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SAFETY DATA SHEET

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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards SDS Revision: 3.0 SDS Revision Date: 2/2/2015 1. PRODUCT & COMPANY IDENTIFICATION Product Name: CAIKOTE[™] 44, (P/N CK44) Chemical Name: NA Synonyms CaiKote[™] 44; PN CK44 Trade Names: CaiKote[™] 44, 1 gram (Part No. K-CK44-1), CaiKote[™] 44, 226 grams (Part No. CK-44-8) Product Uses & Restrictions: Conductive Silver Coating Distributor's Name: CAIG Laboratories, Inc. 12200 Thatcher Court, Poway, CA 92064-6876 USA Distributor's Address: Emergency Phone: CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN XXXXX) Business Phone / Fax: +1 (800) 224-4123 2. HAZARDS IDENTIFICATION This product is classified as a HAZARDOUS SUBSTANCE but NOT as DANGEROUS GOODS Hazard Identification: according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia). WARNING! CAUSES EYE IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. Classification: Eye Irrit 2; Skin Irrit. 1B Hazard Statements (H): H220 – Causes eye irritation. H317 – May cause an allergic skin reaction. Precautionary Statements (P): P261 - Ávoid breathing dust. P264 - Wash thoroughly after handling. P280 - Wear protective gloves. P302+P352 - IF ON SKIN: Wash with plenty of water. P333+P313 - If skin irritation or rash occurs get medical advice/attention. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P321 - Specific treatment see this container label. P362+P364 -Take off contaminated clothing and was it before reuse. P337+P313 - If eye irritation persists: Get medical advice/attention. P501 - Dispose of contents/container to licenses treatment, storage and disposal facility (TSDF). 3. COMPOSITION & INGREDIENT INFORMATION EXPOSURE LIMITS IN AIR (mg/m³) ACGIH NOHSC OSHA ppm ppm ppm ES-ES-ES-STEL STEL CAS No. RTECS No. TLV PEL IDLH OTHER CHEMICAL NAME(S) EINECS No. % TWA STEL PEAK 7440-22-4 VW350000 231-131-3 40-70 DUST 0.1 NA 0.01 NF NF NA NA 10 SILVER Ff5250100 7440-44-0 231-153-3 15-40 NA NA NF NF NF NA NA NA CARBON 1119-40-0 NA 214-277-2 15-40 NA NA NF NF NF NA NA NA DIMETHY GLUTARATE 106-65-0 WM6765000 203-419-9 10-30 NA NA NF NF NF NA NA NA DIMETHYL SUCCINATE NA NA NA 627-93-0 AV1645000 211-020-6 < 10.0 NA NA NF NF NF DIMETHYL ADIPATE NA NA < 10.0 NA NA NF NF NF NA NA NA NA PROPRIETARY RESINS 4. FIRST AID MEASURES If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk First Aid: 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. Wash thoroughly with soap and water. In case of contact, immediately flush skin with plenty of water for at Skin: least 15 minutes. 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. Effects of Exposure: Ingestion: If product is swallowed, may cause nausea, vomiting and/or diarrhea. Moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and Eyes: watering. Skin: May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in

some sensitive individuals.

None expected.

Inhalation:



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SDS Revision: 3.0

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4.3	Symptoms of Overexposure:	Indection	4. FIRS									
4.5	Symptoms of Overexposure.	<u>ingooden</u> indeeda, incontant diecontent, ferniang and/er diarried										
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		<u>Skin</u> :	Symptoms of sl like symptoms. individuals.									
1.4	Acute Health Effects:		when used as s of vapors can o							ted area	as. Addi	tionally, hi
1.5	Chronic Health Effects:	Non-irritating	when used as c ce skin sensitiza	lirected. C)verexposu	e may trigg	er asthma-	like syn	nptoms		e sensitiv	e individua
4.6	Target Organs:	Eyes, Skin.			Spiratory Hy	persensitivi	ty. 1 0331010	ancigi				
4.7	Medical Conditions		lermatitis, other	skin cond	itions, and	disorders d	of the HE	ALTH				1
	Aggravated by Exposure:		(eyes, skin, and						BILITY			1
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5.1	Fire & Explosion Hazards:		s not flammable to form toxic gas	. However	, if involved			nay dec	compose	e at high	n	
5.2	Extinguishing Methods:		, CO ₂ , Dry Che			nitted). Us	e water s	oray to	cool u	nopeneo	k	
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to overexposed aquatic life.

