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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, GHS & 1272/2008/EC Standards

SDS Revision: 7.2

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1.1	Product Name:				& COMF										
1.1	Floduct Name.	DE	:OXIT® I	D-SERIES	6, 5% SPI	RAY , 1	42 g	ram	s, V	OC	CON	IPL		[(P/I	<u>N D5S-6)</u>
1.2	Chemical Name:	-	U	listed in section											
1.3	Synonyms:				PN D5S-6 and										
1.4	Trade Names:				PN D5S-6 and										
1.5	Product Use:	Clea	an, deoxidize	& improve el	ectrical contac	ts & conn	ectors								
1.6	Distributor's Name:		G Laboratori												
1.7	Distributor's Address:	's Address: 12200 Thatcher Court, Poway, CA 92064-6876 USA													
1.8	Emergency Phone:	CH	EMTREC :	: +1 (703) 5	527-3887 / +	-1 (800)	424-9	300	(CCN	1205	206)				
1.9	Business Phone / Fax:	_	800) 224-412												
				2 11	ZARDS II										
2.1	Hazard Identification:	Thio	n raduatia a		HAZARDOUS							200	acardi		
2.1		crite DAN BE I	eria of NOHS NGER! EXT FATAL IF SV	C: 1088 (2004 REMELY FL	4) and ADG Co AMMABLE AE AND ENTERS	ode (Austr EROSOL.	alia). PRES							•	
2.2	Label Elements:				2 – Extremely	flammable	aeroso	ol. H2	229 – F	Pressu	rized c	ontair	ner: ma	ay	^
					e fatal if swalle									-	
		othe P25 P30	er ignition sou 1 – Do not p 1+P310 – If	urces. No sm pierce or burn = SWALLOW	: P210 – Keep oking. P211 – , even after us ED: Immediate – If skin irritat	Do not sp se. P261 ely call a	oray on – Avoid POISO	an op d brea N CE	en flan athing f	ne or o fume/g /docto	other ig jas/mis r. P3	gnition st/vapc 31 – [sourc or/spra Do NO	е. у. Т	N
induce vomiting. P332+P313 – If skin irritation occurs: get medical advice/attention locked up. P410+P412 – Protect from sunlight. Do not expose to temperatures (122 °F). P501 – Dispose of contents/container to a licensed treatment, storage of (TSDF).					res exc	ceedin	g 50 °	С							
2.3	Other Warnings:														•
2.5	Other Warnings.	KEE	POUT OF I	REACH OF C	HILDREN.										
			<u>3. COI</u>	MPOSITIO	JN & ING		- NIII) K IVI		UN				
														0	
									0	EXPO	SURE LI	MITS IN			 _
							ACG	SIH	0	EXPO: NOHSC	SURE LI	MITS IN	OSHA		_
								SIH		EXPO NOHSC ppm	SURE LI	MITS IN			
HEM	ICAL NAME(S)	c	AS No.	RTECS No.	EINECS No.	%	ACG	SIH	0	EXPO: NOHSC	SURE LI	MITS IN	OSHA		OTHER
		64	4742-47-8	OA5504000	EINECS No. 265-149-8	% 40-70	ACG pp TLV	SIH m	ES-	EXPOS NOHSC ppm ES-	ES-		OSHA ppm		OTHER MIST
	ICAL NAME(S) RLESS MINERAL SPIRITS	64 R	4742-47-8 EACH Reg. N	OA5504000 o. 0267859000 ⁻	EINECS No. 265-149-8 1; Asp. Tox. 1; H	% 40-70 304	ACC pp TLV (5)	SIH m STEL NA	ES- TWA NF	EXPOS NOHSC ppm ES- STEL NF	ES- PEAK	PEL (5)	OSHA ppm STEL NA	IDLH NA	MIST
DOF	RLESS MINERAL SPIRITS	6 R 7	4742-47-8 EACH Reg. N 5-37-6	OA5504000 o. 0267859000 [°] K14100000	EINECS No. 265-149-8 1; Asp. Tox. 1; H 200-866-1	% 40-70 304 10-30	ACC pp TLV (5)	SIH m STEL	ES- TWA	EXPOS NOHSC ppm ES- STEL NF	ES- PEAK	PEL	OSHA ppm STEL	IDLH	
DOF		64 R 75 R	4742-47-8 EACH Reg. N 5-37-6 EACH Reg. N	OA5504000 o. 0267859000 [°] K14100000 o. 100000788; I	EINECS No. 265-149-8 1; Asp. Tox. 1; H 200-866-1 Flam. Gas 1, Liq	% 40-70 304 10-30 . Gas; H220	ACC pp TLV (5) 1000 0, H280	sih m <u>Stel</u> NA NA	ES- TWA NF 1000	EXPOS NOHSC ppm ES- STEL NF	ES- PEAK NF	PEL (5) NA	OSHA ppm STEL NA	IDLH NA NA	MIST
