible Substances: Strong oxidizers. 11. TOXICOLOGICAL INFORMATION 11.1 Toxicity Data 1,1,1,3,3-Pentafluoropropane: Acute Dermal (rabbit) - LD₅₀ > 2,000 mg/kg; Cardiac Sensitization (dogs) - No effects noted at 35,000 ppm, the threshold for induction of cardiac arrhythmias in the presence of injected adrenalin was 44,000 ppm. Acute Inhalation (rat): 4-hr. LC50 > 200,000 ppm. No lethality at 200,000 ppm. Evidence of transient anesthetic effect. Acute Inhalation (mouse): 4-hr. LC50 > 100,000 ppm. No lethality at 100,000 ppm. Evidence of transient underactivity during exposure. 11.2 Acute Toxicity: See section 2.5 11.3 Chronic Toxicity: See section 2.6 11.4 Suspected Carcinogen: NE 11.5 Reproductive Toxicity This product is not reported to produce reproductive toxicity in humans. This product is not reported to produce mutagenic effects in humans. Mutagenicity This product is not reported to produce embryotoxic effects in humans. Embryotoxicity This product is not reported to produce teratogenic effects in humans. Teratogenicity: This product is not reported to produce reproductive effects in humans. Reproductive Toxicity 11.6 Irritancy of Product: See Section 2.3 Biological Exposure Indices: 11.7 NF Physician Recommendations: 11.8 Treat symptomatically. 12. ECOLOGICAL INFORMATION 12.1 **Environmental Stability** This product will slowly volatile from soil. Components of this product will slowly decompose into organic compounds. 12.2 Effects on Plants & Animals There is no specific data available for this product. 12.3 Effects on Aquatic Life: 1,1,1,3,3-Pentafluoropropane: Partition Coefficient: Log Pow = 1.35 @ 21.5°C; Acute toxicity to Daphnia magna (Limit Test): NOEC > 97.9 mg/L; 48 hr. EC₅₀ > 97.9 mg/L. Acute toxicity to Rainbow Trout (Limit Test): NOEC > 10 mg/L; 96 hr. EC₅₀ > 81.8 mg/L 13. DISPOSAL CONSIDERATIONS Waste Disposal: Dispose of in accordance with federal, state or local regulations. 13.2 Special Considerations: NA



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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

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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, ADGR and the CTDGR.

14.1	49 CFR (Ground):
	CONSUMER COMMODITY, ORM-D
14.2	IATA (Air):
	ID8000, CONSUMER COMMODITY, 9 (≤ 820 ml)
	UN1950, AEROSOLS, 2.2 (> 820 ml)
14.3	IMDG (Ocean):
	UN1950, AEROSOLS, 2.2, LTD QTY (≤ 1.0 L)
14.4	TDGR (Canada):
	MARK PACKAGE "LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE"
	(≤ 1.0 L)
14.5	ADR/RID (EU):
	UN1950, AEROSOLS, 2, 5 A, ADR, LTD QTY (X ≤ 1.0 L)
14.6	SCT (Mexico):
	UN1950, AEROSOLS, 2.2, CANTIDAD LIMITADA
14.7	ADGR (Australia):
	UN1950, AEROSOLS, 2.2, LTD QTY







15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements:
------	------------------------------

NA

15.2 SARA Threshold Planning Quantity:

N/

15.3 TSCA Inventory Status:

All chemical substances of this product are listed on the TSCA inventory or are otherwise exempt from inventory status.

15.4 CERCLA Reportable Quantity (RQ):

NA

15.5 Other Federal Requirements:

Contains HFC-245fa, a greenhouse gas, a substance which may contribute to global warming. Regulated under Section 612 (SNAP) of the Clean Air Act and 40 CFR Part 82, subpart G.

15.6 Other Canadian Regulation

This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS 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.





15.7 State Regulatory Information:

The primary component of this product is not listed on the following state lists: California OSHA; California Proposition 65; Massachusetts Right to Know List of Chemicals; New Jersey Right to Know List 8:59 Appendix A; Pennsylvania Hazardous Substances List 34 323 Appendix A; Wisconsin Hazardous Substances List NR 605.09; Minnesota Hazardous Substances List; and Florida Toxic Substances List.

15.8 67/548/EEC (European Union) Requirements:

The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC.





http://www.shipmate.com/

MATERIAL SAFETY DATA SHEET

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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards MSDS Revision: 3.1

MSDS Revision Date: 01/29/2011

Prep	pared to Osha, ACC, ANSI, NOHSC, WHIVIIS & 2	2001/58 EC Standards MSDS Revision: 3.1 MSDS Revision Date: 01/29/2011
		16. OTHER INFORMATION
		10. UITER INFURIVIATION
16.1	Other Information:	
	NA	
16.2	Terms & Definitions:	
	See page 7 of this MSDS.	
16.3	Disclaimer:	
	government regulations must be reviewed knowledge, the information contained here are not guaranteed and no warranties of relates only to the specific product(s). If	d pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other for applicability to this product. To the best of ShipMate's & CAIG Laboratories, Inc.'s in is reliable and accurate as of this date; however, accuracy, suitability or completeness any type, either expressed or implied, are provided. The information contained herein this product(s) is combined with other materials, all component properties must be me to time. Be sure to consult the latest edition.
16.4	Prepared for: CAIG Laboratories, Inc. 12200 Thatcher Court Poway, CA 92064-6876 +1 (800) CAIG-123 (244-4123) phone +1 (858) 486-8398 fax http://www.caig.com/	CAIG LABORATORIES, INC.
16.5	Prepared by: ShipMate, Inc. P.O. Box 787 Sisters, OR 97759-0787 310-370-3600 phone 310-370-5700 fax	ShipMate* Dangerous Goods Training & Consulting



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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

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DEFINITION OF TERMS

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

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number
---------	----------------------------------

EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
TLV	Threshold Limit Value
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
IDLH	Immediately Dangerous to Life and Health

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.