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	8. EXPOSURE CONTROLS & PERSONAL PROTECTION – cont'd				
8.4	Eye Protection:	Avoid eye contact. Wear splash proof goggles or equivalent eye protection (ANSI Z87). Safety glasses need to be used when handling or using this product.			
8.5	Hand Protection:	Impermeable gloves required. May cause skin irritation in some sensitive individuals. When handling 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

		5. THIORAE & CHEMICAE I NOT ENTIED
9.1	Appearance:	Thick black silver colored paste
9.2	Odor:	Sweet odor
9.3	Odor Threshold:	NA
9.4	pH:	NA
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	196-212 °C (388-413 °F)
9.7	Flashpoint:	100 °C (212 °F)
9.8	Upper/Lower Flammability Limits:	NA
9.9	Vapor Pressure:	0.10 mm Hg @ 20 ℃
9.10	Vapor Density:	NA
9.11	Relative Density:	NA
9.12	Solubility:	Negligible
9.13	Partition Coefficient (log Pow):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	NA
9.17	Other Information:	NVC 60-70%
		10. STABILITY & REACTIVITY
10.1	Stability:	Stable under normal conditions; unstable with heat or contamination.
10.2	Hazardous Decomposition Products:	Oxides of carbon (CO, CO ₂).
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.
	1	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 and is not presented in this document.
11.3	Acute Toxicity:	Moderate irritation to eyes and skin near affected areas.
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 are no specific data available for this product.
12.3	Effects on Aquatic Life:	There are no specific data available for this product; however, very large releases of this product may be harmful or fatal



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	13. DISPOSAL CONSIDERATIONS				
13.1	Waste Disposal:	Products covered by this MSDS, in their original form, when disposed as waste, are considered non hazardous waste according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with local, state and federal regulations. Dispose of in accordance with federal, state and local regulations.			
13.2	Special Considerations:	The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state, federal and provincial regulations.			

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):
 NOT REGULATED

14.2	IATA (AIR):	NOT REGULATED
14.3	IMDG (OCN):	NOT REGULATED
14.4	TDGR (Canadian GND):	NOT REGULATED
14.5	ADR/RID (EU):	NOT REGULATED
14.6	SCT (MEXICO):	NOT REGULATED
14.7	ADGR (AUS):	NOT REGULATED

15. REGULATORY INFORMATION 15.1 SARA Reporting This product contains Silver a substance subject to SARA Title III, section 313 reporting requirements. Requirements 15.2 SARA Threshold Planning There are no specific Threshold Planning Quantities for the components of this product. Quantity: 15.3 TSCA Inventory Status: The components of this product are listed on the TSCA Inventory. 15.4 CERCLA Reportable Quantity Silver: 454 kg (1,000 lbs.) (RQ): 15.5 Other Federal Requirements: This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR Subchapter G, (Cosmetics) 15.6 Other Canadian Regulations: This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List. 15.7 State Regulatory Information: Silver is found on the following state criteria list: 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). 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) 15.8 Other Requirements: The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC: Irritant (Xi) Risk Phrases: (R) 36/38 - Irritating to eyes and skin. Safety Phrases: (S) 2-24-25-36-45 - Keep out of reach of children. Avoid contact with skin. Avoid contact with eyes. Wear suitable protective clothing. In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).