DOF	RLESS MINERAL SPIRITS	64 R 75 R P	4742-47-8 EACH Reg. N 5-37-6 EACH Reg. N ROPRIETAR	OA5504000 o. 0267859000 K14100000 o. 100000788; I (– TRADE SEC	EINECS No. 265-149-8 1; Asp. Tox. 1; H 200-866-1 Flam. Gas 1, Liq RET	% 40-70 304 10-30	ACC pp TLV (5)	SIH m STEL NA	ES- TWA NF	EXPOS NOHSC ppm ES- STEL NF	ES- PEAK	PEL (5)	OSHA ppm STEL NA	IDLH NA	MIST
DOF	IOROETHANE (R-152A)	64 R 75 R P	4742-47-8 EACH Reg. N 5-37-6 EACH Reg. N ROPRIETAR	OA5504000 o. 0267859000 [°] K14100000 o. 100000788; I	EINECS No. 265-149-8 1; Asp. Tox. 1; H 200-866-1 Flam. Gas 1, Liq RET	% 40-70 304 10-30 . Gas; H220	ACC pp TLV (5) 1000 0, H280	sih m <u>Stel</u> NA NA	ES- TWA NF 1000	EXPOS NOHSC ppm ES- STEL NF	ES- PEAK NF	PEL (5) NA	OSHA ppm STEL NA	IDLH NA NA	MIST
DOF	IOROETHANE (R-152A)	64 R 75 R P	4742-47-8 EACH Reg. N 5-37-6 EACH Reg. N ROPRIETAR	OA5504000 o. 0267859000 K14100000 o. 100000788; I (– TRADE SEC o. Non-hazardo	EINECS No. 265-149-8 1; Asp. Tox. 1; H 200-866-1 Flam. Gas 1, Liq RET us/Proprietary	% 40-70 304 10-30 . Gas; H220 3-7	ACC pp TLV (5) 1000 D, H280 NA	SIH m STEL NA NA NA	ES- TWA NF 1000	EXPOS NOHSC ppm ES- STEL NF	ES- PEAK NF	PEL (5) NA	OSHA ppm STEL NA	IDLH NA NA	MIST
DOF	RLESS MINERAL SPIRITS JOROETHANE (R-152A) (IT® D-SERIES, D100L	6 R 7 R P R	4742-47-8 EACH Reg. N 5-37-6 EACH Reg. N ROPRIETAR EACH Reg. N	OA5504000 o. 0267859000 K14100000 o. 100000788; f (– TRADE SEC o. Non-hazardo 4.	EINECS No. 265-149-8 1; Asp. Tox. 1; H 200-866-1 Flam. Gas 1, Liq RET us/Proprietary FIRST AII	% 40-70 304 10-30 . Gas; H220 3-7 DMEA	ACC PP TLV (5) 1000 0, H280 NA SUR	STEL NA NA NA	ES- TWA NF 1000 NF	EXPOS NOHSC ppm ES- STEL NF NF	ES- PEAK NF NF	PEL (5) NA NA	OSHA ppm STEL NA NA	IDLH NA NA	MIST SKIN
DOF	IOROETHANE (R-152A)	6 R 7 R P R	4742-47-8 EACH Reg. N 5-37-6 EACH Reg. N ROPRIETARN EACH Reg. N EACH Reg. N	OA5504000 o. 0267859000 K14100000 o. 100000788; I (- TRADE SEC o. Non-hazardo 4. F ingested imme	EINECS No. 265-149-8 1; Asp. Tox. 1; H 200-866-1 Flam. Gas 1, Liq RET us/Proprietary FIRST AII ediately call a	% 40-70 304 10-30 . Gas; H220 3-7 D MEA Poison Co	ACC PPI TLV (5) 1000 0, H280 NA SUR ontrol C	SIH m STEL NA NA NA ES enter/	ES- TWA NF 1000 NF	EXPOS NOHSC ppm ES- STEL NF NF NF	ES- PEAK NF NF NF	PEL (5) NA NA	OSHA ppm STEL NA NA NA	IDLH NA NA	MIST SKIN
DOF DIFLUDEOX	RLESS MINERAL SPIRITS JOROETHANE (R-152A) (IT® D-SERIES, D100L	6 R 7 R P R	4742-47-8 EEACH Reg. N 5-37-6 EACH Reg. N ROPRIETARN EACH Reg. N EACH Reg. N	0A5504000 o. 0267859000 K14100000 o. 100000788; H (- TRADE SEC o. Non-hazardo 4. F ingested imme vallowed, drini	EINECS No. 265-149-8 1; Asp. Tox. 1; H 200-866-1 Flam. Gas 1, Liq RET us/Proprietary FIRST AIIE ediately call a < plenty of wat	% 40-70 304 10-30 . Gas; H220 3-7 D MEA Poison Co ter or milk	ACC PPP TLV (5) 1000 0, H280 NA SUR SUR ontrol C IMMEE	SIH m STEL NA NA NA NA ES enter/ DIATE	ES- TWA NF 1000 NF	EXPOS NOHSC ppm ES- STEL NF NF NF . Do	ES- PEAK NF NF NF NF	PEL (5) NA NA	OSHA ppm STEL NA NA NA	IDLH NA NA NA	MIST