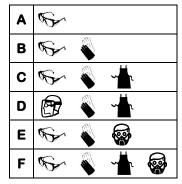
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

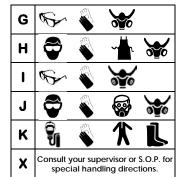
HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

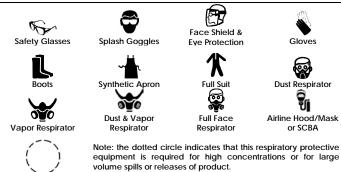
0	Minimal Hazard			
1	1 Slight Hazard			
2	Moderate Hazard			
3	Severe Hazard			
4	Extreme Hazard			



PERSONAL PROTECTION RATINGS:







OTHER STANDARD ABBREVIATIONS:

NA	Not Available		
NR	No Results		
NE	Not Established		
NF Not Found			
ND	Not Determined		
ML	Maximum Limit		
SCBA	Self-Contained Breathing Apparatus		

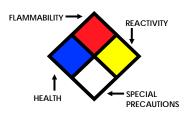
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition	Minimum temperature required to initiate combustion				
Temperature	rature 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,				
	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		
1	Slight Hazard		
2	Moderate Hazard		
3	Severe Hazard		
4	Extreme Hazard		
ACD	Acidic		
ALK	Alkaline		
COR	Corrosive		
w —	Use No Water		
OX	Oxidizer		



TOXICOLOGICAL INFORMATION:

LD ₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals s				
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				
TC, TCo, LCio, & LCo	toxic effects				
IARC	International Agency for Research on Cancer				
NTP	National Toxicology Program				
RTECS	Registry of Toxic Effects of Chemical Substances				
BCF	Bioconcentration Factor				
BCF					
TL _m	Median threshold limit				

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)

EC INFORMATION:

T.			**			X	X	
С	E	F	N	0	T+	Xi	Xn	
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful	



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MSDS-E-G100L

Prep	pared to OSHA, ACC, A	ANSI, WHMIS, NOHSC & 2001/58 EC Standards	MSDS Re	evision: 2.1	MS	DS Revision	n Date: (02/14/20)11
1.	1. PRODUCT IDENTIFICATION			(CHEMICA	L RESPO	NSE C	ARD:	03
1.1	Product Name:	DeoxIT® G100L, G-SERIES (formerly ProGold)			RESPONSE				
1.2	Chemical Name:	See ingredients listed in section 3		1	EAM PPE:				
1.3	Synonyms:	DeoxIT® Gold G100L		,	A/I IN AIC	T			
1.4	Trade Names:	DeoxIT® Gold G100L (see list below)		'	NHMIS:				
1.5	Product Use:	Conditioner, enhancer & protector for con-	tacts & conn	ectors	HEALTH:				0
1.6	Manufacturer's Name:	CAIG Laboratories, Inc.		Ī	FLAMMABI	LITY:			0
1.7	Manufacturer's Address:	12200 Thatcher Court, Poway, CA 92064-68	76	ı	PHYSCIAL I	HAZARDS	S :		0
1.8	Business Phone:	+1 (800)-224-4123		I	PERSONAL	PROTEC ¹	TION:		
1.9	Emergency Phone:	CHEMTREC +1 (703) 527-388	7 / +1 (80	00) 424	-9300				
	Other Product Names: DeoxIT® GOLD G100L, 2 ml (Part No. G100L-2CP) GOLD DeoxIT® GOLD G100L, 7.4 ml (Part No. G100L-2DB) DeoxIT® GOLD G100L, 12 ml (Part No. G100L-12C) DeoxIT® GOLD G100L, 25 ml (Part No. G100L-25C) DeoxIT® GOLD PEN, 7 ml (Part No. G100P) DeoxIT® GOLD WIPES, (Part Nos. G50W, K-G1W-25, K-G1W-50, G1W) DeoxIT® GOLD G100L, 59 ml (Part No. G100L-2) DeoxIT® GOLD G100L, 472 ml (Part No. G100L-8) DeoxIT® GOLD G100L, 944 ml (Part No. G100L-32)								
2.1		2. HAZARD ID classified as a HAZARDOUS SUBSTANCE or as E G Code (Australia). DeoxIT® Gold G100L is no	ANGEROUS (GOODS ac				iteria of	[NOHSC:
2.2	Routes of Entry:	Inhalation: VE	S Abso	orntion:	VFS	Inges	tion:		/FS
2.3	Effects of Exposure: EYES: Non-irritating when used as directed. Can cause irritation, tearing, and temporary blurred vision. SKIN: Non-irritating when used as directed. Prolonged or repeated contact may cause temporary contact dermatitis (localized redness or rash). INGESTION: Not probable. Small amounts if swallowed may cause temporary gastrointestinal irritation. Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary irritating to the eyes, nose, throat, and the respiratory tract; may cause temporary headaches and								
2.4									
2.6	EYES: None reported when used as directed. Mild to moderate temporary irritation. Unlikely when used as directed. Repeated exposure at site of contact may cause temporary contact dermatitis (localized redness or rash). INGESTION: Not probable. Small amount may cause temporary gastrointestinal irritation and central nervous system depression. Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary irritating to the eyes, nose, throat, and the respiratory tract; may cause headaches and dizziness. Chronic Health Effects: None reported by the manufacturer.								
2.2 2.3 2.4 2.5	This product is NOT of 1088 (2004)] and AD Routes of Entry: Effects of Exposure: EYES: N SKIN: N (In INGESTION: N INHALATION: Universely in the second of t	DeoxIT® GOLD G100L, 944 ml (Part No. G100L- DeoxIT® GOLD G100L, 30 L (Part No. G100L- 2. HAZARD ID Classified as a HAZARDOUS SUBSTANCE or as Expected (Australia). DeoxIT® Gold G100L is not limited in the latence of	ENTIFICA CANGEROUS Con-volatile, not se irritation, to ged or repeate y cause temporary ged or rep	GOODS acon-hazard cont-hazard cont-hazard cont-porary gas-bons excee-espiratory diritation, ated cont-porary gas-bons excee-bons exc	d temporary lact may ca strointestinal i ed recomme tract; may ca strointestinal i ed recomme tract may ca strointestinal i ed recomme	Ingest blurred vis use temporritation. ended explained e	le. sion. orary co posure I porary co posure I es and di porary co vous systevels, the	pontact of levels, filtering to the levels, fi	de the

NA = Not Available; ND = Not Determined; NE = Not Established; NF = Not found; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used

NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1998 format.



