MATERIAL SAFETY DATA SHEET

Date Issued: 07/30/2007
MSDS No: 1635-20S
Date Revised: 03/02/2012
Revision No: 3

G3 Industrial Maintenance Cleaner

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: G3 Industrial Maintenance Cleaner
PRODUCT DESCRIPTION: Electronic Maintenance Cleaner
PRODUCT CODE: 1635-20S
ACTIVE INGREDIENT(S): 1,2-transdichloroethylene; 1,1,1,2-Tetrafluoroethane; Carbon dioxide

MANUFACTURER

Techspray, L.P.
1001 N.W. 1st Street
P.O. Box 949
Amarillo, TX 79107
Emergency Contact: Chemtrec
Emergency Phone: 1-800-858-4043
Service Number: 1-800-858-4043

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC CCN#21858 (US Transportation) :(800) 424 - 9300
CANUTEC (Canadian Transportation) :(613) 996 - 6666
Emergency Phone :(800) 858 - 4043

2. HAZARDS IDENTIFICATION

HAZARD DESIGNATION

"Xn" - Harmful
R20 - Harmful by inhalation.

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

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

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Transparent, colorless liquid.

IMMEDIATE CONCERNS: Warning! High concentrations of vapor can reduce oxygen available for breathing. Harmful if inhaled. May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive products.

POTENTIAL HEALTH EFFECTS

EYES: Substance causes substantial eye irritation.

SKIN: Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

INGESTION: Substance may be harmful if swallowed.

INHALATION: High concentrations in immediate area can displace oxygen and can cause dizziness, unconsciousness, and possibly death with longer exposure. Keep people away from such vapors without self-contained breathing apparatus.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Liquid splashed in the eye may cause redness, irritation and conjunctivitis.

SKIN: Prolonged exposure causes redness, pain, drying and cracking of the skin.

INGESTION: For large amounts; abdominal pain, nausea and vomiting.

INHALATION: High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness).

ACUTE TOXICITY: Overexposure may cause dizziness and loss of concentration. At higher levels, CNS

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depression and cardiac arrhythmia may result.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS	EINECS
1,2-transdichloroethylene	50 - 70	156-60-5	205-860-2
2-Propanol	1 - 5	67-63-0	200-661-7
1,1,1,2-Tetrafluoroethane	25 - 35	811-97-2	212-337-0
Carbon dioxide	1 - 3	124-38-9	

4. FIRST AID MEASURES

EYES: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel.

SKIN: Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash clothing separately before reuse.

INGESTION: If swallowed, gently wipe or rinse the inside of the mouth with water. DO NOT induce vomiting. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Immediately contact a poison control center, emergency room or physician as further treatment may be necessary.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: 3.3°C (38°F) TAG CC

Notes: Non-propellant material ("cold fill") only.

EXTINGUISHING MEDIA: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

FIRE FIGHTING PROCEDURES: Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition products are hazardous. This compound can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrochloric and hydrofluoric acids - possibly carbonyl halides.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Contain spill with dike to prevent entry into sewers.

LARGE SPILL: If this material is released into a work area, evacuate the area immediately.

GENERAL PROCEDURES: Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on adsorbent, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces, including vapors, have been removed thoroughly wet vacuum the area. Do not flush to sewer. If area of spill is porous, remove as much contaminated earth, gravel, etc. as necessary and place in closed containers for disposal.

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SPECIAL PROTECTIVE EQUIPMENT: Only personnel equipped with proper respiratory and skin/eye protection should be permitted in area. See Section 8 for details.

7. HANDLING AND STORAGE

HANDLING: Use with adequate ventilation.

STORAGE: Store away from heat.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		SupplierOEL	
Chemical Name		**ppm**	**mg/m³**	**ppm**	**mg/m³**	**ppm**	**mg/m³**
1,2-transdichloroethylene	**TWA**	NE [1]	[1]	200 ppm		NE	
	STEL	NE		200 ppm			
2-Propanol	**TWA**	400 ppm	980 mg/m3	400 ppm	983 mg/m3	NL [2]	NL [2]
	STEL	500 ppm	1225 mg/m3	500 ppm	1230 mg/m3	NL	NL
1,1,1,2-Tetrafluoroethane	**TWA**	NE		NE		1,000 ppm [3]	[3]

OSHA TABLE COMMENTS:
1. NOT ESTABLISHED
2. NL = Not Listed
3. * (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: Gloves of the following materials may provide protection against permeation:
Viton, solvex, Buna, Butyl, and 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.

WORK HYGIENIC PRACTICES: Wash hands before eating and wash before reuse.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

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Chemical Name	Flash Point (°C)	Boiling Point (°C)	Freezing Point (°C)	Solubility in Water	Specific Gravity
1,2-transdichloroethylene	36	48	-50	slight	1.257
2-Propanol	11.7	82.4			0.785
1,1,1,2-Tetrafluoroethane		-26.4	-101	NEGLIGIBLE	1.21

ODOR: Faint ethereal odor

APPEARANCE: Clear, Colorless liquid

pH: Not Applicable

PERCENT VOLATILE: 100

VAPOR PRESSURE: 167.67 mmHg@20C (VOC Composite Vapor Pressure) at 20°C (68°F)

FLASHPOINT AND METHOD: 3.3°C (38°F) TAG CC

Notes: Non-propellant material ("cold fill") only.

EVAPORATION RATE: < 1 (TCE=1)

DENSITY: 1.1819

(VOC): 68.500 % by weight

COMMENTS: This product meets the California Air Resources Board VOC cap of 75 wt % for the Electronic Cleaner category.

10. STABILITY AND REACTIVITY

STABILITY: Stable.

POLYMERIZATION: Will not occur.

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

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

Chemical Name	DERMAL LD_{50} (rabbit)	INHALATION LC_{50} (rat)
1,2-transdichloroethylene	> 5000 mg/kg	24100 ppm
1,1,1,2-Tetrafluoroethane		> 500000 ppm

EYES: Moderately to severely irritating

DERMAL LD_{50}: Mildly to moderately irritating.

ORAL LD_{50}: Slight to very low toxicity.

INHALATION LC_{50}: Slight to very low toxicity.

CARCINOGENICITY

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Chemical Name	NTP Status	IARC Status	OSHA Status
1,2-transdichloroethylene	NOT LISTED	NOT LISTED	NOT LISTED
2-Propanol	NOT LISTED	NOT LISTED	NOT LISTED
1,1,1,2-Tetrafluoroethane	NOT LISTED	NOT LISTED	NOT LISTED

IARC: NOT listed

NTP: NOT listed

OSHA: NOT listed

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)

SHIPPING NAME: Aerosols, flammable

UN/NA NUMBER: 1950

PRIMARY HAZARD CLASS/DIVISION: 2.1

PACKING GROUP: N/A

NOTE: Passenger Air/Rail -- 75kg

Cargo Aircraft -- 150 kg

VESSEL (IMO/IMDG)

SHIPPING NAME: Aerosols, flammable

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UN/NA NUMBER: 1950

PRIMARY HAZARD CLASS/DIVISION: 2.1

PACKING GROUP: N/A

NOTE: Material may be stored on deck or underdeck on a cargo vessel and on a passenger vessel.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: IMMEDIATE / DELAYED

FIRE: Yes **PRESSURE GENERATING:** Yes **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** Yes

313 REPORTABLE INGREDIENTS: 2-propanol (CAS #67-63-0)

EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	Wt.%	CAS
2-Propanol	1 - 5	67-63-0

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.

Chemical Name	Wt.%	CERCLA RQ
1,2-transdichloroethylene	50 - 70	1000 lbs.

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)

Chemical Name	CAS
1,2-transdichloroethylene	156-60-5
2-Propanol	67-63-0
1,1,1,2-Tetrafluoroethane	811-97-2

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

CLEAN AIR ACT

Chemical Name	Wt.%	CAS
1,1,1,2-Tetrafluoroethane	25 - 35	811-97-2

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

OSHA HAZARD COMM. RULE: Contents of this MSDS comply with the OSHA Hazard Communication Standard

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29 CFR 1910.1200.

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

"Xn" - Harmful
R20 - Harmful by inhalation.

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

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

16. OTHER INFORMATION

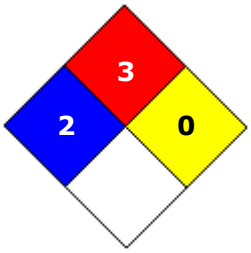
APPROVED BY: Pierce A. Pillon **TITLE:** Chemist

REVISION SUMMARY: This MSDS replaces the 03/02/2012 MSDS.

HMIS RATING

HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

NFPA CODES



NFPA STORAGE CLASSIFICATION: NFPA Flammability rating is based on NFPA 704, Annex C, C.2, fractional evaporation tests and Tech Spray Method -048, Flammability Test for Pooled Liquids. However,due to the product having a Total Heat of Combustion < 20kJ/g, it has an NFPA storage classification as a Level 1 aerosol in accordance with NFPA 30B.

MANUFACTURER SUPPLEMENTAL NOTES: 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.

DATA SOURCES: Code of Federal Regulations (CFR) The Sigma-Aldrich Library of Regulatory and Safety Data OSHA Hazard Communication Standard (29CFR1910.1200) Various Federal, State and Local Regulations

GENERAL STATEMENTS: Total Heat of Combustion for this product < 20 kJ/gram and is classiified for Level 1 storage in accordance with NFPA 30B.

MANUFACTURER DISCLAIMER: To the best of our knowledge, the information contained herein is accurate. However, neither Tech Spray, L.P., or any of its subsidiaries assumes any liability whatsoever for the accuracy or

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completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.