

Section 1 – MANUFACTURER INFORMATION

Manufacturer	IMS Company	Emergency Phone	800-424-9300
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	Chagrin Falls, OH 44023-5296	Prepared/Revised	October 21, 2004
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Products:

- 131405** Non-Flammable 3% SILICONE SPRAY-A4 Mold Release
- 131406** Non-Flammable 1% SILICONE MIST-A4 Mold Release

Product Use: To help plastic parts release from a metal mold in processes such as injection molding.

Hazardous Material Information System

Health2*	Flammability0	Reactivity 1	Protection X
* Chronic (Accumulates)			
0 Normal use Material	0 Will Not Burn	0 Stable	X = Consult the MSDS and your supervisor for your special workplace need
1 Slight Hazard (temporary)	1 Possible to Burn	1 Unstable if Heated	
2 Health Affected (lengthy)	2 Burns if Heated	2 Violent Chemical Change	
3 Extreme Danger	3 Easily Burns	3 Shock and Heat Sensitive	
4 Severe or Fatal	4 Very Easily Burns	4 May Explode	

NOTE The HMIS may not be enough hazard information for this chemical in all workplaces. The HMIS system requires employee training about the system and about information in this MSDS.

Section 2 – INGREDIENTS INFORMATION

Chemical/Common Name	CAS-Number	%	OSHA PEL ppm	OSHA STEL ppm	ACGIH TLV ppm	ACGIH OTHER STEL ppm
Trichloroethylene	79-01-6	40 to 60	50	200	50	100
1,1,1,2 Tetrafluoroethane (HFC-134a)	811-97-2	40 to 60	NE	NE	NE	NE 1000 ⁽¹⁾
Dimethylpolysiloxane ⁽²⁾	63148-62-9	0.1 to 10	NE	NE	NE	NE ⁽³⁾ 5 mg/m ³

⁽¹⁾ Manufacturer's suggested maximum exposure limit (AEL) and WEEL (AIHA) is 1000 ppm

⁽¹⁾ Approved for use when molding food packaging per 21 CFR 181.28

⁽³⁾ In mist applications we consider it good practice to observe a limit of 5 mg/m³ TWA.

Section 3 – HAZARDS IDENTIFICATION

Acute and chronic inhalation hazard. Pressurized containers. Causes slippery floors, which can cause slips and falls. The trichloroethylene component attacks some plastics when in direct contact.

Emergency Overview: Colorless liquid. Irritating odor. Toxic fumes released in fire situations. Harmful if inhaled. Can cause death if too much is breathed. If accidental release, clear personnel from area and wear protective equipment.

Health Effects: Acute and Chronic

Inhalation: Minimal anesthetic or irritant effects may be seen around 200-400 ppm. Dizziness or drunkenness may be seen rapidly at 1000 to 2000 ppm. Higher levels can cause unconsciousness or death. Long-term exposure to silicone mist could cause chemical pneumonitis.

Ingestion: Single dose toxicity is low to moderate. If vomiting occurs, trichloroethylene could be aspirated into the lungs, which could cause chemical pneumonia and systemic effects.

Eyes: Liquid can cause temporary irritation with temporary corneal injury. Vapors can irritate eyes. Silicone can cause mild eye irritation, feeling like dust in the eyes.

Section 3 – HAZARDS IDENTIFICATION (continued)

Skin: Prolonged or repeated skin contact can cause irritation, defatting of skin, and dermatitis. Absorption of liquid through intact skin is possible, resulting in systemic effects.

Chronic: Chronic toxic effects in lab animals may indicate toxicity to humans. Avoid overexposure. Failure to do so could result in injury, illness, or even death. Chronic overexposures to trichloroethylene have caused liver toxic effects in experimental animals. Exposure can cause intolerance to alcoholic beverages.

Primary Routes Of Entry: Inhalation, Skin

Medical Conditions Aggravated By Exposure: Alcoholism, acute and chronic liver disease, rhythm disorders of the heart, neuritis, and other disorders of the nervous system.