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MSDS-E-G100L

Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision: 2.1 MSDS Revision Date: 02/14/2011 3. COMPOSITION & INGREDIENT INFORMATION EXPOSURE LIMITS IN AIR (mg/m³) **ACGIH OSHA** OTHER TLV **STEL** PEL **STEL IDLH** % RTECS No. **EINECS No.** CHEMICAL NAME(S) CAS No. ppm ppm ppm ppm ppm DeoxIT® Gold G100L Trade Secret NA NA 100 NE NE NE NE NE (formerly ProGold) 4. FIRST AID MEASURES First Aid: EYES: Flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If irritation persists, seek immediate medical attention. SKIN: Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt medical attention. Do not wear contaminated clothing until after it has been properly cleaned. INGESTION: Do not induce vomiting! Drink plenty of water. If irritation persists, contact a physician. Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate INHALATION: medical attention. If breathing stops, perform artificial respiration. 4 2 Medical Conditions Aggravated by Exposure: HEALTH 0 None reported by the manufacturer. **FLAMMABILITY** 0 PHYSCIAL HAZARDS 0 PROTECTIVE EQUIPMENT Α **EYES** 5. FIREFIGHTING MEASURES 5.1 Flashpoint & Method: > 280 °C (536 °F) 5.2 Autoignition Temperature: NA 5.3 Flammability Limits: Lower Explosive Limit (LEL): ND Upper Explosive Limit (UEL) ND Fire & Explosion Hazards 5.4 Carbon dioxide, carbon monoxide, hydrocarbons. 5.5 Extinguishing Methods CO2, Alcohol foam, Dry Chemical, Water Fog 5.6 Wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Use a water spray to cool containers involved in fire. Do not use direct water stream. Container storage areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Keep containers cool until well after the fire is out to prevent rupture. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. 6. ACCIDENTAL RELEASE MEASURES Ventilate if in enclosed area. Secure spill area, remove or minimize all sources of ignition, and maximize ventilation. Wipe and rinse with water. Deny entry to all unprotected individuals. Individuals involved in the cleanup must wear appropriate personal protective equipment.



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MSDS-E-G100L

MSDS Revision: 2.1 Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision Date: 02/14/2011 7. HANDLING & STORAGE INFORMATION 7.1 Work & Hygiene Practices: Wash hands thoroughly after using this product and before eating, drinking, or smoking. Remove soiled clothing to prevent prolonged skin contact. Storage & Handling: Use and store in a cool, dry, well-ventilated area. Do not store near or with any incompatible materials listed in section 10. Open containers may change concentrations, keep tightly closed when not in use. Normal shelf life 2-3 years. 7.3 Empty containers may contain product residues. 8. EXPOSURE CONTROLS & PERSONAL PROTECTION 8.1 Ventilation & Engineering Controls: Use with adequate ventilation (e.g., open doors and windows, local exhaust ventilation). Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station). Respiratory Protection: 8.2 None required, when used with adequate ventilation. 8.3 Wear safety glasses with side shields (ANSI Z87) under normal use conditions. 8.4 None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. In such cases, wear rubber or impervious plastic gloves. 8.5 Body Protection: Use as necessary to prevent skin contact. 9. PHYSICAL & CHEMICAL PROPERTIES 9 1 Density: 0.72 Boiling Point: 9.2 > 240 °C (464 °F) 9.3 Melting Point NA 9 4 Evaporation Rate: NA 9.5 Vapor Pressure < 0.01 mm Hg @ 20 °C (68 °F) 9.6 Molecular Weight: 9.7 Appearance & Color: Light yellow/amber 9.8 Odor Threshold: Ethereal/hydrocarbon odor 9.9 Solubility Not soluble in water 9.10 Ph 9.11 Viscosity: 5.4 - 7.5 cSt @ 104 °F 9.12 VOC (g/L): None 9 13 Other Information: NA 10. STABILITY & REACTIVITY 10.1 Stability: Stable under normal conditions of use (see section 7). 10.2 Hazardous Decomposition Products: Change in color signifies exposure to ultraviolet light or exceeding shelf life. Will not degrade to unstable products. Discard solution. 10.3 Hazardous Polymerization: 10.4 Conditions to Avoid: Use or storage near open flames, sparks, high heat (>100 °F) or other heat sources, and proximity to incompatible substances and heavily trafficked areas. 10.5 Incompatible Substances: Strong oxidizers.



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MSDS-E-G100L

riep	ared to Osha, ACC, ANSI, Wh	IMIS, NORSC & 2001/58 EC Standards MSDS Revision: 2.1 MSDS Rev	rision Date: 02/14/2011			
		11 TOVICOLOCICAL INFORMATION				
	11. TOXICOLOGICAL INFORMATION					
11.1	Toxicity Data:	This product has not been tested on animals to obtain toxicological data.				
		for the components of this product, which are found in the scientific literal	ature. These data have not			
11.2	been presented in this document. Acute Toxicity: See section 3.5					
	-	See section 3.5				
11.3	2 COC SOCION C.C					
11.4	Suspected Carcinogen:	NE NE				
11.5	Reproductive Toxicity:	This product is not reported to produce reproductive toxicity 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 produce teratogenic effects in humans.				
11.6	Reproductive Toxicity: Irritancy of Product:	This product is not reported to produce reproductive effects in humans.				
	-	See Section 3.3				
11.7	Biological Exposure Indices:	NE .				
11.8	Physician Recommendations:	Treat symptomatically.				
		12. ECOLOGICAL INFORMATION				
12.1	Environmental Stability:	This product will slowly volatile from soil. Components of this product v	will slowly decompose into			
		organic compounds.				
12.2	Effects on Plants & Animals:	There is no specific data available for this product.				
12.3	Effects on Aquatic Life:	Releases of large volumes of this product are expected to be harmful or fa	ital to overexposed aquatic			
		life.	•			
		13. DISPOSAL CONSIDERATIONS				
13.1	Waste Disposal:					
	Dispose of in accordance with federal, state or local regulations.					
13.2	Special Considerations: NA					
	IVA					
14. TRANSPORTATION INFORMATION						
Tho k	pasic description (ID Number	proper shipping name, hazard class & division, packing group) is shown for ea	ach mode of transportation			
		may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.	den mode of transportation.			
14.1	49 CFR (GND):					
	NOT REGULATED					
14.2	IATA (AIR):					
	NOT REGULATED					
14.3	IMDG (OCN): NOT REGULATED					
14.4	TDGR (Canadian GND):					
	NOT REGULATED					
14.5	ADR/RID (EU):					
	NOT REGULATED					
14.6	SCT (MEXICO):					
	NO REGULADO					
14.7	ADGR (AUS):					
	NOT REGULATED					



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MSDS-E-G100L

Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision Date: 02/14/2011 MSDS Revision: 2.1 15. REGULATORY INFORMATION 15.1 SARA Reporting Requirements: 15.2 SARA Threshold Planning Quantity NA 15.3 TSCA Inventory Status: All chemical substances of this product are listed on the TSCA inventory or are otherwise exempt from inventory status. 15.4 CERCLA Reportable Quantity (RQ) 15.5 Other Federal Requirements: NA 15.6 Other Canadian Regulations This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS 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. 15.7 State Regulatory Information: The primary component of this product is not listed on the following state lists: California OSHA; California Proposition 65; Massachusetts Right to Know List of Chemicals; New Jersey Right to Know List 8:59 Appendix A; Pennsylvania Hazardous Substances List 34 323 Appendix A; Wisconsin Hazardous Substances List NR 605.09; Minnesota Hazardous Substances List; and Florida Toxic Substances List. 15.8 67/548/EEC (European Union) Requirements: The primary component of this product is not listed in Annex I of EU Directive 67/548/EEC. 16. OTHER INFORMATION 16.1 Other Information: NA 16.2 Terms & Definitions: See page last page of this MSDS. 16.3 Disclaimer: This Material 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 & CAIG Laboratories, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are 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. Prepared for 16.4 CAIG Laboratories, Inc. 12200 Thatcher Court Poway, CA 92064-6876 +1 (800) CAIG-123 (244-4123) phone +1 (858) 486-8398 fax http://www.caig.com/ Prepared by: ShipMate, Inc. P.O. Box 787 Sisters, OR. 97759-0787 +1 (310) 370-3600 phone +1 (310) 370-5700 fax http://www.shipmate.com/



