ETI 71DA

SAFETY DATA SHEET
PREPARATION DATE: September 1, 2024

1. Product and Company Identification

Product Name:	***ETI 71DA*** Fluorinated Solvent Mixture
Identified uses:	Cleaning of oils, greases, waxes. **INDUSTRIAL USE ONLY. NOT FOR CONSUMER SALE OR USE.**
Supplier:	Enviro Tech International, Inc. 1800 N 25th Avenue Melrose Park, IL 60160 708-343-6641 www.envirotechint.com
Contact Person:	sales@envirotechint.com
Emergency Contact:	Velocity EHS 24-HR EMERGENCY CONTACT U.S, Canada, Puerto Rico, U.S. Virgin Islands (800) 255-3924 INTERNATIONAL CALLS: +01-813-248-0585 Non emergency number: 708-343-6641 8 AM to 4 pm (CST - US)

2. HAZARD IDENTIFICATION

ETI 71DA Mixture:
Signal Word: **Danger**
Classification:

Physical Hazards Not Otherwise Classified:	Category 1
Serious Eye Damage/Irritation:	Category 2A
Specific Target Organ Toxicity (single exposure):	Category 3

Hazard Statements
Causes serious eye irritation
May cause drowsiness or dizziness
In use, may form flammable/explosive vapor/air mixture

Further Information on Individual Constituents
1,2 trans-dichloroethylene
Classification

Acute Toxicity - Oral	Category 4
Acute Toxicity – Inhalation	Category 4
Skin Corrosion/Irritation	Category 2
Eye Damage/Irritation	Category 2A
Specific Target Organ Toxicity (Single Exposure)	Category 1
Specific Target Organ Toxicity (Single Exposure)	Category 2
Specific Target Organ Toxicity (Single Exposure)	Category 3
Flammable Liquids	Category 2
Aquatic Hazard (Acute)	Category 3
Aquatic Hazard (Long-Term)	Category 3
Aspiration Hazard	Category 1

Methyl Nonafluorobutyl Ether

Classification:	Not applicable
Hazard Statements:	Not applicable
Pictogram:	Not applicable

Ethanol

Eye irritation	Category 2A

ETI 71DE Mixture:

Prevention:

P103 Read label before use.
P102 Keep out of reach of children.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces – no smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment
P241 Use explosion-proof electrical/ventilating/lighting/…/equipment
P242 Use only non-sparking tools
P243 Take precautionary measures against static discharge.
P261 Avoid breathing vapors
P262 Do not get in eyes, on skin or clothing
P270 Do not eat, drink or smoke when using this product
P271 Use only outdoors or in a well-ventilated area
P273 Avoid release to the environment
P280 Wear protective gloves/eye protection/face protection
P281 Use personal protective equipment as required.
P282 Wear Viton or Silvershield gloves.

Response:

P301 + P310	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P303 +P361+ P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340+P312	If INHALED Remove person to fresh air keep comfortable for breathing. Call a POISON CENTER/doctor/if you feel unwell.
P331	Do NOT induce vomiting.
P370+378	In case of fire: Use Dry Chemical Extinguisher (B-C), Water Spray, Carbon Dioxide or appropriate foam to extinguish.

Storage & Disposal:

P403+P235	Store in a well-ventilated place. Keep Cool.
P405	Store locked up
P501	Dispose of contents/containers in accordance with all local/regional/national/international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	CAS	WEIGHT PERCENT
trans-1,2-dichloroethylene	CAS: 156-60-5	≤ 43 %

Methyl Nonafluorobutyl Ether	CAS: 163702-08-7	> 53 %
ethanol	CAS: 64-17-5	> 3 %

The exact percentage (concentration) of this composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Inhalation: Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

Ingestion: Gently wipe or rinse the inside of the mouth with water. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Do not induce vomiting. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

Skin Contact: Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

Eye Contact: Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

Notes to Physician: Do not give adrenaline or similar drugs. Because of possible disturbances of cardia rhythm, catecholamine drugs, such as epinephrine, that may be used in situations of emergency life support should be used with special caution.

5. FIRE FIGHTING MEASURES

Flash point (°F): None

Extinguishing Media: Extinguishing media should be chosen based on surrounding conditions. Dry Chemical Extinguisher (B-C), Water Foam Carbon Dioxide or appropriate foam may be used.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire

Fire and Explosion Hazards: Non-flammable in most situations. Vapor/air mixtures may be explosive.

Hazardous combustion products: Thermal decomposition or combustion may liberate hydrogen chloride, chlorinated hydrocarbons, carbonyl chloride, hydrogen fluoride (HF), carbon monoxide and carbon dioxide.