Section 4 – FIRST AID PROCEDURES

Inhalation: Remove to fresh air if gross overexposure. If breathing is irregular, have trained personnel supply oxygen if it is available. If breathing is stopped, have trained personnel administer artificial respiration. If victim is unconscious, remove to fresh air and ****Get Medical Help at once****

Eye Contact: Flush eyes immediately with water for at least 15 minutes. Call a physician.

Skin Contact: Promptly flush area with water. Remove contaminated clothing and shoes. Wash exposed area with soap and water. Wash contaminated clothing before re-use.

Ingestion: Unlikely route of entry. Single dose toxicity is low to moderate. Do not induce vomiting unless directed by physician. If vomiting occurs, trichloroethylene could be aspirated into the lungs, which could cause chemical pneumonia and systemic effects.

****Note to Medical Personnel****

Because of increased risk of disturbances of cardiac rhythm (eliciting cardiac dysrhythmias), Catecholamine drugs (Epinephrine, Adrenaline) should be used only with special caution and only in situations of emergency life support and only as a last resort.

Section 5 – FIRE-FIGHTING MEASURES

Flash Point (Method Used).....None (TCC) Flammable Limits* LEL= 8.0 UEL=10.5 @ 77°F
Auto ignition temperaturenot determined (* for components with lowest LEL and highest UEL)

Extinguishing Media: Water, foam, dry chemical, and carbon dioxide -- because product is essentially non-flammable, media to control fire in surrounding materials is important.

Special Fire Fighting Procedures: Under fire conditions, irritating and/or toxic vapors, or gases could be present. At elevated temperatures, pressurized containers may burst, vent, or rupture. Use equipment or shielding to protect personnel against bursting, rupturing, or venting containers. Cooling with water streams may be helpful.

Unusual Fire and Explosion Hazards: Concentrated vapors can be ignited by high intensity ignition source. Firefighters should wear self-contained, positive-pressure breathing apparatus, due to thermal decomposition products, and should avoid skin contact.

Hazardous Decomposition Products: Not determined; however, carbon monoxide, carbon dioxide, halogens, halogen acids, carbonyl halides, oxides of silicon (SiO), formaldehyde, and possibly incompletely burned hydrocarbon products would be expected.

Section 6 – ACCIDENTAL RELEASE MEASURES

Avoid breathing vapors. Evacuate area and ventilate to reduce concentration of components below their exposure limits. Use protective equipment consistent with the situation. Pick up spilled liquid on absorbent material. If large release occurs indoors, turn off HVAC system to prevent vapors from contaminating entire building.

Section 7 – HANDLING AND STORAGE

Precautions to be Taken in Handling and Storage: Store all industrial chemicals away from food and beverages. Store below 120°F in cool, dry area, out of direct sunlight and away from strong oxidizers. Do not puncture or burn.

Maintenance Precautions and Other Precautions: Do not remove or deface label. Read and follow directions and cautions on the container label, and any accompanying literature. The trichloroethylene component will attack some plastics. Do not spray directly on plastics. Ensure enough ventilation to keep concentrated vapors from attacking plastics. Product can cause slippery surfaces. Clean up spills promptly. Monitor floors for slipperiness. Vapors are heavier than air and will collect in low, enclosed areas.

Section 8 – EXPOSURE CONTROLS – PERSONAL PROTECTION

General: If clothing is likely to be contaminated, wear polymer-coated apron or other body covering.

Ventilation: Local exhaust, or mechanical or special ventilation to maintain exposure limits.

NOTICE

This product contains methylpolysiloxanes, which when heated to temperatures above 300°F (150°C), in the presence of air, can form formaldehyde vapors. Formaldehyde is a potential cancer hazard, a known skin and respiratory sensitizer, eye and throat irritant, and an acute toxicant. Vapors irritate eyes, nose, and throat. Safe handling conditions may be maintained by keeping vapor concentrations within the OSHA permissible exposure limit for formaldehyde. (Note: Product does not contain formaldehyde).

Respiratory Protection: Generally not required if adequate ventilation is provided. If the exposure limit of the product or any of its components is exceeded, an approved organic vapor mask should be used (consult your safety equipment supplier). Above 1000 ppm, an approved self-contained breathing apparatus or airline respirator with full face-piece is required.