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		16. OTHER INFO	ORMATION
16.1	Other Information:	Keep out of reach of children. Avoid contact with	Y CAUSE AN ALLERGIC SKIN REACTION. Use only as directed. th skin. Avoid contact with eyes. Wear suitable protective clothing. In cal advice immediately (show the label where possible). If skin irritation KED UP AND OUT OF REACH OF CHILDREN.
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.	
16.3	Disclaimer:	government regulations must be reviewed for Laboratories, Inc.'s knowledge, the information accuracy, suitability or completeness is not gual provided. The information contained herein rela	OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other applicability to this product. To the best of ShipMate's & CAIG contained herein is reliable and accurate as of this date; however, ranteed and no warranties of any type, either expressed or implied, are ates only to the specific product(s). If this product(s) is combined with be considered. Data may be changed from time to time. Be sure to
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/	CARISE LABORATORIES, 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	ShipMate Dangerous Goods Training & 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 No. 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:

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	

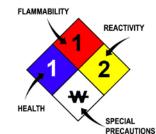
PERSONAL PROTECTION RATINGS:

A Image: Second Sec								
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Image: Construct of the construction of the constructio	в			Н	8		E 1	
E Image: Construct on the construction of the construction o	С			I				
F Image: Construct on the construction of the construction o	D	B		J			Î	
Image: Constraint of the constraint	Е			κ	Î			
Safety Glasses Splash Goggles Protective Eyewear Gloves Boots Synthetic Apron Protective Clothing & Full Suit Dust Respirator Full Face Respirator Dust & Vapor Half- Mask Respirator Full Suit Dust Respirator OTHER STANDARD ABBREVIATIONS: Maximum Limit Image: Clove Stable Stablished Image: Clove Stablished NA Not Determined Image: Clove Stablished Image: Clove Stablished NE Not Found Image: Clove Stablished Image: Clove Stablished NR No Results Image: Clove Stablished Image: Clove Stablished	F			X				
Boots Synthetic Apron & Full Suit Dust Respirator Full Face Respirator Dust & Vapor Half- Mask Respirator Full Face Respirator Airline Hood/Mask or SCBA OTHER STANDARD ABBREVIATIONS: Musimum Limit State State ML Maximum Limit State State NA Not Available State State ND Not Determined State State NF Not Found Not Results State NR No Results State State ppm parts per million State State	Sa	fety Glasse	es Splash Goggles				Glove	es
Full Face Respirator Mask Respirator Respirator or SCBA OTHER STANDARD ABBREVIATIONS: ML Maximum Limit mg/m3 milligrams per cubic meter NA Not Available ND Not Determined NE Not Established NF Not Found NR Ne esults ppm parts per million		Boots	Synthetic Apron			ing I	Dust Res	birator
ML Maximum Limit mg/m3 milligrams per cubic meter NA Not Available ND Not Determined NE Not Established NF Not Found NR No Results ppm parts per million	Full I	Face Respire				Ai		
mg/m3 milligrams per cubic meter NA Not Available ND Not Determined NE Not Established NF Not Found NR No Results ppm parts per million	отн	ER STAN	DARD ABBREVIATION	S:				
mg/m3 milligrams per cubic meter NA Not Available ND Not Determined NE Not Established NF Not Found NR No Results ppm parts per million		МІ	Maximum Limit					
NA Not Available ND Not Determined NE Not Established NF Not Found NR No Results ppm parts per million								
NE Not Established NF Not Found NR No Results ppm parts per million								
NF Not Found NR No Results ppm parts per million		ND	Not Determined					
NR No Results ppm parts per million		NE	Not Established					
ppm parts per million								
		NR						
SCBA Self-Contained Breathing Apparatus								
		SCBA	Self-Contained Breathing A	pparatus				

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		
1	Slight Hazard		
2	Moderate Hazard		
3	Severe Hazard		
4	Extreme Hazard		
ACD	Acidic		
ALK	Alkaline		
COR	Corrosive		
₩	Use No Water		
OX	Oxidizer		
TREFOIL	Radioactive		



TOXICOLOGICAL INFORMATION:

	PRECACITIONS
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 _{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
тс	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:

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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

EC (67/548/EEC) INFORMATION:

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С	E	F	Ν	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