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MSDS-E-G100L

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 1.1

MSDS Revision Date:

01/05/2011

DEFINITIONS OF TERMS

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

GENERAL INFORMATION:

CAS No. Chemical Abstract Service Number
--

EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists		
TLV	Threshold Limit Value		
OSHA	U.S. Occupational Safety and Health Administration		
PEL	Permissible Exposure Limit		
IDLH Immediately Dangerous to Life and Health			

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.

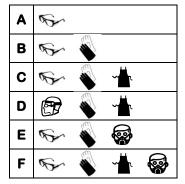
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

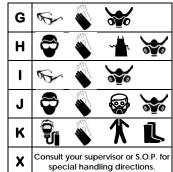
HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

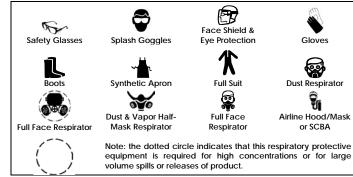
0	Minimal Hazard
1	Slight Hazard
2 Moderate Hazard	
3	Severe Hazard
4 Extreme Hazard	



PERSONAL PROTECTION RATINGS:







OTHER STANDARD ABBREVIATIONS:

NA	Not Available
NR No Results	
NE	Not Established
NF	Not Found
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

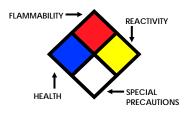
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition	Minimum temperature required to initiate combustion			
Temperature	in air with no other source of ignition			
LEL				
	by volume, that will explode or ignite in the presence			
	of an ignition source			
UEL	Upper Explosive Limit - highest percent of vapor in air,			
	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
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
-W -	Use No Water
OX	Oxidizer



TOXICOLOGICAL INFORMATION:

LD ₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals s
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 _{lo} , LD _{lo} , & LD _o or TC, TC _o , LC _{lo} , & LC _o	Lowest dose (or concentration) to cause lethal or toxic effects
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)			

EC INFORMATION:

		No.	*			×	×
С	E	F	N	0	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful



Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards

MATERIAL SAFETY DATA SHEET

MSDS Revision: 2.1

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MSDS Revision Date: 02/14/2011

MSDS-E-G100L-WIPES

03 1. PRODUCT IDENTIFICATION **CHEMICAL RESPONSE CARD:** Product Name: DeoxIT® Gold G-SERIES, WIPES, RESPONSE (formerly ProGold) TEAM PPE: 1.2 Chemical Name See ingredients listed in section 3 1.3 Synonyms: DeoxIT® Gold G100L WHMIS: 1.4 Trade Names: DeoxIT® Gold G100L (see list below) 1.5 Product Use: Conditioner, enhancer & protector for contacts & connectors **HEALTH:** 0 1.6 Manufacturer's Name CAIG Laboratories, Inc. FLAMMABILITY: 0 1.7 Manufacturer's Address: 0 12200 Thatcher Court, Poway, CA 92064-6876 PHYSICAL HAZARDS: 1.8 Business Phone: +1 (800)-224-4123 PERSONAL PROTECTION: 1.9 Emergency Phone: CHEMTREC +1 (703) 527-3887 / +1 (800) 424-9300 1 10 Other Product Names: DeoxIT® Gold WIPES, (Part Nos. G50W, K-G1W-25, K-G1W-50, G1W) 2. HAZARD IDENTIFICATION 21 Hazard Identification This product is NOT classified as a HAZARDOUS SUBSTANCE or as DANGEROUS GOODS according to the classification criteria of [NOHSC: 1088 (2004)] and ADG Code (Australia). DeoxIT® Gold G100L is non-volatile, non-hazardous and non-flammable. 22 Routes of Entry Inhalation: YES Absorption: YES 2.3 Effects of Exposure: Non-irritating when used as directed. Can cause irritation, tearing, and temporary blurred vision. EYES: SKIN: Non-irritating when used as directed. Prolonged or repeated contact may cause temporary contact dermatitis (localized redness or rash). INGESTION: Not probable. Small amounts if swallowed may cause temporary gastrointestinal irritation. INHALATION: Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary irritating to the eyes, nose, throat, and the respiratory tract; may cause temporary headaches and dizziness. 2.4 Symptoms of Overexposure: EYES: Non-irritating when used as directed. Can cause temporary irritation, tearing, and blurred vision. SKIN: Non-irritating when used as directed. Prolonged or repeated contact may cause temporary contact dermatitis (localized redness or rash). Not probable. Small amounts if swallowed may cause temporary gastrointestinal irritation. INGESTION: INHALATION: Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary irritating to the eyes, nose, throat, and the respiratory tract; may cause headaches and dizziness 2.5 Acute Health Effects: None reported when used as directed. Mild to moderate temporary irritation. EYES: SKIN: Unlikely when used as directed. Repeated exposure at site of contact may cause temporary contact dermatitis (localized redness or rash). Not probable. Small amount may cause temporary gastrointestinal irritation and central nervous system depression. INGESTION: INHALATION: Unlikely route of exposure. Should vapor concentrations exceed recommended exposure levels, they are temporary irritating to the eyes, nose, throat, and the respiratory tract; may cause headaches and dizziness. 26 Chronic Health Effects None reported by the manufacturer. 27 Target Organs: Eyes and skin. NA = Not Available; ND = Not Determined; NE = Not Established; NF = Not found; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used

NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1998 format.



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MSDS-E-G100L-WIPES

Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision: 2.1 MSDS Revision Date: 02/14/2011 3. COMPOSITION & INGREDIENT INFORMATION EXPOSURE LIMITS IN AIR (mg/m³) **ACGIH OSHA OTHER** STEL PEL STEL **IDLH** ΠV % **CHEMICAL NAME(S)** CAS No. RTECS No. **EINECS No.** ppm ppm ppm ppm ppm DeoxIT® Gold G100L Trade Secret NA 100 NE NE NE NE NE (formerly ProGold) 4. FIRST AID MEASURES First Aid: EYES: Flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If irritation persists, seek immediate medical attention. Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt SKIN: medical attention. Do not wear contaminated clothing until after it has been properly cleaned. INGESTION: Do not induce vomiting! Drink plenty of water. If irritation persists, contact a physician. Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate INHALATION: medical attention. If breathing stops, perform artificial respiration. 4.2 Medical Conditions Aggravated by Exposure: HEALTH 0 None reported by the manufacturer. **FLAMMABILITY** 0 **PHYSICAL HAZARDS** 0 PROTECTIVE EQUIPMENT Α **EYES** 5. FIREFIGHTING MEASURES Flashpoint & Method: > 280 °C (536 °F) Autoignition Temperature: 5.2 NA 5.3 Flammability Limits: Lower Explosive Limit (LEL): ND Upper Explosive Limit (UEL): ND Fire & Explosion Hazards: Carbon dioxide, carbon monoxide, hydrocarbons. 5.5 Extinguishing Methods: CO2, Alcohol foam, Dry Chemical, Water Fog Firefighting Procedures 5.6 Wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Use a water spray to cool containers involved in fire. Do not use direct water stream. Container storage areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Keep containers cool until well after the fire is out to prevent rupture. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway.

6. ACCIDENTAL RELEASE MEASURES

5.1 Spill

Ventilate if in enclosed area. Secure spill area, remove or minimize all sources of ignition, and maximize ventilation. Wipe and rinse with water. Deny entry to all unprotected individuals. Individuals involved in the cleanup must wear appropriate personal protective equipment.



Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards

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MSDS Revision Date: 02/14/2011

MSDS-E-G100L-WIPES

7. HANDLING & STORAGE INFORMATION 7.1 Work & Hygiene Practices: Wash hands thoroughly after using this product and before eating, drinking, or smoking. Remove soiled clothing to prevent prolonged skin contact. Storage & Handling: Use and store in a cool, dry, well-ventilated area. Do not store near or with any incompatible materials listed in section 10. Open containers may change concentrations, keep tightly closed when not in use. Normal shelf life 2-3 years. 7.3 Empty containers may contain product residues. 8. EXPOSURE CONTROLS & PERSONAL PROTECTION 8.1 Ventilation & Engineering Controls: Use with adequate ventilation (e.g., open doors and windows, local exhaust ventilation). Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station). Respiratory Protection: 8.2 None required, when used with adequate ventilation. 8.3 Wear safety glasses with side shields (ANSI Z87) under normal use conditions. 8.4 None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. In such cases, wear rubber or impervious plastic gloves. 8.5 Body Protection: Use as necessary to prevent skin contact. 9. PHYSICAL & CHEMICAL PROPERTIES 9 1 Density: 0.72 Boiling Point: 9.2 > 240 °C (464 °F) 9.3 Melting Point NA 9 4 Evaporation Rate: NA 9.5 Vapor Pressure < 0.01 mm Hg @ 20 °C (68 °F) 9.6 Molecular Weight: 9.7 Appearance & Color: Light yellow/amber 9.8 Odor Threshold: Ethereal/hydrocarbon odor 9.9 Solubility Not soluble in water 9.10 Ph 9.11 Viscosity: 5.4 - 7.5 cSt @ 104 °F 9.12 VOC (g/L): None 9 13 Other Information: NA 10. STABILITY & REACTIVITY 10.1 Stability: Stable under normal conditions of use (see section 7). 10.2 Hazardous Decomposition Products: Change in color signifies exposure to ultraviolet light or exceeding shelf life. Will not degrade to unstable products. Discard solution. 10.3 Hazardous Polymerization: 10.4 Conditions to Avoid: Use or storage near open flames, sparks, high heat (>100 °F) or other heat sources, and proximity to incompatible substances and heavily trafficked areas. 10.5 Incompatible Substances: Strong oxidizers.



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MSDS-E-G100L-WIPES

Piep	aled to Osha, ACC, ANSI, W	HMIS, NORSC & 2001/58 EC Standards MSDS Revision: 2.1 MSDS Revision Date: 02/14/2011					
		11. TOXICOLOGICAL INFORMATION					
11.1	Toxicity Data: This product has not been tested on animals to obtain toxicological data. There are toxicology data for the components of this product, which are found in the scientific literature. These data have not been tested on animals to obtain toxicological data. There are toxicology data for the components of this product, which are found in the scientific literature.						
11.2	Acute Toxicity:	been presented in this document. See section 3.5					
11.3	, and the second						
11.4	. Goo seeken ele						
11.5	THE THE						
11.5	Reproductive Toxicity:	This product is not reported to produce reproductive toxicity in humans. This product is not reported to produce mutagenic effects in humans.					
	Mutagenicity: Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.					
	Teratogenicity:	This product is not reported to produce teratogenic effects in humans.					
	Reproductive Toxicity:	This product is not reported to produce reproductive effects in humans.					
11.6	Irritancy of Product:	See Section 3.3					
11.7	Biological Exposure Indices:	NE NE					
11.8	Physician Recommendations:	Treat symptomatically.					
		12. ECOLOGICAL INFORMATION					
12.1	Environmental Stability:	This product will slowly volatile from soil. Components of this product will slowly decompose into organic compounds.					
12.2	Effects on Plants & Animals:	There is no specific data available for this product.					
12.3	Effects on Aquatic Life:	Releases of large volumes of this product are expected to be harmful or fatal to overexposed aquatic life.					
		13. DISPOSAL CONSIDERATIONS					
13.1	Waste Disposal: Dispose of in accordance with federal, state or local regulations.						
13.2							
		14. TRANSPORTATION INFORMATION					
		, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. In may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.					
14.1	49 CFR (GND): NOT REGULATED						
14.2	IATA (AIR):						
14.3	IMDG (OCN): NOT REGULATED						
14.4	TDGR (Canadian GND):						
	NOT REGULATED						
14.5	ADR/RID (EU):						
	NOT REGULATED						
14.6	SCT (MEXICO):						
	NO REGULADO						
14.7	ADGR (AUS): NOT REGULATED						
	HOT RECOUNTED						



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MATERIAL SAFETY DATA SHEET

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MSDS-E-G100L-WIPES

Prepared to OSHA, ACC, ANSI, WHMIS, NOHSC & 2001/58 EC Standards MSDS Revision Date: 02/14/2011 MSDS Revision: 2.1 15. REGULATORY INFORMATION 15.1 SARA Reporting Requirements: 15.2 SARA Threshold Planning Quantity NA 15.3 TSCA Inventory Status: All chemical substances of this product are listed on the TSCA inventory or are otherwise exempt from inventory status. 15.4 CERCLA Reportable Quantity (RQ) 15.5 Other Federal Requirements: NA 15.6 Other Canadian Regulations This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS 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. 15.7 State Regulatory Information: The primary component of this product is not listed on the following state lists: California OSHA; California Proposition 65; Massachusetts Right to Know List of Chemicals; New Jersey Right to Know List 8:59 Appendix A; Pennsylvania Hazardous Substances List 34 323 Appendix A; Wisconsin Hazardous Substances List NR 605.09; Minnesota Hazardous Substances List; and Florida Toxic Substances List. 15.8 67/548/EEC (European Union) Requirements: The primary component of this product is not listed in Annex I of EU Directive 67/548/EEC. 16. OTHER INFORMATION 16.1 Other Information: NA 16.2 Terms & Definitions: See page last page of this MSDS. 16.3 Disclaimer: This Material 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 & CAIG Laboratories, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are 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. Prepared for 16.4 CAIG Laboratories, Inc. 12200 Thatcher Court Poway, CA 92064-6876 +1 (800) CAIG-123 (244-4123) phone +1 (858) 486-8398 fax http://www.caig.com/ Prepared by: ShipMate, Inc. P.O. Box 787 Sisters, OR, 97759-0787 +1 (310) 370-3600 phone +1 (310) 370-5700 fax



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MSDS-E-G100L-WIPES

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 1.1

MSDS Revision Date:

01/05/2011

DEFINITIONS OF TERMS

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

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CAS No.	Chemical Abstract Service Number

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TLV	Threshold Limit Value			
OSHA	U.S. Occupational Safety and Health Administration			
PEL	Permissible Exposure Limit			
IDLH	Immediately Dangerous to Life and Health			

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.						

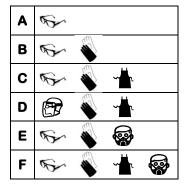
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

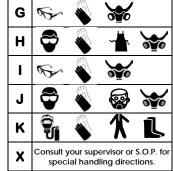
HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

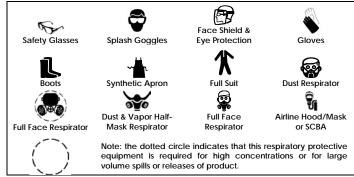
0	0 Minimal Hazard1 Slight Hazard	
1		
2	2 Moderate Hazard	
3	Severe Hazard	
4	Extreme Hazard	



PERSONAL PROTECTION RATINGS:







OTHER STANDARD ABBREVIATIONS:

NA	Not Available
NR	No Results
NE	Not Established
NF	Not Found
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

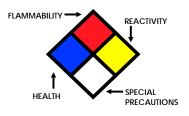
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

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	of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air,
	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
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
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ALK	Alkaline
COR	Corrosive
-W -	Use No Water
OX	Oxidizer



TOXICOLOGICAL INFORMATION:

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LC ₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
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TCLo	Lowest concentration to cause a symptom
TD _{lo} , LD _{lo} , & LD _o or TC, TC _o , LC _{lo} , & LC _o	Lowest dose (or concentration) to cause lethal or toxic effects
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)			

EC INFORMATION:

		M	*		Q	×	×
С	E	F	N	0	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful



Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MATERIAL SAFETY DATA SHEET

MSDS Revision: 3.1

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MSDS Revision Date: 01/29/2011

MSDS-E-GN5MS-15

01 CHEMICAL RESPONSE CARD: 1. PRODUCT IDENTIFICATION 1.1 Product Name DeoxIT® G-Series, GN5MS-15, 5% Spray, 14 g **RESPONSE** 1.2 Chemical Name TEAM PPE: See ingredients listed in section 2 1.3 Synonyms DeoxIT® Gold, GN5MS-15, 5% Spray WHMIS: 1.4 Trade Names: DeoxIT® Gold, GN5MS-15, 5% Spray 1.5 Product Use Conditioner, enhancer for contacts & connectors **HEALTH:** 1 1.6 Manufacturer's Name CAIG Laboratories, Inc. FLAMMABILITY: 1 1 7 Manufacturer's Address **PHYSICAL HAZARDS** 12200 Thatcher Court, Poway, CA 92064-6876 0 1.8 **Business Phone** PERSONAL PROTECTION: +1 (800)-224-4123 В 1.9 Emergency Phone: CHEMTREC +1-800-424-9300/+1-703-527-3887 1.10 Other Product Names: 2. HAZARD IDENTIFICATION Hazard Identification: This product is Classified as a HAZARDOUS SUBSTANCE and as DANGEROUS GOODS according to the classification criteria of NOHSC: 1008 (2004) and ADG Code (Australia). Colorless, volatile liquid with ethereal and faint sweetish odor. Non-flammable material. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphyxiation in confined spaces. At high temperatures (>250°C), decomposition products may include Hydrofluoric Acid (HF) and carbonyl halides. 2.2 Routes of Entry: Inhalation: YES YES Absorption: Ingestion: YES 2.3 Effects of Exposure: EYES: Mild to moderate irritation. SKIN: Irritant and potential skin sensitizer. Prolonged or repeated contact may cause contact dermatitis (localized redness or rash). INGESTION: Gastrointestinal irritation and central nervous system depression. INHALATION: Central nervous system depressant. Irritating to the upper respiratory tract. 2.4 Symptoms of Overexposure EYES: Mild irritation, redness, and watering. Contact dermatitis, characterized by localized red or puffy dry skin and itching. SKIN: INGESTION: INHALATION: Mouth, nose, and throat irritation, dizziness, nausea, light-headedness, drunkenness, and loss of coordination. 2.5 Acute Health Effects: Mild to moderate irritation. EYES: SKIN: Irritant and potential skin sensitizer. Prolonged or repeated contact may cause contact dermatitis (localized redness or rash). INGESTION: Gastrointestinal irritation and central nervous system depression. INHALATION: Central nervous system depressant. Irritating to the upper respiratory tract. 2.6 Chronic Health Effects: Mild to moderate irritation. EYES: SKIN: Irritant and potential skin sensitizer. Prolonged or repeated contact may cause contact dermatitis (localized redness or rash). INGESTION: Gastrointestinal irritation and central nervous system depression. INHALATION: Central nervous system depressant. Irritating to the upper respiratory tract. 2.7 Target Organs: Eyes, skin and respiratory system. NA = Not Available; ND = Not Determined; NE = Not Established; NF; Not found; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-2004 format



natural waterway.

