

SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

Product Name: GC STATIC FREE FLUX REMOVER**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**Product Type: Flux Remover
Product Name: Flux Remover and Cleaner
Part Number(s): 22-271-B**Emergency Contact: Chemtrec**
Phone: (800) 424-9300**SECTION 2. HAZARDS IDENTIFICATION****Classification of the substance or mixture**

Flammable Aerosol	Category 1	Extremely flammable aerosol
Compressed Dissolved Gas Respiratory	Category 1B	Contains gas under pressure; may explode if heated
Skin Irritation	Category 2	Causes skin and eye irritation
Eye Irritation	Category 2	May cause respiratory irritation
Specific Target Organ Toxicity (Single exposure)	Category 3	May cause drowsiness or dizziness
Specific Target Organ Toxicity (Repeated exposure)	Category 2	May damage fertility or the unborn child (state specific effect if known)(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
		May cause damage to organs (or state all organs affected, if known)(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

GHS label elements

Danger



Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not pierce or burn, even after use.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands and skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Other hazards which do not result in classification

Harmful to aquatic life with long lasting effects.

SECTION 3. COMPOSITION / INFORMATION OF INGREDIENTS

Description	CAS Number	EINECS Number	%	Note
Trans - 1, 2 Dichloroethylene	156-60-5		58	Flam. Liq. 1; H224 Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H336 Aquatic Acute 3; H402 Aquatic Chronic 3; H412
1,1-Difluoroethane, liquefied, under pressure	75-37-6	200-866-1	26	Flam. Gas 1; H220 Liquefied Gas; H280
2-Propanol	67-63-0		16	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336

SECTION 4. FIRST AID MEASURES**Description of necessary first-aid measures**

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is labored, administer oxygen. If symptoms develop, obtain medical attention.

Skin Contact: Wash affected skin with soap and water. If irritation (redness, rash, blistering) develops, get medical attention. Take off contaminated clothing and wash it before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion: Immediately call a POISON CENTER or doctor/physician. Do not give anything by mouth to an unconscious person.



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SECTION 4. FIRST AID MEASURES (CONTINUED)

Most important symptoms/effects, acute and delayed

May cause drowsiness or dizziness.

Indication of immediate medical attention and special treatment needed, if necessary

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media

Suitable Extinguishing Media Extinguish with carbon dioxide, dry chemical, foam or water spray.

Unsuitable Extinguishing Media Do not use water jet.

Specific hazards arising from the chemical

Pressurised container: May burst if heated

Special protective actions for fire-fighters

A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions. Keep containers cool by spraying with water if exposed to fire.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Eliminate sources of ignition. Avoid contact with skin and eyes. Avoid breathing spray. Wear protective gloves/eye protection.

Environmental precautions

Prevent liquid entering sewers, basements and work pits. Avoid release to the environment.

Methods and materials for containment and cleaning up

Cover spills with inert absorbent material. Transfer to a container for disposal or recovery.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Eliminate sources of ignition. Avoid contact with skin and eyes. Avoid breathing spray. Wear protective gloves/eye protection.

Conditions for safe storage, including any incompatibilities

-Storage temperature Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50°C/ 122°F. Keep container tightly closed.

-Incompatible materials This product should be stored away from sources of strong heat, oxidizing agents, reducing agents, and strong acids. Do not mix with finely divided alkali or alkaline earth metals. May attack some plastics, rubbers, and coatings.



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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Substance.	CAS No.	(8hr TWA)		(STEL)		Note:
		PEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
Trans-1,2-Dichloroethylene	156-60-5	200 ppm	200 ppm	----	----	----
Isopropanal	67-63-0	400 ppm	200 ppm	500 ppm	400 ppm	----

#Assure minimum oxygen content of work atmosphere. +

Appropriate engineering controls

Use only with adequate ventilation to keep exposures (airborne levels of dust, fume, vapour etc) below recommended exposure limits.

Individual protection measures

- Eye/Face Protection: Wear protective eyewear (goggles, face shield, or safety glasses).
- Skin Protection: Wear suitable gloves if prolonged skin contact is likely. Check with protective equipment manufacturer's data.
- Respiratory protection: Normally no personal respiratory protection is necessary. In case of insufficient ventilation, wear suitable respiratory equipment. Check with protective equipment manufacturer's data.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Aerosol spray	Density (g/ml)	Not available
Color.	Clear	Solubility (Water)	Not available
Odor	Sweet	Solubility (Other)	Not available
Odor Threshold (ppm)	Not available	Partition Coefficient (n-Octanol/water)	Not available
pH (Value)	Not available	Auto Ignition Point (°C)	370 (1-Bromopropane)
Melting Point (°C) / Freezing Point (°C)	-129.5 (1-Bromopropane)	Decomposition Temperature (°C)	Not available
Boiling point/boiling range (°C):	63.4 (1-Bromopropane)	Kinematic Viscosity (cSt)	< 20.5 @ 40 0°C
Flash Point (°C)	Flammable aerosol	Explosive properties	Not explosive.
Evaporation Rate	Not available	Oxidizing properties	Not oxidizing.
Flammability (solid, gas)	Flammable aerosol		
Explosive Limit Ranges	~ 3 - 8%		
Vapor pressure (Pascal)	> 4.4 x 10 ⁴ (> 331 mmHg)		
Vapor Density (Air=1)	> 1		