DOF DIFLU DEOX	RLESS MINERAL SPIRITS JOROETHANE (R-152A) (IT® D-SERIES, D100L	6 R 7 R P R	4742-47-8 EEACH Reg. N 5-37-6 EEACH Reg. N ROPRIETAR EACH Reg. N EACH Reg. N	OA5504000 o. 0267859000 K14100000 o. 100000788; I (– TRADE SEC o. Non-hazardo A. I ingested imme <i>v</i> allowed, drinl milk. Never (EINECS No. 265-149-8 1; Asp. Tox. 1; H 200-866-1 Elam. Gas 1, Liq CRET us/Proprietary FIRST AIL ediately call a < plenty of wat give water or m	% 40-70 304 10-30 . Gas; H220 3-7 D MEA Poison Co ter or milk milk to an u	ACC PPI TLV (5) 1000 0, H280 NA SUR SUR Dontrol C IMMEE Unconso	STEL NA NA NA ES enter/ DIATE	ES- TWA NF 1000 NF	EXPOS NOHSC ppm ES- STEL NF NF NF . Do	ES- PEAK NF NF NF NF not ind atient i	PEL (5) NA NA luce vo s vom	OSHA ppm STEL NA NA NA Omiting, c est Po	IDLH NA NA	MIST
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DOF DIFLU DEOX	RLESS MINERAL SPIRITS JOROETHANE (R-152A) (IT® D-SERIES, D100L	6. R 7! R P R	4742-47-8 EEACH Reg. N 5-37-6 EEACH Reg. N ROPRIETAR EACH Reg. N Eastion: If i sw or loc an es: Sp wa	0A5504000 o. 0267859000 K14100000 o. 100000788; I (- TRADE SEC o. Non-hazardo 4. ingested immediate vallowed, drinding milk. Never (cal emergenc) nount of the side of the	EINECS No. 265-149-8 1; Asp. Tox. 1; H 200-866-1 Elam. Gas 1, Liq CRET us/Proprietary FIRST AIL ediately call a k plenty of wat give water or m y number. Pr ubstance that the	% 40-70 304 10-30 . Gas; H220 3-7 D MEA Poison Co ter or milk nilk to an u ovide an was swalle ever, if pr lifting upp	ACC PPI TLV (5) 1000 0, H280 NA SUR SUR SUR ontrol C IMMEI unconsci cestimat by er and	STEL MA NA NA NA ESS enter/ DIATE e of t lower	ES- TWA NF 1000 NF doctor LY. If person he tim e the e lids, o	EXPOSING A CONTROL FOR A CONTR	NF NF NF NF NF NF NF NF NF NF NF	PEL (5) NA NA luce ve s vom e near he ma ith co Remo	OSHA ppm STEL NA NA NA NA	IDLH NA NA NA NA NA NA NA NA NA NA	MIST SKIN SKIN Doduct has bee to offer wate ontrol Center of gested and the sested and the set of set of
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DOF DIFLUDEOX	RLESS MINERAL SPIRITS JOROETHANE (R-152A) (IT® D-SERIES, D100L	6- R P R Inge	4742-47-8 EEACH Reg. N 5-37-6 EEACH Reg. N ROPRIETAR EEACH Reg. N EEACH Reg. N EEACH Reg. N Contemport EESTION: If it switch an or bitch an an an an an an an an an an an an an	OA5504000 o. 0267859000 K14100000 o. 100000788; I (- TRADE SEC o. Non-hazardo . Non-h	EINECS No. 265-149-8 1; Asp. Tox. 1; H 200-866-1 Flam. Gas 1, Liq RET us/Proprietary FIRST AIL ediately call a k plenty of water or m y number. Pr ubstance that v ot likely; howe st 15 minutes continue rinsir y with soap an s. Treat for frc	% 40-70 304 10-30 . Gas; H220 3-7 D MEA Poison Co ter or milk hilk to an u was swalk ever, if pr lifting upp ng. If irrita d water. ostbite if n	ACC PPI TLV (5) 1000 0, H280 0, H280 0, H280 NA SUR SUR SUR SUR SUR SUR SUR SUR	STEL MA NA NA NA ES ES enter// DIATE cious p e of t lower rsists of coury, be	ES- TWA NF 1000 NF doctor LY. If person he tim e the e lids, or repeat ntact, in	EXPOSING NOHSC ppm ES- STEL NF NF NF NF r. Do the p . Con e at w eyes, f cccasio flushim mmed	NF NF NF NF NF NF NF NF NF NF NF NF NF	PEL (5) NA NA NA NA NA ith co Remo	OSHA ppm STEL NA NA NA NA NA Domiting, c est Po tterial y pious ove con ical att	IDLH NA NA NA NA NA NA NA NA NA NA NA NA NA	MIST SKIN SKIN Deduct has bee to offer wate ontrol Center gested and the sested and the so of lukeware nses if prese v of water for a
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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, GHS & 1272/2008/EC Standards

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	4. FIRST AID MEASURES – cont'd										
4.3	Symptoms of Overexposure:	Ingestion: Nausea, intestinal discomfort, vomiting and/or diarrhea. Eves: Overexposure in eyes may cause redness, itching and watering. Skin: Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. Frostbite like symptoms. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some individuals.									
4.4	Acute Health Effects:	Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. Frostbite like effect to skin.									
4.5	Chronic Health Effects:	Overexposure may trigger asthma-like symptoms in some sensitive individuals. May also induce skin sensitization and respiratory hypersensitivity. Possible allergic dermatitis.									
4.6	Target Organs:	Eyes, Skin, Respiratory System.									
4.7	Medical Conditions Aggravated by Exposure:	Pre-existing dermatitis, other skin			disorders	of the	HEALT	H			1
		target organs (eyes, skin, and respir	ratory s	ystem).			FLAMM	ABILIT	Y		3
							PHYSIC	AL HA	ZARDS		0
							PROTE	CTIVE B	EQUIPM	ENT	В
							EYES	SKIN			
		1									
		5. FIREFI	GHT	ING N	IEASU	RES					
5.1	Fire & Explosion Hazards:	Level 3 Aerosol (NFPA 30B). Aeros containers to prevent possible burs aerosols are bursting, stay clear However, if involved in a fire, this gases (e.g., CO, hydrogen fluoride).	sting. until b produc	Aerosols ursting is	may be pay be pay be	projectile e. This	hazards product	when bu is not fla	irsting. I ammable	f	
5.2 5.3	Extinguishing Methods: Firefighting Procedures:	Water, Foam, CO2, Dry Chemical. 1									3
		Fight fires as for surrounding materials. As in any fire, wear MSHA/NIOSH approved self- contained breathing apparatus (pressure-demand) and full protective gear. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Fight fire upwind. Avoid spraying water directly into storage containers because of danger of boil-over. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.									
							DEC				
6.1	6. ACCIDENTAL RELEASE MEASURES I Spills: Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment. Plastic or rubber gloves, respirator, eye protection and apron may be required for clean-up of large spills. Small Spills: Wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustibl material such as vermiculite or sand to soak up the product and place into a container for later disposal. Do not us water or a material such as "speedy dry" to soak up material. Sweep up material using non-sparking materials (e.g. plastic brooms, shovels, dustpans) and place into a plastic container or plastic liner within another container. Large Spills: Keep incompatible materials (e.g., organics such as oil) away from spill. Stay upwind and away from sp or release. Isolate immediate hazard area and keep unauthorized personnel out of area. Stop spill or release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant.					large spills. n-combustible I. Do not use naterials (e.g., er. away from spill ase if it can be					
		7 HANDLING 8									
7.1	Work & Hygiene Practices:	Work & Hygiene Practices: Do not eat, drink or smoke when handling this product. Contents under pressure. Handle as to avoid puncturing container(s). When used as intended, no additional protective equipment is necessary. Use chemical goggles if eye contact is possible. Wash unintentional residues with soap and warm water.									
7.2	Storage & Handling:	Use and store in a cool, dry, well- sunlight. Avoid temperatures above damage. To avoid unintentional spr	e 120 °F	. Keep a	away from	incompa	tible subst				
7.3	Special Precautions:	Clean all spills promptly.									
		8. EXPOSURE CONTR	ROLS	5 & PE	RSON	AL PI	ROTEC	TION			
8.1	Exposure Limits:		AC	GIH		NOHSC			OSHA	1	OTHER
	ppm (mg/m ³)	CHEMICAL NAME(S)	TLV	STEL	ES-TWA	ES- STEL	ES- PEAK	PEL	STEL	IDLH	
		ODORLESS MINERAL SPIRITS	(5)	NA	NF	NF	NF	(5)	NA	NA	MIST
		DIFLUOROETHANE (R-152A)	1000	NA	1000	NF	NF	NA	NA	NA	SKIN
8.2	Vontilation & Engineering	DEOXIT [®] D-SERIES, D100L	NA	NA	NF	NF	NF	15	NA	NA	
0.2	² Ventilation & Engineering Controls: General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use. Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).										