Special Fire Fighting Procedures: Emits toxic fumes under fire conditions. Vapor concentration in a confined or poorly ventilated area can be ignited upon contact with a high energy spark, flame, or high intensity source of heat id vapor/air ratio is within flammable limit range. Evacuated personnel to a safe area and isolate the scene of the accident. Remove all ignition sources. Put out the fire upwind. Appropriate protective

	equipment (including chemical protective gloves) should be worn for special equipment of firefighters. Wear chemical protective clothing if there is a risk of extensive contact with spilled products. When the fire-fighting conditions are bad and the product may undergo thermal decomposition, firefighters must wear self-contained positive pressure breathing apparatus and choose firefighting clothing that meets relevant standards when they need to enter the confined space where the fire occurs. If the container in the fire is discolored or sounds from the safety relief device, it must be evacuated immediately. Keep run-off water out of sewers and water sources. Dike for water control.
Protective Equipment:	Use NIOSH/MSHA approved/equivalent self-contained breathing apparatus in positive pressure mode\ and full protective clothing must be worn in case of fire. Use water spray or fog to cool exposed equipment and containers.
Further information:	Remove container from danger zone if possible and able to be completed safely. Cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Do not breathe vapors. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.
Environmental Precautions	Do not discharge or let enter into drains, water courses or onto the ground. Contain spillages with sand, earth or any suitable adsorbent material.
Spill Clean Up Methods	Immediately evacuate the area. Provide maximum ventilation. Unprotected personnel should move upwind of spill. Only personnel equipped with proper respiratory and eye/skin protection should be permitted in the area. Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material with absorbents, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces have been removed, thoroughly wet vacuum the area. Do not flush to sewer. If area of spill is porous, remove as much earth and gravel, etc. as necessary and place in closed containers for disposal. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ for 1,2 trans-

	dichloroethylene (U.S. SARA Section 304). If reportable release occurs under CERCLA Section 103, notify the National Response Center.
Reference to other sections	For personal protection, see section 8. For waste disposal, see section 13

7. HANDLING AND STORAGE

Handling	Do not inhale substance/mixture. Avoid generation of vapors. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.). Do not use cutting or welding torches on drums that contained this product. Do not use in poorly ventilated or confined spaces without proper respiratory protection. Keep away from open flames, hot surfaces and sources of ignition. Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.
Storage	Keep container closed when not in use. Store only in closed, properly labeled containers. Separate from oxidizing agenmts and strong bases. Avoid exposure to the sun. Store at temperatures not exceeding 38C/100F.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Exposure Limits:	**1,2 trans-dichloroethylene** OSHA: 200 ppm (790 mg/m3) OSHA TWA ACGIH: 200 ppm TWA. (1, 2-trans-Dichloroethylene) **Methyl Nonafluorobutyl Ether** AIHA 750 ppm No OSHA PEL or ACGIH TLV has been published for this product. **Ethanol** OSHA PEL: 1,000 ppm
Process Conditions	Provide eyewash, quick drench.
Engineering Measures	Provide adequate general and local exhaust ventilation.
Respiratory Equipment	NIOSH/MSHA approved/equivalent organic vapor respirator. should be provided. Check that mask fits tight and change filter regularly.
Hand Protection	Wear approved gloves when handling this product. Use Viton or Silvershield gloves for extended protection. Nitrile, neoprene or butyl gloves offer less protection and should be used only for splash protection. **DO NOT** use natural rubber, cloth or synthetic material gloves when handling this product.
Eye Protection	Required. Wear approved safety goggles with side shields. Use face shield where possibility of face contact due to splashing, spraying or other airborne contact exists.
Hygiene Measures	When using do not eat, drink or smoke. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap & water if skin becomes contaminated.
Engineering Controls	Safety shower, eye wash stations, ventilation systems.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless liquid.
Odor:	Characteristic
pH Value:	Not applicable.
Freezing Point:	No data available
Boiling Point:	40 ºC
Flash Point (Closed Cup):	None (ASTM Method D96)
Lower Flammability Limit:	5% - reported
Upper Flammability Limit:	13% - reported
Evaporation Rate:	No data available
Vapor Pressure:	55,062 Pa @ 25 ºC
Vapor Density:	No data available
Density:	No data available
Specific Gravity:	1.33
Specific Heat:	No data available
Auto-ignition temperature:	No data available
Thermal Conductivity:	No data available
Dielectric Strength:	No data available
Dielectric Constant:	No data available

10. STABILITY AND REACTIVITY

Stability	Stable under normal temperature conditions and recommended use. No decomposition if stored and applied as directed.
Reactivity:	Vapors may form explosive mixture with air.
Conditions To Avoid	Avoid open flames and other sources of ignition. Avoid high temperatures.
Incompatible Materials	Incompatible with strong acids, strong bases and strong oxidizing agents.
Hazardous Decomposition Products	Carbon monoxide; Carbon dioxide, Hydrogen fluoride, Perfluoroisobutylene; Hydrogen chloride gas.

11. TOXICOLOGICAL INFORMATION

1,2 trans-dichloroethylene

Acute Inhalation L_C50:	(rat) 24,100 ppm (4 hours). Slight to very low toxicity.
Acute Dermal L_D50:	(rabbit) >5000 mg/kg. Slight to very low toxicity.
Skin Irritation:	Mildly to moderately irritating.
Eye Irritation:	Moderately to severely irritating.
Acute Oral L_D50:	Slight to very low toxicity.
Chronic Effects/Carcinogenicity:	NOT listed as a carcinogen by NTP, IARC, or OSHA.
Medical Conditions Aggravated:	None known.

Carcinogenicity:

NTP	No	IARC	No	OSHA	No

Effects of overexposure:

ACUTE

Inhalation: This product is a central nervous system depressant. Inhalation can cause irritation of the respiratory tract, dizziness nausea, headache, loss of coordination and equilibrium, unconsciousness and even death in confined or poorly ventilated areas. