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Prepared to OSHA, ACC, ANSI, WHSR, WHMIS, EU & GHS Standards

SDS Revision: 4.1

FICH	ared to USHA, ACC, ANS			Stanuarus			000	IVENISIO	11. 4.1		000	11611310	in Date.	5/51/2022
	1. PRODUCT & COMPANY IDENTIFICATION													
1.1	Product Name:	DEOXIT	[®] D-SERIE	S, 100%	SPRA	Y, (F	P/N [D100	S-2), 57	g			
1.2	Chemical Name:	NA												
1.3	Synonyms:	NA												
1.4	Trade Names:	DeoxIT [®] D-S	eries, 100% Sp	ray, (P/N D100)S-2), 57g	1								
1.5	Product Uses & Restrictions:	Deoxidize & improve electrical contacts & connectors.												
1.6	Distributor's Name:	CAIG Labora	CAIG Laboratories, Inc.											
1.7	Distributor's Address:	12200 Thatcher Court, Poway, CA 92064-6876 USA												
1.8	Emergency Phone:	CHEMTRE	EC: +1 (703)	527-3887 /	+1 (80	0) 424	1-930	0						
1.9	Business Phone / Fax:	+1 (800) 224												
			2. HA		DENT	IFIC		ON						
2.1	Hazard Identification:	Prenared in							nded t	o com	nly wit	h OSF	44 29 (CFR 1910.1200.
			HMIS and Austr				anuaru	S. Inter	lucu i	0 0011		11 001	IA 23 (511(1910.1200.
			PRESSURIZED				F HEA	TED. C	CAUS	ES EY		ΤΑΤΙΟ	DN.	
			: Aerosols 3; Ey		,									
2.2	Label Elements:		ements (H): H22		ed contai	ner: m	av bur	st if he	ated.	H320	– Cau	ses ev	/e	
		irritation.	<u></u> ()			,						,	-	
		Precautionar	<u>y Statements</u> (F): P210 – Kee	p away fr	om hea	at, hot s	surface	, spar	ks, ope	en flam	ies, an	ıd	
			sources. No si											
			exposed skin											
			P338 – IF IN E											
		· ·	sent and easy to		0			,			0			
			P412 – Protect fi ose of contents/											
2.3	Other Warnings:						,	lage of	uispu	J541 14	Sinty (1	<u> 501)</u> .		
		REEP LOCK	ED UP AND O	UT OF REACT		LUKEN	N							
		3. C(OMPOSITI	ON & INC	GRED	ENT	INF	ORM	ΙΑΤ	ION				
											IMITS IN	AIR (m	g/m³)	
						AC	GIH	-	NOHSC			OSHA		
						pp	om		ppm	1		ppm		-
CHEM	ICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	TLV	STEL	ES- TWA	ES- STEL	ES- PEAK	PEL	STEL	IDLH	OTHER
		75-37-6	K14100000	200-866-1	60-100	1000	NA	1000		NF	NA	NA	NA	Unitit
1,1-D	FLUOROETHANE (R-152A)	Flam. Gas 1; L	iq. Gas; H220, H2	280										
Doox	T [®] D-Series D100L	NA	NA	NA	≤ 20.0	NA	NA	NF	NF	NF	NA	NA	NA	
Deoxi	T D-Genes D 100E	REACH Reg. I	No. Non-Hazardoı	us/Proprietary										
				FIRST AI										
4.1	First Aid:	Ingestion:												of water or milk
														ater or milk to an
														ber. Provide an stance that was
			swallowed.			alena	was	ingeste	u and	une	amoun		le subs	stance that was
		Eyes:		not likely: howe	ever if pro	oduct a	ets in t	the eve	s flus	h with	copiou	is amo	ounts of	lukewarm water
			Splashes are not likely; however, if product gets in the eyes, flush with copious amounts of lukewarm for at least 15 minutes lifting upper and lower lids, occasionally. If irritation persists repeat flushing											
			medical attent	ion.								•	•	0
		<u>Skin</u> :												nty of water for at
								e gentl	y war	ming a	ffectec	l area.	If irrita	ation, redness or
			swelling persis					- u						
		Inhalation:	Remove victin									If brea	ithing st	tops give
4.2	Effects of Exposure:	Ingestion	artificial respira								<u>)n.</u>			
4.2	Lifects of Exposure.	Ingestion:	If product is sw											
		Eyes:	,	itating to the e	eyes. Syr	nptoms	s or ov	erexpo	sure r	nay in	ciude i	reanes	s, itchii	ng, irritation and
		Skin	watering.	ag to skip. Th	o produc	t con c		lloraic	okin r	opotior		rach	nos wol	lts, dermatitis) in
		<u>Skin:</u>	some sensitive	0	e produc		ause a	liergic	SKILLI	eaction	is (e.y	., 14511		is, uermanns) in
		Inhalation:	None expected											
4.3	Symptoms of Overexposure:	Ingestion:	Nausea, intest		t vomitin	a and/r	n diarr	hea						
	,		Overexposure		-	•			torina					
		<u>Eyes</u> : Skin:	•			-	•				ation o	f affer	ted are	as. Frostbite like
		<u>SKII</u> .												matitis) in some
			individuals.		.a. 00030		Siti			(e.g.,	. 401100	-, •••••	, uon	
4.4	Acute Health Effects:	Moderate irri	itation to eyes a	nd skin near a	ffected ar	eas. A	dditior	hallv, hi	gh co	ncentra	ations	of vap	ors can	cause
			dizziness, head											