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0.0	-	EXPOSURE CONTROLS & PERSONAL PROTECTION – cont'd
8.3	Respiratory Protection:	No special respiratory protection is required under typical circumstances of use or handling. In instances where dusts of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.
8.4	Eye Protection:	Avoid eye contact. None required under normal conditions of use. Safety glasses could be used when handling or using large quantities of this product.
8.5	Hand Protection:	None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. When handling large quantities (e.g., ≥ 1 gallon (3.8 L)), wear rubber, nitrile or impervious plastic gloves.
3.6	Body Protection:	No apron required when handling small quantities. When handling large quantities (e.g., \geq 5 lbs), eye wash stations and deluge showers should be available. Upon completion of work activities involving large quantities of this product, wash any exposed areas thoroughly with soap and water.
		9. PHYSICAL & CHEMICAL PROPERTIES
9.1	Appearance:	
9.2	Odor:	Light red aerosol spray/mist Ethereal hydrocarbon odor
9.3	Odor Threshold:	
9.4	pH:	NA
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling	
9.7	Range: Flashpoint:	171.1-204 °C @ 760 mm Hg
9.7	Flashpoint: Upper/Lower Flammability	48.8 – 54.4 °C (120 - 130 °F)
9.8	Limits:	NA
9.9	Vapor Pressure:	NA
9.10	Vapor Density:	4.9 (air = 1.0)
9.11	Relative Density:	0.75
9.12	Solubility:	Not soluble in water
9.13	Partition Coefficient (log Pow):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	10.0 cPs
9.17	Other Information:	VOC: 588 g/L
		10. STABILITY & REACTIVITY
10.1	Stability:	Stable under normal conditions; unstable with heat or contamination.
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:	Will not occur.
	Conditions to Avoid:	
10.4		Open flames, sparks, high heat, incompatible substances and direct sunlight.
-	Incompatible Substances:	Open flames, sparks, high heat, incompatible substances and direct sunlight. Avoid extreme heat and ignition sources. Store away from oxidizers.
-	Incompatible Substances:	Avoid extreme heat and ignition sources. Store away from oxidizers.
-	Incompatible Substances:	
10.5	Incompatible Substances: Routes of Entry:	Avoid extreme heat and ignition sources. Store away from oxidizers.
10.5 11.1 11.2	Routes of Entry: Toxicity Data:	Avoid extreme heat and ignition sources. Store away from oxidizers. Intervention: YES Absorption: YES Ingestion: YES
10.5 11.1 11.2	Routes of Entry:	Avoid extreme heat and ignition sources. Store away from oxidizers. Interstanding of the product. Inhalation: YES Ingestion: YES Inhalation: YES Absorption: YES Ingestion: YES This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, available for some of the components of the product. Toxicology data. Toxicology data, found in scientific literature, available for some of the components of the product.
10.5 11.1 11.2 11.3	Routes of Entry: Toxicity Data:	Avoid extreme heat and ignition sources. Store away from oxidizers. 11. TOXICOLOGICAL INFORMATION Inhalation: YES Absorption: YES Ingestion: YES This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, available for some of the components of the product. Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause
10.4 10.5 11.1 11.2 11.3 11.4 11.5	Routes of Entry: Toxicity Data: Acute Toxicity:	Avoid extreme heat and ignition sources. Store away from oxidizers. Interview of the components of the product. Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can caus drowsiness, dizziness, headaches and nausea. This product contains less than 3% Dimethyl Sulfoxide (DMSO) per IP 346. This product does not contain any chemicals known to the State of California to cause cancer or other reproduction
10.5 11.1 11.2 11.3 11.4 11.5	Routes of Entry: Toxicity Data: Acute Toxicity: Chronic Toxicity: Suspected Carcinogen:	Avoid extreme heat and ignition sources. Store away from oxidizers. Inhalation: YES Negetion: YES Inhalation: YES Negetion: YES Inhalation: YES Negetion: YES Inhalation: YES Negetion: YES This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, available for some of the components of the product. Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. This material may aggravate any pre-existing skin condition (e.g., dermatitis). This product contains less than 3% Dimethyl Sulfoxide (DMSO) per IP 346. This product does not contain any chemicals known to the State of California to cause cancer or other reproduction harm. For more information go to www.P65Warnings.ca.gov
10.5 11.1 11.2 11.3 11.4 11.5	Routes of Entry: Toxicity Data: Acute Toxicity: Chronic Toxicity: Suspected Carcinogen: Reproductive Toxicity:	Avoid extreme heat and ignition sources. Store away from oxidizers. Interpretation in the product in the product. Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. This material may aggravate any pre-existing skin condition (e.g., dermatitis). This product contains less than 3% Dimethyl Sulfoxide (DMSO) per IP 346. This product does not contain any chemicals known to the State of California to cause cancer or other reproduction harm. For more information go to www.P65Warnings.ca.gov This product is not reported to produce reproductive toxicity in humans.
10.5 11.1 11.2 11.3 11.4 11.5	Routes of Entry: Toxicity Data: Acute Toxicity: Chronic Toxicity: Suspected Carcinogen: Reproductive Toxicity: Mutagenicity:	Avoid extreme heat and ignition sources. Store away from oxidizers. 11. TOXICOLOGICAL INFORMATION Inhalation: YES Absorption: YES Ingestion: YES This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, available for some of the components of the product. Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. This material may aggravate any pre-existing skin condition (e.g., dermatitis). This product contains less than 3% Dimethyl Sulfoxide (DMSO) per IP 346. This product does not contain any chemicals known to the State of California to cause cancer or other reproducti harm. For more information go to www.P65Warnings.ca.gov This product is not reported to produce mutagenic effects in humans. This product is not reported to produce mutagenic effects in humans.
10.5 11.1 11.2 11.3 11.4	Routes of Entry: Toxicity Data: Acute Toxicity: Chronic Toxicity: Suspected Carcinogen: Reproductive Toxicity: Mutagenicity: Embryotoxicity:	Avoid extreme heat and ignition sources. Store away from oxidizers. 11. TOXICOLOGICAL INFORMATION Inhalation: YES Ingestion: YES This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, available for some of the components of the product. Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. This material may aggravate any pre-existing skin condition (e.g., dermatitis). This product contains less than 3% Dimethyl Sulfoxide (DMSO) per IP 346. This product does not contain any chemicals known to the State of California to cause cancer or other reproducti harm. For more information go to www.P65Warnings.ca.gov This product is not reported to produce mutagenic effects in humans. This product is not reported to produce mutagenic effects in humans. This product is not reported to produce embryotoxic effects in humans.
10.5 11.1 11.2 11.3 11.4 11.5	Routes of Entry: Toxicity Data: Acute Toxicity: Chronic Toxicity: Suspected Carcinogen: Reproductive Toxicity: Mutagenicity: Embryotoxicity: Teratogenicity:	Avoid extreme heat and ignition sources. Store away from oxidizers. 11. TOXICOLOGICAL INFORMATION Inhalation: YES Ingestion: YES This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, available for some of the components of the product. Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. This material may aggravate any pre-existing skin condition (e.g., dermatitis). This product contains less than 3% Dimethyl Sulfoxide (DMSO) per IP 346. This product does not contain any chemicals known to the State of California to cause cancer or other reproducti harm. For more information go to www.P65Warnings.ca.gov This product is not reported to produce mutagenic effects in humans. This product is not reported to produce mutagenic effects in humans. This product is not reported to cause teratogenic effects in humans. This product is not reported to cause teratogenic effects in humans.
110.5 111.1 111.2 111.3 111.4 111.5	Routes of Entry: Toxicity Data: Acute Toxicity: Chronic Toxicity: Suspected Carcinogen: Reproductive Toxicity: Mutagenicity: Embryotoxicity: Teratogenicity: Reproductive Toxicity:	Avoid extreme heat and ignition sources. Store away from oxidizers. 11. TOXICOLOGICAL INFORMATION Inhalation: YES Ingestion: YES This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, available for some of the components of the product. Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. This material may aggravate any pre-existing skin condition (e.g., dermatitis). This product contains less than 3% Dimethyl Sulfoxide (DMSO) per IP 346. This product does not contain any chemicals known to the State of California to cause cancer or other reproducti harm. For more information go to www.P65Warnings.ca.gov This product is not reported to produce reproductive toxicity in humans. This product is not reported to produce mutagenic effects in humans. This product is not reported to cause teratogenic effects in humans. This product is not reported to cause teratogenic effects in humans. This product is not reported to cause teratogenic effects in humans. This product is not reported to cause reproductive effects in humans. This product is not reported to cause reproductive effects in humans.
10.5 11.1 11.2 11.3 11.4 11.5	Routes of Entry: Toxicity Data: Acute Toxicity: Chronic Toxicity: Suspected Carcinogen: Reproductive Toxicity: Mutagenicity: Embryotoxicity: Teratogenicity:	Avoid extreme heat and ignition sources. Store away from oxidizers. 11. TOXICOLOGICAL INFORMATION Inhalation: YES YES Ingestion: YES This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, available for some of the components of the product. Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. This material may aggravate any pre-existing skin condition (e.g., dermatitis). This product contains less than 3% Dimethyl Sulfoxide (DMSO) per IP 346. This product does not contain any chemicals known to the State of California to cause cancer or other reproducti harm. For more information go to www.P65Warnings.ca.gov This product is not reported to produce mutagenic effects in humans. This product is not reported to produce mutagenic effects in humans. This product is not reported to produce embryotoxic effects in humans. This product is not reported to cause teratogenic effects in humans. This product is not reported to cause teratogenic effects in humans.



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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, GHS & 1272/2008/EC Standards

SDS Revision: 7.2

SDS Revision Date: 2/1/2018

	12. ECOLOGICAL INFORMATION				
12.1	Environmental Stability:	There is no specific data available for this product.			
12.2	12.2 Effects on Plants & Animals: There are no specific data available for this product.				
12.3	12.3 Effects on Aquatic Life: There are no specific data available for this product.				
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13. DISPOSAL CONSIDERATIONS

 13.1
 Waste Disposal:
 Dispose of in accordance with federal, state and local regulations.

 13.2
 Special Considerations:
 U.S. EPA RCRA Hazardous Waste: D001 (Characteristic – Ignitability). California Waste Code: 331 (liquid concentrate).

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 and the CTDGR.

 14.1
 49 CFR (GND):
 UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L); or

		CONSUMER COMMODITY, ORM-D (IP VOL ≤ 1.0 L) – until 12/31/2020	\diamond
14.2	IATA (AIR):	UN1950, AEROSOLS, FLAMMABLE, 2.1 (LTD QTY, IP VOL \leq 0.5 L); or ID8000, CONSUMER COMMODITY, ORM-D (IP VOL \leq 0.5 L)	
14.3	IMDG (OCN):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	\diamond
14.4	TDGR (Canadian GND):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L); or MARK PACKAGE "LIMITED QUANTITY," "LTD QTY," or "QUANT LTÉE" or "QUANTITÉ LIMITÉE"	\diamond
14.5	ADR/RID (EU):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	\diamond
14.6	SCT (MEXICO):	UN1950, AEROSOLES, 2.1 (CANTIDAD LIMITADA, IP VOL ≤ 1.0 L)	\diamond
14.7	ADGR (AUS):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	\diamond

15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements:	This product does not contain any substances subject to SARA Title III, section 313 reporting requirements.			
15.2	SARA TPQ:	There are no specific Threshold Planning Quantities for the components of this product.			
15.3	TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.			
15.4	CERCLA Reportable Quantity:	ΝΑ			
15.5	Other Federal Requirements:	None of the ingredients in this mixture are listed as Hazardous Air Pollutants (HAPs). None of the ingredients in this mixture are listed as a Priority Pollutant under the CWA. None of the ingredients in this mixture are listed as a Toxic Pollutant under the CWA.			
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the 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. WHMIS Class B5, D2B (Flammable Aerosol, Other Toxic Effects).			
15.7	State Regulatory Information:	 <u>Difluoroethane</u> can be found on the following state criteria lists: MA and NJ. No ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY) Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI). This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or othe reproductive harm. For more information go to www.P65Warnings.ca.gov. 			
15.8	Other Requirements:				



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	16. OTHER INFORMATION						
16.1	Other Information:	DANGER! EXTREMELY FLAMMABLE AEROSOL. PRESSURIZED CONTAINER: MAY BURST IF HEATED. MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS. Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking. Provide good ventilation in process area to prevent formation of vapor. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid breathing fume/gas/mist/vapor/spray. WARNING – ELECTRIC SHOCK HAZARD: This can will conduct electricity – keep away from all live electrical sources including battery terminals, electrical panels, and other electrical components. Failure to observe this warning may result in serious injury. Wear protective gloves, eye protection and face protection. Wash hands and exposed skin areas with soap and water thoroughly after handling. In case of fire, CO ₂ Halon (if permitted), dry chemical, or foam for extinction. IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. If skin irritation occurs: get medical advice/attention. Keep Cool. Protect from sunlight. Do not expose to temperatures exceeding 50 °C (122 °F). KEEP LOCKED UP. KEEP OUT OF REACH OF CHILDREN.					
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.					
16.3	Disclaimer:	This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & CAIG Laboratories, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.					
16.4	Prepared for:	CAIG Laboratories, Inc. 12200 Thatcher Court Poway, CA 92064-6876 Tel: +1 (800) CAIG-123 (244-4123) Fax: +1 (858) 486-8398 fax http://www.caig.com/					
16.5	Prepared by:	ShipMate, Inc. P.O. Box 787 Sisters, Oregon 97759-0787 USA Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 http://www.shipmate.com					



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DEFINITION OF TERMS

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

GENERAL INFORMATION:

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

EXPOSURE LIMITS IN AIR:

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

FIRST AID MEASURES:

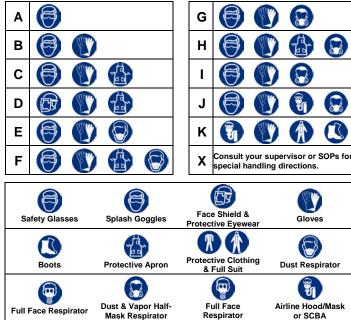
CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
	and provide oxygen to the body.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

	0	Minimal Hazard	HEALTH
	1	Slight Hazard	FLAMMABILITY
ſ	2	Moderate Hazard	PHYSICAL HAZARDS
ſ	3	Severe Hazard	PERSONAL PROTECTION
ſ	4	Extreme Hazard	

PERSONAL PROTECTION RATINGS:



OTHER STANDARD ABBREVIATIONS:

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

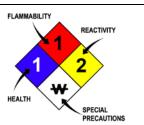
FLAMMABILI	TY LIMITS IN AIR:
	Minimum temperature required to initiate combustion in air with no oth
Temperature	of ignition

NATIONAL FIRE PROTECTION ASSOCIATION: NEPA

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

HAZARD RATINGS:

0	Minimal Hazard	FL			
1	Slight Hazard	FL			
2	Moderate Hazard				
3	3 Severe Hazard				
1 Slight Hazard 2 Moderate Hazard					
ACD	Moderate Hazard Severe Hazard Extreme Hazard Acidic Alkaline Corrosive Use No Water Oxidizer				
ALK	Severe Hazard Extreme Hazard Acidic Alkaline Corrosive Use No Water				
COR	Corrosive				
w	Use No Water	HE			
W Use No Water OX Oxidizer					



TOXICOLOGICAL INFORMATION:

LD ₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals			
LC ₅₀	Lethal concentration (gases) which kills 50% of the exposed animal			
ppm	Concentration expressed in parts of material per million parts			
TD _{Io}	Lowest dose to cause a symptom			
TCLo	Lowest concentration to cause a symptom			
TD _{io} , LD _{io} , & LD _o or	Lowest dose (or concentration) to cause lethal or toxic effects			
TC, TC _o , LC _{io} , & LC _o				
IARC	International Agency for Research on Cancer			
NTP	National Toxicology Program			
RTECS	Registry of Toxic Effects of Chemical Substances			
BCF	Bioconcentration Factor			
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)			
WGK	Wassergefährdungsklassen (German Water Hazard Class)			

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

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Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

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

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