MATERIAL SAFETY DATA SHEET

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MSDS Revision Date: 01/29/2011 MSDS Revision: 3.1 Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards 3. COMPOSITION & INGREDIENT INFORMATION EXPOSURE LIMITS IN AIR (mg/m³) ACGIH **NOHSC OSHA** ppm ppm OTHER ppm ES-ES-ES-**EINECS No.** % TLV STEL PEAK TLV CHEMICAL NAME(S) CAS No. RTECS No. TWA STEL **IDLH** STEL 460-73-1 419-170-6 300 NF NF 300 NE 1,1,1,3,3-PENTAFLUOROPROPANE UNK ≤ 75 NE NF NE HYDROCARBON PROPELLANT: ≤ 20 **ISOBUTANE** 75-28-5 TZ4300000 200-857-2 NA NE NE NF NF NF NE NE NE **PROPANE** 74-98-6 TX2275000 200-827-9 NΑ NE NE NF NF NF 1000 NE NE ISOPROPYL ALCOHOL 67-63-0 NT8050000 200-661-7 ≤ 3 400 NE 983 500 1230 400 NE 2000 TRADE SECRET DeoxIT® Gold G100L NΑ NA ≤ 5 NE NE NF NF NF NE NE NE 4. FIRST AID MEASURES First Aid Flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure EYES: complete flushing. If irritation persists, seek immediate medical attention. Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt SKIN: medical attention. Do not wear contaminated clothing until after it has been properly cleaned. INGESTION: Drink plenty of water. If irritation persists, contact a physician. Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate INHALATION: medical attention. If breathing stops, perform artificial respiration. Medical Conditions Aggravated by Exposure: 4.2 1 HEALTH None reported by the manufacturer. 1 **FLAMMABILITY** PHYSICAL HAZARDS 0 PROTECTIVE EQUIPMENT В **EYES** SKIN 5. FIREFIGHTING MEASURES 5.1 Flashpoint & Method ND. Level 1 aerosol. 5.2 Autoignition Temperature: 412 °C (774 °F) - 1,1,1,3,3-Pentafluoropropane 5.3 Flammability Limits: Lower Explosive Limit (LEL): NΑ Upper Explosive Limit (UEL): NA 5.4 Fire & Explosion Hazards: Carbon dioxide, carbon monoxide, hydrocarbons. 5.5 Extinguishing Methods: CO₂, Alcohol foam, Dry Chemical, Water Fog 5.6 0 Wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Use a water spray to cool containers involved in fire. Do not use direct water stream. Container storage areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Keep containers cool until well after the fire is out to prevent rupture. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any



9.7

9.8

9.9

9 10

9.11

9.12

Appearance & Color

Other Information: VOC Content

Odor Threshold:

Solubility:

MATERIAL SAFETY DATA SHEET

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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards MSDS Revision: 3.1 MSDS Revision Date: 01/29/2011 6. ACCIDENTAL RELEASE MEASURES Secure spill area and deny entry to all unprotected individuals. Individuals involved in the cleanup should wear appropriate personal protective equipment. Area may become slippery. Absorb product onto porous material, such as sand, clay, diatomaceous earth or commercial absorbent material. Place into leak-proof, U.S. DOT-approved containers. If necessary, cover all drains and dike well ahead of the spill to prevent runoff into sewers, drains, and all waterways. Contact appropriate local or provincial authorities for assistance and/or reporting requirements. 7. HANDLING & STORAGE INFORMATION 7.1 Work & Hygiene Practices: Wash hands thoroughly after using this product and before eating, drinking, or smoking. Remove soiled clothing to prevent prolonged skin contact. 7.2 Storage & Handling: Store at temperatures between 59 °F and 95 °F (15 °C and 35 °C) in a dry, well-ventilated location. Keep away from heat, sparks, open flame, and other sources of ignition. Normal shelf-life: 2-3 years. 7.3 Empty containers may contain product residues. 8. EXPOSURE CONTROLS & PERSONAL PROTECTION 8.1 Ventilation & Engineering Controls Use with adequate ventilation (e.g., open doors and windows, local exhaust ventilation). Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station). 8.2 None required, when used with adequate ventilation. 8.3 Wear safety glasses with side shields (ANSI Z87) under normal use conditions. 8.4 None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. In such cases, wear rubber or impervious plastic gloves. **Body Protection** Use as necessary to prevent skin contact. 9. PHYSICAL & CHEMICAL PROPERTIES 9 1 Density: 9.2 Boiling Point: 15 °C (59 °F) - 1,1,1,3,3-Pentafluoropropane 9.3 Melting Point: NA 9.4 **Evaporation Rate** NA 9.5 Vapor Pressure: 50 +/- 5 psig @ 20 °C 9.6 Molecular Weight: NΑ

Light yellow/amber, aerosol

Ethereal/hydrocarbon odor

Not soluble in water

268 grams/liter

NA

ND



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Prep	ared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards MSDS Revision: 3.1 MSDS Revision Date: 01/29/2011
	10. STABILITY & REACTIVITY
10.1	Stability: Stable under normal conditions of use (see section 7).
0.2	Hazardous Decomposition Products:
0.2	Change in color signifies exposure to ultraviolet light or exceeding shelf life. Will not degrade to unstable products. Discard solution.
0.3	Hazardous Polymerization:
	Will not occur.
0.4	Conditions to Avoid:
	Use or storage near open flames, sparks, high heat (>100 °F) or other heat sources, and proximity to incompatible substances and heavily trafficked areas.
0.5	Incompatible Substances:
	Strong oxidizers.
	11. TOXICOLOGICAL INFORMATION
1.1	Toxicity Data:
	1,1,1,3,3-Pentafluoropropane: Acute Dermal (rabbit) – $LD_{50} > 2,000$ mg/kg; Cardiac Sensitization (dogs) – No effects noted at 35,000 ppm, the threshold for induction of cardiac arrhythmias in the presence of injected adrenalin was 44,000 ppm. Acute Inhalation (rat) 4-hr. $LC_{50} > 200,000$ ppm. No lethality at 200,000 ppm. Evidence of transient anesthetic effect. Acute Inhalation (mouse): 4-hr. $LC_{50} > 100,000$ ppm. No lethality at 100,000 ppm. Evidence of transient underactivity during exposure.
1.2	Acute Toxicity:
	See section 2.5
1.3	Chronic Toxicity:
	See section 2.6
1.4	Suspected Carcinogen: NE
11.5	Reproductive Toxicity:
	This product is not reported to produce reproductive toxicity 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 produce teratogenic effects in humans.
	Teratogenicity: This product is not reported to produce teratogenic effects in humans. Reproductive Toxicity: This product is not reported to produce reproductive effects in humans.
1.6	Irritancy of Product:
	See Section 2.3
1.7	Biological Exposure Indices:
	NE NE
1.8	Physician Recommendations:
1.8	Physician Recommendations: Treat symptomatically.
11.8	Treat symptomatically.
	Treat symptomatically. 12. ECOLOGICAL INFORMATION
2.1	Treat symptomatically. 12. ECOLOGICAL INFORMATION Environmental Stability:
2.1	Treat symptomatically. 12. ECOLOGICAL INFORMATION Environmental Stability: This product will slowly volatile from soil. Components of this product will slowly decompose into organic compounds.
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11.8	Treat symptomatically. 12. ECOLOGICAL INFORMATION Environmental Stability: This product will slowly volatile from soil. Components of this product will slowly decompose into organic compounds. Effects on Plants & Animals: There is no specific data available for this product. Effects on Aquatic Life: 1,1,1,3,3-Pentafluoropropane: Partition Coefficient: Log Pow = 1.35 @ 21.5°C; Acute toxicity to Daphnia magna (Limit Test): NOEC > 97.9 mg/L; 48 hr. EC50 > 97.9 mg/L. Acute toxicity to Rainbow Trout (Limit Test): NOEC > 10 mg/L; 96 hr. EC50 > 81.8 mg/L 13. DISPOSAL CONSIDERATIONS Waste Disposal:
2.2	Treat symptomatically. 12. ECOLOGICAL INFORMATION Environmental Stability: This product will slowly volatile from soil. Components of this product will slowly decompose into organic compounds. Effects on Plants & Animals: There is no specific data available for this product. Effects on Aquatic Life: 1,1,1,3,3-Pentafluoropropane: Partition Coefficient: Log Pow = 1.35 @ 21.5°C; Acute toxicity to Daphnia magna (Limit Test): NOEC > 97.9 mg/L; 48 hr. EC50 > 97.9 mg/L. Acute toxicity to Rainbow Trout (Limit Test): NOEC > 10 mg/L; 96 hr. EC50 > 81.8 mg/L 13. DISPOSAL CONSIDERATIONS



