



# Contact Cleaner G3®

Contact Cleaner  
1632

## Introduction

Contact Cleaner G3®™ contains a patented formula designed specifically as the replacement for contact cleaners containing HCFC-141b. This precision blend is the choice for all types of cleaning of switches, relays, contact pads and other electrical connections. The innovative cleaner removes oils, greases, silicones, dirt and grim. Contact Cleaner G3® is the superior choice for all contact cleaning applications.

### Features / Benefits

- Non-Ozone Depleting
- Non-Flammable
- Safe on Most Plastics
- Rapidly Evaporating
- Zero Residue

## Chemical Components

1,2-transdichloroethylene.....	(156-60-5)	30-90%
1,1,1,3,3-Pentafluoropropane.....	(460-73-1)	10-50%
Ethyl Hydroxy Propionate.....	(97-64-3)	<1%
1,1,1,2-Tetraflouroethane (Propellant).....	(871-97-2)	10-20%
Carbon Dioxide (Propellant).....	(124-38-9)	1-10%

## Solvent Specifications

Snap Approved	Non-Flammable	Toxicity Exposure (ppm)	Relative Evaporation Rate TCE=1	Surface Tension (dyne/cm)	Cleaning Efficiency 1=Relative efficiency of 141b*	VOC Content (grams/liter)	ODP
Yes	Yes	200	0.75	21.0	1.33	1001	0

\*Cleaning Efficiency in compliance with MIL-PRF-29608(AS)

## Plastic Compatibility

Material	Compatibility	Material	Compatibility
ABS	Not Compatible	PMMA	Not Compatible
Nylon	Excellent	POM	Excellent
Lexan	Not Compatible	PP	Excellent
HDPE	Excellent	PS	Not Compatible
CDPE	Excellent	PTFE	Excellent
C. E. Phenolic	Excellent	PVC	Excellent

## Environmental Policy

---

Techspray® is committed to developing products to ensure a safer and cleaner environment. We will continue to meet and sustain the regulations of all federal, state and local government agencies.

## Licensing Restriction

---

The use of this product for cleaning is subject to U.S. Patent No. 5,902,412 and use is restricted by Tech Spray, L. P.

## Packaging and Availability

---

Contact Cleaner G3® is available in the following size:

1632-16S      16 Ounce Aerosol

# MATERIAL SAFETY DATA SHEET

**Finished Product**

MSDS Ref. No: ms1632A

## Contact Cleaner G3®

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Contact Cleaner G3®  
**GENERAL USE:** General Purpose Contact Cleaning  
**PRODUCT DESCRIPTION:** Contact Cleaner G3  
**PRODUCT CODE:** 1632/CAN/EUR-6S,10S,16S (Aerosols)

### MANUFACTURER

Techspray, L.P.

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt.%</u>	<u>CAS#</u>	<u>EINECS#</u>
1,2-transdichloroethylene (Trans)	30 - 90	156-60-5	205-860-2
1,1,1,3,3-Pentafluoropropane (HFC-245fa)	10 - 50	460-73-1	4191706
Ethyl Hydroxy Propionate	< 1	97-64-3	202-598-0
1,1,1,2-Tetrafluoroethane (HFC-134a)	10 - 20	811-97-2	223770
Carbon dioxide	1 - 10	124-38-9	

### EEC LABEL SYMBOL AND CLASSIFICATION



R20 - Harmful by inhalation.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE GUIDELINES:

#### OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

<u>Chemical Name</u>	<u>EXPOSURE LIMITS</u>					
	<u>OSHA PEL</u>		<u>ACGIH TLV</u>		<u>Supplier OEL</u>	
	<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>
1,2-transdichloroethylene (Trans)	<b>TWA</b>	NE <sup>[1]</sup>		200 ppm		NE
	<b>STEL</b>	NE		200 ppm		
1,1,1,3,3-Pentafluoropropane (HFC-245fa)	<b>TWA</b>	NONE		NONE		300 ppm
	<b>STEL</b>	NONE		NONE		
Ethyl Hydroxy Propionate	<b>TWA</b>	[2]				
	<b>STEL</b>	[3]				
1,1,1,2-Tetrafluoroethane (HFC-134a)	<b>TWA</b>	NE		NE		1,000 ppm <sup>[4]</sup>

#### OSHA TABLE COMMENTS:

1. NOT ESTABLISHED
2. NA=NOT APPLICABLE
3. NOT APPLICABLE
4. \* (AEL)=Acceptable Exposure Limit as established by the manufacture

**ENGINEERING CONTROLS:** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

#### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

**SKIN:** The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Viton, Solvex, Butyl, Buna, Neoprene.

**RESPIRATORY:** A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**OTHER USE PRECAUTIONS:** Emergency shower and eyewash facility should be in close proximity.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**ODOR:** Faint ethereal odor

**APPEARANCE:** Clear, Colorless liquid

**PERCENT VOLATILE:** 100

**VAPOR PRESSURE:** 17.8 psi at 20°C (68°F)

**EVAPORATION RATE:** < 1 (TCE=1)

**SPECIFIC GRAVITY:** 1.249 (water=1)

**(VOC):** 856.5 g/L (non-exempt VOC)

---

## 10. STABILITY AND REACTIVITY

**STABLE:** YES

**HAZARDOUS POLYMERIZATION:** NO

**CONDITIONS TO AVOID:** Stable. However, may decompose if heated.

**STABILITY:** Stable.

**POLYMERIZATION:** Will not occur.

**HAZARDOUS DECOMPOSITION PRODUCTS:** When exposed to high temperatures or flames this product may form hydrochloric and hydrofluoric acids - possibly carbonyl halides.

**INCOMPATIBLE MATERIALS:** Oxidizing agents, alkalies and bases.

---

## 11. TOXICOLOGICAL INFORMATION

### ACUTE

**EYES:** Moderately to severely irritating

**DERMAL LD<sub>50</sub>:** Mildly to moderately irritating.

**ORAL LD<sub>50</sub>:** Slight to very low toxicity.

**INHALATION LC<sub>50</sub>:** Slight to very low toxicity.

**TERATOGENIC EFFECTS:** Test results indicate this compound/mixture is not teratogenic.

---

## 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL DATA:** There is limited information available on the environmental fate and effects of this material. The primary environmental concern for release is the impact on aquatic and terrestrial species. Due care should be taken to avoid the accidental release of this material into the environment.

---

## 13. DISPOSAL CONSIDERATIONS

**FOR LARGE SPILLS:** Contaminated sawdust, vermiculite, or porous surfaces must be disposed of in a permitted hazardous waste management facility. Recovered liquids may be reprocessed or incinerated or must be treated in a permitted hazardous waste management facility.

**GENERAL COMMENTS:** Dispose of in a manner consistent with federal, state, and local regulations.

---

## 14. TRANSPORT INFORMATION

### DOT (DEPARTMENT OF TRANSPORTATION)

**PROPER SHIPPING NAME:** CONSUMER COMMODITY ORM-D

**PRIMARY HAZARD CLASS/DIVISION:** No classification

**UN/NA NUMBER:** N/A

**PACKING GROUP:** N/A

### AIR (ICAO/IATA)

**PROPER SHIPPING NAME:** CONSUMER COMMODITY ORM-D

**PRIMARY HAZARD CLASS/DIVISION:** 9

**UN/NA NUMBER:** ID8000

**PACKING GROUP:** N/A

### VESSEL (IMO/IMDG)

**PROPER SHIPPING NAME:** AEROSOLS IN LIMITED QUANTITIES OF CLASS 2

**PRIMARY HAZARD CLASS/DIVISION:** 2.2

**UN/NA NUMBER:** UN1950

**PACKING GROUP:** N/A

**IMDG NOTE:** Page 2102

### EUROPEAN TRANSPORTATION:

**ADR/RID HAZARD CLASSIFICATION:** 2.2

**ADR/RID ITEM NUMBER:** UN1950

---

## 15. REGULATORY INFORMATION

### UNITED STATES

#### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

**311/312 HAZARD CATEGORIES:** IMMEDIATE / DELAYED

**FIRE:** NO **PRESSURE GENERATING:** YES **REACTIVITY:** NO **ACUTE:** YES

**CHRONIC:** YES

**TITLE III NOTES:** Not listed as an Extremely Hazardous Substance.

#### CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

**CERCLA REGULATORY:** Releases to air, land, or water which exceed the RQ must be reported to the National Response Center [(800)424-8802] and to your Local Emergency Planning Committee.

**CERCLA RQ:** Trans-1,2-dichloroethylene is listed in Table 302.4 of 40 CFR Part 302 as a hazardous substance. Reportable Quantity = 1,000 lbs.

### EPA

**EPA RQ INGREDIENT:** trans-1,2-dichloroethylene (# 156-60-5)

### TSCA (TOXIC SUBSTANCE CONTROL ACT)

**TSCA REGULATORY:** All chemicals in this product are listed on the TSCA Inventory.

## CANADA

**WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM):** This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

**WHMIS CLASS:** Class A, Class D2B.

## EUROPEAN COMMUNITY

### EEC LABEL SYMBOL AND CLASSIFICATION



R20 - Harmful by inhalation.

EEC Harmful - "Xn"



R36/37/38 - Irritating to eyes, respiratory system and skin.

EEC Irritant - "Xi"



R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

EEC Environment - "N"

**CALIFORNIA PROPOSITION 65:** This product does not contain any chemicals known to the State of California to cause cancer.

---

## 16. OTHER INFORMATION

**APPROVED BY:** Dana M. Morelos    **TITLE:** Chemist

**PREPARED BY:** D.M. Morelos

**REVISION SUMMARY** Revision #: 7 This MSDS replaces the June 13, 2005 MSDS. Any changes in information are as follows: In Section 1 Product Code