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SECTION 10. STABILITY AND REACTIVITY

Reactivity	Conditions to avoid
Stable under normal conditions.	Avoid contact with heat and ignition sources.
Chemical stability	Incompatible materials
Stable.	Strong oxidising agents.
Possibility of hazardous reactions	Hazardous decomposition products
None anticipated.	None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicological (health) effects

Acute toxicity (calculated / estimated) Oral LD50 = 770 mg/kg (rat)
 Dermal LD50 >5000 mg/kg (rabbit)
 Inhalation LC50 2410 ppm (4 hour(s)) (rat) - Vapours may cause drowsiness and dizziness.

Irritation/Corrosivity Causes skin irritation. Causes serious eye irritation. Repeated exposure may cause skin dryness or cracking.

Sensitization It is not a skin sensitizer.

Repeated dose toxicity Inhalation NOAEL 4000 ppm (rat) (90-days)

Carcinogenicity It is unlikely to present a carcinogenic hazard to man.

NTP	IARC	ACGIH	OSHA	NIOSH
No.	No.	No.	No.	No.

Mutagenicity Negative
Reproductive toxicity Negative
Other information None known.

Isopropanol (CAS No. 67-63-0):

Acute toxicity Oral: LD50 5840 = mg/kg (rat)
 Inhalation: LC50 > 10000 ppm (6-hr, rat, Vapour) May cause drowsiness or dizziness.
 Dermal: LD50 > 16.4 ml/kg

Irritation/Corrosivity Causes serious eye irritation.

Sensitization It is not a skin sensitiser.

Repeated dose toxicity NOEC:500 ppm (104-week(s), rat)
 NOAEC: 5000 ppm (104-week(s), rat, Systemic effects)

Carcinogenicity No evidence of carcinogenicity.NOEL: 5000 ppm

NTP	IARC	ACGIH	OSHA	NIOSH
No.	No.	No.	No.	No.



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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

Mutagenicity There is no evidence of mutagenic potential.

Reproductive toxicity None anticipated

Information on the likely routes of exposure

Inhalation, Skin Contact, Eye Contact

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Trans-1,2-dichloroethylene (CAS No. 156-60-5):

Short term LC50 (96 hour): 74 - 290 mg/L (Fish)
 LC50 (48 hour): 79 mg/L (Daphnia magna)
 LC50 (96 hour): 798 mg/L (Algae)

Long Term NOEC (28 days): <110 mg/L (Fish)

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

SECTION 14. TRANSPORT INFORMATION

UN Number	Environmental hazards
UN1950	None
UN Proper Shipping Name	Special precautions for user
Aerosol, Flammable	None
Transport hazard class(es)	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
2.1	
Packing group, if applicable	Not Available.
None	

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question

TSCA (Toxic Substance Control Act) Inventory Status: All components listed or polymer exempt.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):



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SECTION 15. REGULATORY INFORMATION (CONTINUED)

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
Trans-1,2-Dichloroethylene	156-60-5	10	1000

SARA 311/312 - Hazard Categories:

Fire
 Sudden Release
 Reactivity
 Immediate (acute)
 Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
Isopropanol	67-63-0	16

SARA 302 - Extremely Hazardous Substances (40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	TPQ (Pounds)
None	----	----	----

California Proposition 65 List:

Chemical Name	CAS No.	Typical %wt.
1-bromopropane	106-94-5	Developmental, female, male

SECTION 16. OTHER INFORMATION

GC Electronics believes that the information contained herein is accurate and reliable as of the date of this material safety data sheet, but no representation guarantee or warranty, express or implied, is made as to the accuracy, reliability or completeness of the information. Persons receiving information are encouraged to make their own determination as to the information's suitability and completeness for their particular application. NO INFORMATION CONTAINED HEREIN CONSTITUTES A PRODUCT WARRANTY OF ANY KIND, WHETHER EXPRESS OR IMPLIED; AND ALL IMPLIED WARRANTIES OF MERCHANT ABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY GC ELECTRONICS.