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				ACLIDE		ont'd					
4.5	Chronic Health Effects:		T AID ME				lucia N	Any alay			
4.5	Target Organs:	Overexposure may trigger as respiratory hypersensitivity. F	ossible allergic	dermatitis	ome sensi S.	tive individ	iuais. N	/lay also	Dinduce	skin sens	sitization ar
4.7	Medical Conditions	Eyes, Skin, Respiratory Syste Pre-existing dermatitis, other		o and dia	oordoro of	the HE	ALTH				4
1.1	Aggravated by Exposure:	target organs (eyes, skin, and			soluers of						1
									4000		2
								L HAZ			0
								1		ENT	B
						EYE	S	SKIN			
		5. FIF	REFIGHTI	NG ME	ASUR	ES					
5.1	Fire & Explosion Hazards:	Level 1 Aerosol (NFPA 30B). Aerosols may burst at temperatures above 120 °F. Cool uninvolved containers to prevent possible bursting. Aerosols may be projectile hazards when bursting. If aerosols are bursting, stay clear until bursting is complete. If involved in a fire, this product may decompose at high temperatures to form toxic gases (e.g., CO, Hydrogen Fluoride).									
5.2	Extinguishing Methods:	Water, Foam, CO ₂ , Dry Chem									2
5.3	Firefighting Procedures:	Fight fires as for surrounding a breathing apparatus (pressure after the fire is out. Use water upwind. Avoid spraying wat Prevent runoff from fire contro natural waterway. Firefighte pressure self-contained breat decomposition products and o	e-demand) and spray to cool fil er directly into or dilution from ers must use f ning apparatus	I full protect re-exposed storage con entering s full bunker to protect	ctive gear. d surfaces containers sewers, dr r gear ind	Keep co and to pro because rains, drink cluding NI	ontainer otect per of dang ing wate OSH-ap	s cool u sonal. I ger of b er suppl proved	until well Fight fire ooil-over. y, or any positive		0
		6. ACCIDE	NTAL RE	FI FASI		SURES	s				
6.1	Spills:	Before cleaning any spill or lea Plastic or rubber gloves, resp <u>Small Spills</u> : Wear appropriat material such as vermiculite o	rator, eye prote e protective eq	ection and a quipment ir	apron may ncluding g	be require	ed for cl protect	ive eyev	of large wear. U	spills. se a non-	combustit
		use water or a material such a plastic brooms, shovels, dust <u>i</u> <u>Large Spills</u> : Keep incompati release. Isolate immediate h done with minimal risk. Wea Sweep up material using non- container.	bans) and place ole materials (e azard area and ar appropriate p	" to soak up e into a me e.g., organio d keep una protective	p material etal or plas cs such as authorized equipmen	Sweep u tic containe oil) away personnel t including	p mater er. from sp out of respira	rial using nill. Stay area. S atory pro	g non-sp / upwind Stop spill otection	arking ma and away or release as conditi	terials (e.) from spill e if it can ons warra
		plastic brooms, shovels, dust <u>Large Spills</u> : Keep incompati release. Isolate immediate h done with minimal risk. Wea Sweep up material using non- container.	pans) and place ble materials (e azard area and ar appropriate p sparking mater	" to soak up e into a me e.g., organio d keep una protective rials (e.g., p	p material stal or plas cs such as authorized equipmen plastic bro	. Sweep u tic containe s oil) away personnel t including oms, shove	ip mater er. from sp out of respira els, dus	rial using nill. Stay area. S atory pro	g non-sp / upwind Stop spill otection	arking ma and away or release as conditi	terials (e.g r from spill e if it can ons warra
7.4		plastic brooms, shovels, dust Large Spills: Keep incompati release. Isolate immediate h done with minimal risk. Wea Sweep up material using non- container. 7. HANDLIN	bans) and place ble materials (e azard area and ar appropriate p sparking mater IG & STO	" to soak up e into a me e.g., organia d keep una protective rials (e.g., p RAGE	p material etal or plas cs such as authorized equipmen plastic bro INFOR	Sweep u tic containe s oil) away personnel t including oms, shove	ip mater er. from sp out of respira els, dus	rial usin ill. Stay area. S atory pro tpans) a	g non-sp y upwind Stop spill otection and place	arking ma and away or release as conditi into a me	tterials (e. r from spill e if it can ons warra stal or plas
7.1	Work & Hygiene Practices:	plastic brooms, shovels, dust <u>Large Spills</u> : Keep incompati release. Isolate immediate h done with minimal risk. Wea Sweep up material using non- container. 7. HANDLIN Do not eat, drink or smoke container(s). When used as in	bans) and place ble materials (e azard area and ar appropriate p sparking mater IG & STO when handling tended, no addi	" to soak up e into a me e.g., organio d keep una protective rials (e.g., p RAGE this prod itional prote	p material etal or plas cs such as authorized equipmen plastic bro INFOR luct. Con ective equ	Sweep u tic containe s oil) away personnel t including oms, shove RMATIC tents unde ipment is n	ip mater er. from sp out of a respira els, dus DN er press	rial using area. S atory pro tpans) a sure. H	g non-sp y upwind Stop spill ptection and place Handle a	arking ma and away or releas as conditi into a me s to avoid	terials (e. r from spill e if it can ons warra etal or plas d puncturi
	Work & Hygiene Practices: Storage & Handling:	plastic brooms, shovels, dust <u>Large Spills</u> : Keep incompati release. Isolate immediate h done with minimal risk. Wea Sweep up material using non- container. 7. HANDLIN Do not eat, drink or smoke container(s). When used as in is possible. Wash unintention	bans) and place ble materials (e azard area and ar appropriate p sparking mater IG & STO when handling tended, no addi al residues with	" to soak up e into a me e.g., organio d keep una protective rials (e.g., p RAGE this prod itional prote	p material tal or plas cs such as authorized equipmen plastic bro INFOF luct. Con ective equ I warm wat	. Sweep u tic containe s oil) away personnel t including oms, shove RMATIC tents unde ipment is n ter.	p mater er. from sp out of r respira els, dus DN er press ecessar	rial usin ill. Stay area. S atory pro tpans) a sure. F ry. Use	g non-sp / upwind Stop spill otection and place Handle a chemica	arking ma and away or release as conditi into a me s to avoid l goggles i	terials (e., r from spill e if it can ons warra etal or plas d puncturi f eye conta
		plastic brooms, shovels, dustplarge Spills: Large Spills: Keep incompati release. Isolate immediate h done with minimal risk. Wea Sweep up material using non- container. Sweep up material using non- container. 7. HANDLIN Do not eat, drink or smoke container(s). When used as in is possible. Wash unintention Use and store in a cool, dry, w Avoid temperatures above 12	bans) and place ble materials (e azard area and ar appropriate p sparking mater IG & STO when handling tended, no addi al residues with ell-ventilated loc 0 °F. Keep awa	" to soak up e into a me e.g., organio d keep una protective rials (e.g., p RAGE this prod itional prote <u>n soap and</u> cation (e.g. ay from inc	p material atal or plas cs such as authorized equipmen plastic bro INFOF luct. Con ective equ I warm wat ., local exh compatible	. Sweep u tic containe s oil) away personnel t including oms, shove RMATIC tents unde ipment is n ter. naust ventile e substance	p mater er. from sp out of a respira els, dus DN er press eccessar ation, fa	rial usin iill. Stay area. S atory pro tpans) a sure. H ry. Use nns) awa	g non-sp y upwind Stop spill otection is and place Handle a chemica ay from h	arking ma and away or release as conditi into a me s to avoid l goggles i eat and di	terials (e., r from spill e if it can ons warra etal or plas d puncturi f eye conta rect sunlig
7.2	Storage & Handling:	plastic brooms, shovels, dustplarge Spills: Large Spills: Keep incompati release. Isolate immediate h done with minimal risk. Wea Sweep up material using non- container. Sweep up material using non- container. Do not eat, drink or smoke container(s). When used as in is possible. Use and store in a cool, dry, w Avoid temperatures above 12 To avoid unintentional sprayin	bans) and place ble materials (e azard area and ar appropriate p sparking mater IG & STO when handling tended, no addi al residues with ell-ventilated loc 0 °F. Keep awa	" to soak up e into a me e.g., organio d keep una protective rials (e.g., p RAGE this prod itional prote <u>n soap and</u> cation (e.g. ay from inc	p material atal or plas cs such as authorized equipmen plastic bro INFOF luct. Con ective equ I warm wat ., local exh compatible	. Sweep u tic containe s oil) away personnel t including oms, shove RMATIC tents unde ipment is n ter. naust ventile e substance	p mater er. from sp out of a respira els, dus DN er press eccessar ation, fa	rial usin iill. Stay area. S atory pro tpans) a sure. H ry. Use nns) awa	g non-sp y upwind Stop spill otection is and place Handle a chemica ay from h	arking ma and away or release as conditi into a me s to avoid l goggles i eat and di	terials (e. r from spill e if it can ons warra etal or plas d punctur f eye cont rect sunlig
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7.2	Storage & Handling: Special Precautions: Exposure Limits:	plastic brooms, shovels, dustp Large Spills: Keep incompati release. Isolate immediate h done with minimal risk. Wea Sweep up material using non- container. Sweep up material using non- container. Do not eat, drink or smoke container(s). When used as in is possible. Use and store in a cool, dry, w Avoid temperatures above 12 To avoid unintentional sprayin Clean all spills promptly.	bans) and place ble materials (e azard area and ar appropriate p sparking mater IG & STO when handling tended, no addi al residues with ell-ventilated loc 0 °F. Keep awa g keep cap in p	to soak up e into a me e.g., organio d keep una protective rials (e.g., p RAGE this prod itional prote n soap and cation (e.g. ay from inc olace when	p material etal or plas cs such as authorized equipmen plastic bro INFOR luct. Con ective equ l warm wat ., local exh compatible n not in use	Sweep u tic containe s oil) away personnel t including oms, shove RMATIC tents unde ipment is n ter. naust ventil e substance	p matel er. from sp out of a respira els, dus DN er press eccessal ation, fa es. Pro	rial usin ill. Stay area. S tory pro tpans) a sure. F ry. Use ans) awa tect cor	g non-sp y upwind Stop spill otection is and place Handle a chemica ay from h	arking ma and away or release as conditi into a me s to avoid l goggles i eat and di	terials (e. r from spill e if it can ons warra etal or plas d punctur f eye cont rect sunlig
7.2	Storage & Handling: Special Precautions:	plastic brooms, shovels, dustp Large Spills: Keep incompati release. Isolate immediate h done with minimal risk. Wea Sweep up material using non- container. 7. HANDLIN Do not eat, drink or smoke container(s). When used as in is possible. Wash unintention Use and store in a cool, dry, w Avoid temperatures above 12 To avoid unintentional sprayin Clean all spills promptly. 8. EXPOSURE CO CHEMICAL NAME(S)	ACGIH TLV STEL Sparking Sparking mater Sparking material Sparking	 to soak up e into a me o.g., organid d keep una protective of rials (e.g., p RAGE I this prod itional protein soap and cation (e.g. ay from incolace when & PER ES-TWA 	p material tal or plas cs such as authorized equipmen plastic bro INFOF luct. Con ective equ d warm wat ., local exh compatible n not in use SONA NOHSC ES-STEL	Sweep u tic containes soil) away personnel t including oms, shove RMATIC tents unde ipment is n ter. naust ventile e substance c. L PRO	p matel er. from sp out of respira els, dus DN er press eccessal ation, fa es. Pro	rial usin ill. Stay area. S atory pro tpans) a sure. F ry. Use nns) awa tect cor FION <u>OSHA</u> <u>STEL</u>	g non-sp y upwind Stop spill otection is and place Handle a chemica ay from h	arking ma and away or releas as conditi e into a me s to avoid l goggles i eat and di rom physi	terials (e. r from spill e if it can ons warra etal or plas d punctur f eye cont rect sunlig
7.2	Storage & Handling: Special Precautions: Exposure Limits: ppm (mg/m ³)	plastic brooms, shovels, dust <u>Large Spills</u> : Keep incompati release. Isolate immediate h done with minimal risk. Wea Sweep up material using non- container. 7. HANDLIN Do not eat, drink or smoke container(s). When used as in is possible. Wash unintention Use and store in a cool, dry, w Avoid temperatures above 12 To avoid unintentional sprayin Clean all spills promptly. 8. EXPOSURE CO <u>CHEMICAL NAME(S)</u> DIFLUOROETHANE (R-152A)	ACGIH TLV STEL 1000 NA NA NA NA NA NA NA NA NA NA	 to soak up e into a me o.g., organid d keep una protective rials (e.g., p RAGE this prod itional protective n soap and cation (e.g. ay from inco place when & PER Es-TWA 1000 	p material tal or plas cs such as authorized equipmen plastic bro INFOF luct. Con ective equ l warm wat ., local exh compatible not in use SONA NOHSC ES-STEL NF	Sweep u tic containes oil) away personnel t including oms, shove RMATIC tents unde ipment is n ter. naust ventile e substance b L PRO	p matel er. from sp out of respira els, dus DN er press eccessar ation, fa es. Pro TEC1 PEL NA	rial usin iill. Stay area. S tory pro tpans) a sure. F ry. Use nns) awa tect cor FION <u>osha</u> <u>stel</u> NA	g non-sp y upwind Stop spill otection and and place Handle a chemica ay from h ntainers f IDLH NA	arking ma and away or release as conditi e into a me s to avoid l goggles i eat and di rom physi	terials (e. r from spil e if it can ons warra etal or pla: d punctur f eye cont rect sunlig ical dama
7.2	Storage & Handling: Special Precautions: Exposure Limits:	plastic brooms, shovels, dustp Large Spills: Keep incompati release. Isolate immediate h done with minimal risk. Wea Sweep up material using non- container. Sweep up material using non- container. Do not eat, drink or smoke container(s). When used as in is possible. Use and store in a cool, dry, w Avoid temperatures above 12 To avoid unintentional sprayin Clean all spills promptly. 8. EXPOSURE CO CHEMICAL NAME(S) DIFLUOROETHANE (R-152A) General mechanical (e.g., fams ventilation to effectively remover	Ar appropriate parameterials (e azard area and ar appropriate p sparking mater IG & STO when handling tended, no addi al residues with ell-ventilated loc 0 °F. Keep awa g keep cap in p NTROLS ACGIH TLV STEL 1000 NA s) or natural ver e and prevent b	^a to soak up e into a me o.g., organid d keep una protective rials (e.g., p RAGE this prod itional protective soap and cation (e.g. ay from inco place when & PER ES-TWA 1000 ntilation is so buildup of v	р material etal or plas cs such as authorized equipmen plastic bro INFOF luct. Con ective equ twarm wat ., local exh compatible not in use SONA NOHSC ES-STEL NF sufficient v vapors or r	Sweep u tic containes soil) away personnel t including oms, shove RMATIC tents unde ipment is n ter. naust ventil e substance b L PRO	p mateler. from sp out of a respira els, dus DN er press eccessal ation, fa es. Pro TEC1 PEL NA product i ated from	rial usin rial usin rial. Stay area. S tory pro- tpans) a sure. F ry. Use ans) awa tect cor FION OSHA STEL NA s in use m the ha	g non-sp y upwind Stop spill otection and and place Handle a chemica ay from h ntainers f IDLH NA e. Use lo andling o	arking ma and away or release as conditi e into a me s to avoid l goggles i eat and di rom physi OTHER cal or gen	terials (e. r from spil e if it can ons warra etal or pla d punctur f eye cont rect sunliç ical dama eral exha
7.2 7.3 8.1	Storage & Handling: Special Precautions: Exposure Limits: ppm (mg/m ³) Ventilation & Engineering	plastic brooms, shovels, dustp Large Spills: Keep incompati release. Isolate immediate h done with minimal risk. Wea Sweep up material using non- container. Sweep up material using non- container. Do not eat, drink or smoke container(s). When used as in is possible. Use and store in a cool, dry, w Avoid temperatures above 12 To avoid unintentional sprayin Clean all spills promptly. 8. EXPOSURE CO CHEMICAL NAME(S) DIFLUOROETHANE (R-152A) General mechanical (e.g., fame	Ans) and place be materials (e azard area and ar appropriate p sparking mater AG & STO when handling tended, no addi al residues with ell-ventilated loc 0 °F. Keep awa g keep cap in p CACGIH TLV STEL 1000 NA s) or natural ver e and prevent b aquipment is av tion is required product are ger R §1910.134, a	^a to soak up e into a me e.g., organid d keep una protective rials (e.g., p RAGE this prodi- itional prote <u>soap and</u> cation (e.g. ay from inco- place when <u>soap and</u> (cation (e.g. a) for a so place when (cation (e.g. a) for a so place when (cation (e.g. a) for a so place when (cation (p material tal or plas cs such as authorized equipmen plastic bro INFOF Iuct. Con ective equ I warm wal ., local exh compatible n not in use SONA NOHSC ES-STEL NF sufficient v vapors or r g., sink, sa pical circu	Sweep u tic containes soil) away personnel t including oms, shove RMATIC tents unde ipment is n ter. aust ventil- e substance so ES-PEAK NF when this p mist genera afety showe mistances cory protect pregulation	p matel er. from sp out of ; respira els, dus DN er press eccessal ation, fa es. Pro TEC1 PEL PEL NA roduct i ated froi er, eye- of use	rial usin rial usin area. S atory pro- tpans) a sure. H ry. Use ans) awa tect cor FION STEL NA s in use m the ha wash sta or hance eeded, a Canad	g non-sp y upwind Stop spill btection : and place Handle a chemica ay from h ntainers f IDLH NA e. Use lo andling o ation). Jling. In use only lian CAS	arking ma and away or releas as conditi e into a me s to avoid l goggles i eat and di rom physi OTHER cal or gen f this prod	terials (e. r from spil e if it can ons warra etal or plas d punctur f eye cont rect sunlig ical dama eral exhau
7.1 7.2 7.3 8.1 8.2 8.3 8.3	Storage & Handling: Special Precautions: Exposure Limits: ppm (mg/m ³) Ventilation & Engineering Controls:	plastic brooms, shovels, dustp Large Spills: Keep incompati release. Isolate immediate h done with minimal risk. Wea Sweep up material using non- container. Sweep up material using non- container. 7. HANDLIN Do not eat, drink or smoke container(s). When used as in is possible. Wash unintention Use and store in a cool, dry, w Avoid temperatures above 12 To avoid unintentional sprayin Clean all spills promptly. 8. EXPOSURE COO CHEMICAL NAME(S) DIFLUOROETHANE (R-152A) General mechanical (e.g., fans ventilation to effectively remov appropriate decontamination of No special respiratory protec instances where dusts of this protection authorized by 29 CF Standard Z94.4-93 and app	Ans) and place be materials (e azard area and ar appropriate p sparking mater AG & STO when handling tended, no addi al residues with ell-ventilated loc 0 °F. Keep awa g keep cap in p ACGIH TLV STEL 1000 NA s) or natural ver e and prevent b equipment is av tion is required product are ger R §1910.134, a iicable standar	^a to soak up e into a me e.g., organid d keep una protective rials (e.g., p RAGE this prod itional prote <u>soap and</u> cation (e.g. ay from inco olace when <u>& PER</u> <u>ES-TWA</u> <u>1000</u> ntilation is s buildup of v <u>railable (e.g.</u> d under typ nerated, ar applicable (a.g. funder typ d under typ restable (a.g. funder typ funder typ restable (a.g. funder typ funder ty	р material etal or plas cs such as authorized equipmen plastic bro INFOF luct. Con ective equ l warm wal compatible not in use SONA NOHSC ES-STEL NF sufficient v vapors or r g., sink, sa pical circu uS. State nadian Pr	Sweep u tic containes oil) away personnel t including oms, show RMATIC tents under ipment is n ter. naust ventile e substance ES-PEAK NF when this p mist genera fety showe ory protect regulation ovinces, E	p matel er. from sp out of r respira els, dus DN er press eccessal ation, fa es. Pro TEC1 <u>PEL</u> <u>NA</u> roduct i ated froi er, eye-v of use tion is n the EC mer	rial usin iill. Stay area. S atory pro- tpans) a sure. H ry. Use mns) awa tect cor FION OSHA STEL NA s in use m the have wash stay or hand, e Canado nber St	g non-sp y upwind Stop spill btection a and place Handle a chemica ay from h ntainers f IDLH NA LUSE lo andling o ation). In use only lian CAS tates, or	arking ma and away or releas as conditi e into a me s to avoid l goggles i eat and di from physi OTHER	terials (e. r from spill e if it can ons warra etal or plas d punctur f eye cont rect sunlig ical damag eral exhau



SAFETY DATA SHEET

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		8. EXPOSURE CONTROLS & PERSONAL PROTECTION
8.6	Body Protection:	No apron required when handling small quantities. When handling large quantities (e.g., ≥ 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:	Aerosol. Light red liquid.
9.2	Odor:	Ethereal/hydrocarbon odor
9.3	Odor Threshold:	NA
9.4	pH:	NA
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling	-25 °C @ 760 mmHg
9.7	Range: Flashpoint:	NA
9.8	Upper/Lower Flammability	LEL: 4.32 % v/v - UEL: 20.2 % v/v (for 1,1-Difluoroethane)
9.9	Limits: Vapor Pressure:	
9.9	Vapor Density:	74 psig (5.1 bar) @ 20 °C 1.1-Difluoroethane: 2.3 (air = 1.0)
9.11	Relative Density:	0.884 – liguid concentrate
9.12	Solubility:	Not soluble in water
9.13	Partition Coefficient (log Pow):	NA
9.14	Autoignition Temperature:	1,1-Difluoroethane: 455 °C (851 °F)
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	5.4-7.5 cSt @ 104 °F
9.17	Other Information:	VOC: 1,1-Difluoroethane - exempt per 40 CFR 51.100
		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.
10.4	Conditions to Avoid:	Open flames, sparks, high heat, incompatible substances and direct sunlight.
10.5	Incompatible Substances:	Avoid extreme heat and ignition sources. Store away from oxidizers.
		11. TOXICOLOGICAL INFORMATION
11.1	Routes of Entry:	Inhalation: YES Absorption: YES Ingestion: YES
11.2	Toxicity Data:	This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, is available for some of the components of the product.
11.3	Acute Toxicity:	Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea.
11.4	Chronic Toxicity:	This material may aggravate any pre-existing skin condition (e.g., dermatitis).
11.5	Suspected Carcinogen:	No.
11.6	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 cause teratogenic effects in humans.
44.7	Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.
11.7 11.8	Irritancy of Product:	The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.
11.0	Biological Exposure Indices: Physician Recommendations:	NE
11.5	r nysiolan noooninchuauolis.	Treat symptomatically.
		12. ECOLOGICAL INFORMATION
12.1	Environmental Stability:	There is no specific data available for this product.
12.2	Effects on Plants & Animals:	There is no specific data available for this product.
12.3	Effects on Aquatic Life:	There is no specific data available for this product.
		13. DISPOSAL CONSIDERATIONS
13.1	Waste Disposal:	Disposal should be in accordance with local, state, provincial and federal regulations
13.2	Special Considerations:	NA



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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 and the CTDGR.						
14.1	49 CFR (GND):	UN1950, AEROSOLS, 2.2 (LTD QTY, IP VOL ≤ 1.0 L)	\diamond			
14.2	IATA (AIR):	UN1950, AEROSOLS, NON-FLAMMABLE, 2.2 (LTD QTY, IP VOL ≤ 0.50 L); or ID8000, CONSUMER COMMODITY, ORM-D (IP VOL ≤ 0.82 L)				
14.3	IMDG (OCN):	UN1950, AEROSOLS, 2.2 (LTD QTY, IP VOL ≤ 1.0 L)	\diamond			
14.4	TDGR (Canadian GND):	UN1950, AEROSOLS, 2.2 (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, 2.2 (LTD QTY, IP VOL ≤ 1.0 L)	\diamond			
14.6	SCT (MEXICO):	UN1950, AEROSOLES, 2.2 (CANT. LTDA., IP VOL ≤ 1.0 L)	\diamond			
14.7	ADGR (AUS):	UN1950, AEROSOLS, 2.2 (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 Threshold Planning Quantity:	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 or are otherwise exempt.
15.4	CERCLA Reportable Quantity (RQ):	NA
15.5	Other Federal Requirements:	NA
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the HPR and the SDS contains all the information required by the HPR. 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 D2B (Other Toxic Effects).
15.7	State Regulatory Information:	Difluoroethane can be found on the following state criteria lists: Massachusetts Hazardous Substances List (MA) and New Jersey Right-to-Know List (NJ). No other 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 (MA), 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 or other reproductive harm. For more information go to www.P65Warnings.ca.gov
15.8	Other Requirements:	NA



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		16. OTHER INFO	RMATION			
16.1	Other Information:	WARNING! PRESSURIZED CONTAINER; MAY BURST IF HEATED. CAUSES EYE IRRITATION. Keep away from heat, hot surface, sparks, open flames, and other ignition sources. No smoking. No not pierce or burn, even after use. Wash hands and exposed skin areas with soap and warm water thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical help. Protect from sunlight. Do not expose to temperatures exceeding 50 °C (122 °F). KEEP LOCKED UP AND 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/	EADORATORIES, INC.			
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	Consulting			



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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 N	. Chemical Abstract Service Number		
EXPOSURE LIMITS IN AIR:			

ACGIH	American Conference on Governmental Industrial Hygienists
C	Ceiling Limit
ES	Exposure Standard (Australia)
IDLH	Immediately Dangerous to Life and Health
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:

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

HMIS-III HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

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

PERSONAL PROTECTION RATINGS:

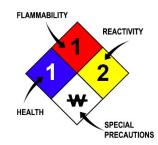
Α	6		G			
В			Н			8
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Е			κ	9)	
F			X		r supervisor o lling direction	
Sa	Safety Glasses Splash Goggles			e Shield & tive Eyewear	Glove	es
	Boots	Synthetic Apron		tive Clothing Full Suit	Dust Res	pirator
Full Face Respirator				ull Face	Airline Hoo or SC	
отн	ER STAND	Mask Respirator		spirator	or SC	DA
	ML	Maximum Limit				
mg/m3 milligrams per cubic meter			ər			
NA Not Available						
ND Not Determined						
	NE	Not Established				
	NF	Not Found				
	NR	No Results				
	ppm	parts per million				
	SCBA	Self-Contained Breathing	a Apparatus			
ΝΔΤ		PROTECTION ASSO				

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:			
Autoignition	Minimum temperature required to initiate combustion in air with no other		
Temperature	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 Slight Hazard

	oliyin hazaru
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
W	Use No Water
OX	Oxidizer
TREFOIL	Radioactive



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 _{lo}	Lowest dose to cause a symptom					
TCLo	Lowest concentration to cause a symptom					
TD _{lo} , LD _{lo} , & 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

RECOLMON					
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				
NOHSC	National Occupational Health and Safety Commission (Australia)				
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)				
HMIS-III	National Paint & Coatings Association Hazardous Materials Identification System				

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

0	۲	٨	$\textcircled{\begin{subarray}{c} \end{subarray}}$	1	۲		(R)
Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

EC (67/548/EEC) INFORMATION:

		×	¥,		₽ X	★	★
с	E	F	N	0	т	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

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