Protective Gloves: If prolonged or repeated contact is likely, wear solvent-resistant gloves.

Other Protective Equipment: If contact with the spray is likely, wear eye protection. Monogoggles or safety glasses with side shields and a face shield will provide protection in most situations. Do not wear contact lenses.

Other Engineering Controls: To determine exposure levels, perform monitoring. Eyewash station must be available. Monitor for formation of formaldehyde if the product will be used at temperatures above 300° F while exposed to air. Overspray is slippery and is difficult to fully remove from floors. Avoid overspray.

Work Practices: Do not use in confined or closed space. Ventilation must maintain the concentration of the product and its components below their exposure limits.

Hygienic Practices: Avoid contact with skin and avoid breathing vapors. Do not eat, drink, or smoke in work area. Wash hands before eating, drinking, or using restroom after using this or any chemical product.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity (Water = 1)> 1	Vapor Pressure (PSIG)..... 60 ± 20	Vapor Density (Air = 1).... > 1
Evaporation Rate (Ether)....Faster	Solubility in Water.....NIL	Melting point..... -99° F
% VOC by Volume.....49	% VOC by Weight.....55	

Appearance and Odor Information: Clear mist with the odor of chlorinated solvent (a mildly sweet odor) as dispensed from the spray system.

Section 10 – STABILITY AND REACTIVITY

Incompatibility (Materials to Avoid): Strong alkalis, oxidizers, and reactive metals (i.e. potassium, sodium, zinc, magnesium). Strong bases, may react with strong oxidizers. The trichloroethylene component attacks some plastics.

Conditions to Avoid for Polymerization: N/A

Is the Product Stable? Yes

Conditions to Avoid for Stability: Avoid contact with open flame, electric arcs, or other hot surfaces that can cause thermal decomposition. Avoid temperatures high enough to rupture container (>120° F).

Will Hazardous Polymerization Occur? No

Section 11 – TOXICOLOGICAL INFORMATION

COMPONENT	CARCINOGENICITY			ORAL TOXICITY	INHALATION TOXICITY
	IARC	NTP	ACGIH		
Trichloroethylene	yes, A2	suspect	no, A5	LD ₅₀ rat = 4920 mg/kg	LC ₅₀ rat 4hr = 12,500 ppm
1,1,1,2 Tetrafluoroethane	no	no	no	not available	ALC rat 4 hr = 567,000 ppm
Dimethylpolysiloxane.....	no	no	no	not available	not available

(Skin Toxicity: for trichloroethylene, the LD₅₀ rabbit for skin absorption is approximately 19,000 mg/kg.)

Section 12 – ECOLOGICAL INFORMATION

Not an ozone-depleting substance.

Section 13 – DISPOSAL CONSIDERATIONS

Consult Federal, State and Local regulations. Do not puncture or burn containers. Give empty, leaking or full containers to a disposal service equipped to handle and dispose of aerosol (pressurized) containers.

Section 14 – TRANSPORT INFORMATION

Ground (US DOT)	Consumer Commodity, Class ORM-D, ERG 126;	OR	Aerosols (Limited Quantity), Class 2.2, ERG 126
Air (IATA)	Consumer Commodity, Class 9, UN/ID No. ID 8000, Packing 1900, Authorization: Limited Quantity		
Vessel	Aerosols (Limited Quantity), Class 2 (2.2), UN No 1950, EmS No 2-13, ERG 126		

Section 15 – REGULATORY INFORMATION

CFC, Class 1, Class 2no FDA 21 CFR 181.28 yes USDA H-1, -2 yes

COMPONENT	CAS#	SARA 313	California PROP 65
Trichloroethylene	79-01-6	yes	This product contains a chemical known to the state of California to cause cancer

ADDITIONAL COMMENTS

CAUTION Intentional misuse of this chemical product, as with any industrial chemical, in contact with the body can be harmful or fatal. This includes such things as deliberately breathing, placing in mouth, swallowing, placing on skin, or any other body contact, or repeated, or continuous contact.

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