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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, ADGR and the CTDGR.

14.1	49 CFR (Ground):
	CONSUMER COMMODITY, ORM-D
14.2	IATA (Air):
	ID8000, CONSUMER COMMODITY, 9 (≤ 820 ml)
	UN1950, AEROSOLS, 2.2 (> 820 ml)
14.3	IMDG (Ocean):
	UN1950, AEROSOLS, 2.2, LTD QTY (≤ 1.0 L)
14.4	TDGR (Canada):
	MARK PACKAGE "LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE"
	(≤ 1.0 L)
14.5	ADR/RID (EU):
	UN1950, AEROSOLS, 2, 5 A, ADR, LTD QTY (X ≤ 1.0 L)
14.6	SCT (Mexico):
	UN1950, AEROSOLS, 2.2, CANTIDAD LIMITADA
14.7	ADGR (Australia):
	UN1950, AEROSOLS, 2.2, LTD QTY







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15.1 SARA Reporting Requirements:

NA

15.2 SARA Threshold Planning Quantity:

N/

15.3 TSCA Inventory Status:

All chemical substances of this product are listed on the TSCA inventory or are otherwise exempt from inventory status.

15.4 CERCLA Reportable Quantity (RQ):

NA

15.5 Other Federal Requirements:

Contains HFC-245fa, a greenhouse gas, a substance which may contribute to global warming. Regulated under Section 612 (SNAP) of the Clean Air Act and 40 CFR Part 82, subpart G.

15.6 Other Canadian Regulations

This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS 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.





15.7 State Regulatory Information:

The primary component of this product is not listed on the following state lists: California OSHA; California Proposition 65; Massachusetts Right to Know List of Chemicals; New Jersey Right to Know List 8:59 Appendix A; Pennsylvania Hazardous Substances List 34 323 Appendix A; Wisconsin Hazardous Substances List NR 605.09; Minnesota Hazardous Substances List; and Florida Toxic Substances List.

15.8 67/548/EEC (European Union) Requirements:

The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC.





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MATERIAL SAFETY DATA SHEET

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Prep	pared to OSHA, ACC, ANSI, NOHSC, WHMIS	& 2001/58 EC Standards MSDS Revision: 3.1 MSDS Revision Date: 01/29/2011				
	16. OTHER INFORMATION					
16.1	Other Information:					
	NA					
16.2	Terms & Definitions:					
	See page 7 of this MSDS.					
16.3	Disclaimer:					
	This Material 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 & CAIG Laboratories, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are 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: CAIG Laboratories, Inc. 12200 Thatcher Court Poway, CA 92064-6876 +1 (800) CAIG-123 (244-4123) phone +1 (858) 486-8398 fax http://www.caig.com/	CAIGE PRODUCTION OF THE PRODUC				
16.5	Prepared by: ShipMate, Inc. P.O. Box 787 Sisters, OR 97759-0787 310-370-3600 phone 310-370-5700 fax	ShipMate Dangerous Goods Training & Consulting				



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DEFINITION OF TERMS

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

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number
CAS No.	L Chemical Abstract Service Number

EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
TLV	Threshold Limit Value
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
IDLH	Immediately Dangerous to Life and Health

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.					

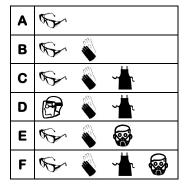
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

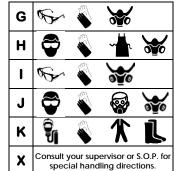
HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

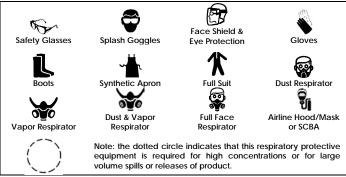
0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard



PERSONAL PROTECTION RATINGS:







OTHER STANDARD ABBREVIATIONS:

NA	Not Available	
NR	No Results	
NE	Not Established	
NF Not Found		
ND	Not Determined	
ML	Maximum Limit	
SCBA	Self-Contained Breathing Apparatus	

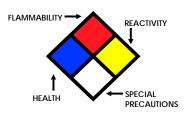
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition Minimum temperature required to initiate combus				
Temperature	ature in air with no other source of ignition			
LEL Lower Explosive Limit - lowest percent of vapor in air,				
	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	
1	Slight Hazard	
2	Moderate Hazard	
3	Severe Hazard	
4	Extreme Hazard	
ACD	Acidic	
ALK	Alkaline	
COR	Corrosive	
w —	Use No Water	
OX	Oxidizer	



TOXICOLOGICAL INFORMATION:

LD 50	Lethal Dose (solids & liquids) which kills 50% of the exposed animals s	
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 ₁₀ , LD ₁₀ , & LD ₀ or Lowest dose (or concentration) to cause leth		
TC, TCo, LClo, & LCo	toxic effects	
IARC	International Agency for Research on Cancer	
NTP	National Toxicology Program	
RTECS	Registry of Toxic Effects of Chemical Substances	
BCF	Bioconcentration Factor	
TLm	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)

EC INFORMATION:

		M	*			X	X
С	E	F	N	0	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful