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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards SDS Revision: 4.0 SDS Revision Date: 6/2/2016 1. PRODUCT & COMPANY IDENTIFICATION 1.1 Product Name: DEOXIT® GOLD G-SERIES, 100% SPRAY, (P/N G100S-2), 57 g 1.2 Chemical Name NA 1.3 Synonyms NA DeoxIT[®] Gold G-Series, 100% Spray, (P/N G100S-2), 57g 1.4 Trade Names: 1.5 Product Uses & Restrictions: Conditioner, enhancer for plated and gold plated electronic contacts & connectors 1.6 Distributor's Name: CAIG Laboratories, Inc. 12200 Thatcher Court, Poway, CA 92064-6876 USA Distributor's Address: 1.7 1.8 Emergency Phone: CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN XXXXX) 1.9 Business Phone / Fax: +1 (800) 224-4123 2. HAZARDS IDENTIFICATION 2.1 Hazard Identification: This product is classified as a HAZARDOUS SUBSTANCE and as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia). WARNING! PRESSURIZED CONTAINER; MAY BURST IF HEATED. CAUSES EYE **IRRITATION.** Classification: Aerosols 3; Eye Irrit. 2B Hazard Statements (H): H229 - Pressurized container; may burst if heated. H320 - Causes eye irritation. Precautionary Statements (P): P210 - Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking. P251 - Do not pierce or burn, even after use. P264 - Wash hands and exposed skin areas with soap and warm water thoroughly after handling. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 - If eye irritation persists: get medical advice/attention. P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C (122 °F). P501 - Dispose of contents/container to a licensed treatment, storage or disposal facility (TSDF) 3. COMPOSITION & INGREDIENT INFORMATION EXPOSURE LIMITS IN AIR (mg/m³) ACGIH NOHSC OSHA ppm ppm ppm ES. ES-ES-EINECS No TLV STEL PEL STEL IDLH OTHER CHEMICAL NAME(S) CAS No. RTECS No. % TWA STEL PEAK K14100000 200-866-1 1000 75-37-6 60-100 NA 1000 NF NF NA NA NA 1,1-DIFLUOROETHANE (R-152A) Flam. Gas 1; Liq. Gas; H220, H280 PROPRIETARY – TRADE SECRET ≤ 20.0 NA NA NF NF NF NA NA NA DEOXIT[®] Gold G-SERIES, G100L NON-HAZARDOUS 4. FIRST AID MEASURES 4.1 First Aid: If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk Ingestion: IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give water or milk to an unconscious person. Contact the nearest Poison Control Center or local emergency number. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed. Eyes: Splashes are not likely; however, if product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes lifting upper and lower lids, occasionally. If irritation persists repeat flushing. Get medical attention. Skin: Wash thoroughly with soap and water. In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Treat for frostbite if necessary, be gently warming affected area. If irritation, redness or swelling persists, contact a physician immediately. Remove victim to fresh air at once. If breathing difficult, administer oxygen. If breathing stops give Inhalation: artificial respiration. Keep person warm, quiet and get medical attention 4.2 Effects of Exposure: If product is swallowed, may cause nausea, vomiting and/or diarrhea. Ingestion: Moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and Eyes: watering. May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in Skin: some sensitive individuals. Inhalation: None expected. 4.3 Symptoms of Overexposure: Ingestion: Nausea, intestinal discomfort, vomiting and/or diarrhea. Eyes: Overexposure in eyes may cause redness, itching and watering. Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. Frostbite <u>Skin</u>: 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



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SAFETY DATA SHEET

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		4. FIRS	T AID ME	ASUR	ES – c	ont'd					
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:										1
	riggiarated by Exposition	target organs (eyes, skin, and	respiratory sys	stem).		FL.		IMABILITY			2
						PH	YSICA	L HAZ	ARDS		2
						PR	OTEC	FIVE E	QUIPM	ENT	В
						EYE	ES	SKIN			
		5. FIF	REFIGHTI	NG ME	ASUR	ES					
5.1	Fire & Explosion Hazards:	Level 1 Aerosol (NFPA 30B).					20 °F.	Cool un	involve	t	
		containers to prevent possib aerosols are bursting, stay cl decompose at high temperatu	le bursting. À ear until bursti	erosols m ng is com	nay be pro plete. If i	ojectile haz nvolved in	ards wh a fire, t	nen burs his prod	sting. I	f	
5.2	Extinguishing Methods:	Water, Foam, CO ₂ , Dry Chem	ical. Use wate	er spray to	cool unop	ened conta	iners.				
5.3	Firefighting Procedures:	Fight fires as for surrounding breathing apparatus (pressur- after the fire is out. Use wate fire upwind. Avoid spraying of Prevent runoff from fire contr any natural waterway. Firefig pressure self-contained breat decomposition products and co	e-demand) and er spray to coo water directly in ol or dilution fi ghters must us hing apparatus	d full prote ol fire-exponto nto storag rom enteri se full bun s to protect	ective gear osed surface e containe ing sewers ker gear in	r. Keep c ces and to ers because s, drains, d ncluding N	ontainer protect of dan rinking IOSH-ap	rs cool u persona ger of b water su oproved	until we al. Figh ooil-over upply, o positive	II t r r	0
		6. ACCIDE	ENTAL RE	ELEAS	E MEA	SURES	5				
6.1 7.1 7.2	7.1 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.								rge spills. combustible isposal. Do ng materials ay from spill e if it can be ons warrant. o a metal or d puncturing oggles if eye at and direct		
7.3	Special Precautions:	Clean all spills promptly.									
		8. EXPOSURE CO	NTROLS	& PER	SONA	L PRO	TECT	ION			
8.1	Exposure Limits:		ACGIH		NOHSC		<u> </u>	OSHA		OTHER	
	ppm (mg/m ³)		TLV STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH		
8.2	Ventilation & Engineering Controls:	DIFLUOROETHANE (R-152A) General mechanical (e.g., fa exhaust ventilation to effectiv product. Ensure appropriate of	vely remove a	nd preven	t buildup	of vapors	or mist	generat	ted fron	n the han	dling of this
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.										



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8. EXPOSURE CONTROLS & PERSONAL PROTECTION							
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., \geq 1 gallon (3.8 L)), wear rubber, nitrile or impervious plastic gloves.					
8.6	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. PHYSICAL & CHEMICAL PROPERTIES						
9.1	Appearance:	Aerosol. Light yellow 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 Range:	-25 °C @ 760 mmHg					
9.7	Flashpoint:	NA					
9.8	Upper/Lower Flammability Limits:	1,1-Difluoroethane: LEL: 4.32 % v/v / UEL: 20.2 % v/v					
9.9	Vapor Pressure:	74 psig (5.1 bar) @ 20 °C					
9.10	Vapor Density:	1,1-Difluoroethane: 2.3 (air = 1.0)					
9.11	Relative Density:	0.870 – liquid 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					
11.3	Acute Toxicity:	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.					
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.					
	Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.					
11.7	Irritancy of Product:	The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.					
11.8	Biological Exposure Indices:	NE					
11.9	Physician Recommendations:	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.					



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13. DISPOSAL CONSIDERATIONS

 13.1
 Waste Disposal:
 Disposal should be in accordance with local, state, provincial and federal regulations

 13.2
 Special Considerations:
 NA

		14. TRANSPORTATION INFORMATION					
		nber, proper shipping name, hazard class & division, packing group) is shown for each mode e required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.	of transportation. Additional				
14.1	49 CFR (GND):	49 CFR (GND): UN1950, AEROSOLS, 2.2 (LTD QTY, IP VOL \leq 1.0 L); or CONSUMER COMMODITY, ORM-D (IP VOL \leq 0.5 L) – until 12/31/2020					
14.2	IATA (AIR):	UN1950, AEROSOLS, NON-FLAMMABLE, 2.2 (LTD QTY, IP VOL \leq 0.5 L); or ID8000, CONSUMER COMMODITY, ORM-D (IP VOL \leq 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.					
15.4	CERCLA Reportable Quantity (RQ):	NA					
15.5	Other Federal Requirements:	This product complies with the appropriate sections of the Food and Drug Administration's 2 (Cosmetics).	21 CFR Subchapter G,				
15.6							
15.7	5.7 State Regulatory Information: Diffuoroethane 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 (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).						
	Other Requirements:	NA					



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		16. OTHER INFORMATION								
16.1	16.1 Other Information: WARNING! FLAMMABLE AEROSOL. PRESSURIZED CONTAINER; MAY BURST IF HEATED. CAUSES EY IRRITATION. Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking. Do not spray on open flames or other ignition source. Do not pierce or burn, even after use. Wash hands and exposed sk areas with soap and warm water thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minute: Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medic advice/attention. Protect from sunlight. Do not expose to temperatures exceeding 50 °C (122 °F). Dispose of contents/container to a licensed treatment, storage or disposal facility (TSDF). KEEP LOCKED UP AND OUT OR 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

EXPOSURE LIMITS IN AIR:

American Conference on Governmental Industrial Hygienists
Ceiling Limit
Exposure Standard (Australia)
Immediately Dangerous to Life and Health
U.S. Occupational Safety and Health Administration
Permissible Exposure Limit
Short-Term Exposure Limit
Threshold Limit Value
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.

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	

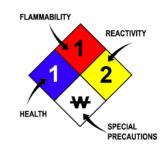
PERSONAL PROTECTION RATINGS:

Α			G						
В			Н			E,I			
С			I						
D	B		J			Î			
Е			К	() ()					
F			X			ervisor or directions	SOPs for S.		
Sa	afety Glasse	es Splash Goggles		e Shield & tive Eyewo		Glove	s		
	Boots	Synthetic Apron		Protective Clothing & Full Suit					
Full I	Face Respire	rator Dust & Vapor Half- Mask Respirator		Full Face Airline Hood/Max Respirator or SCBA					
отн	ER STAN	DARD ABBREVIATION							
	ML	Maximum Limit							
mg/m3 milligrams per cubic meter									
NA Not Available									
	ND	Not Determined							
	NE	Not Established							
	NF								
NR No Results									
	ppm	parts per million							
	SCBA Self-Contained Breathing Apparatus								
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA									

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:						
Autoignition	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 w						
explode or ignite in the presence of an ignition source						
UEL Upper Explosive Limit - highest percent of vapor in air, by volume, that						
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 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 _{Io} , LD _{Io} , & LD _o or	Lowest dose (or concentration) to cause lethal or toxic effects
TC, TC _o , LC _{lo} , & 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					
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:

\bigcirc	۲		$\textcircled{\begin{subarray}{c} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	(]	۲		Ŕ			
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:

		N	¥	0	*	×	×
с	E	F	Ν	0	т	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

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

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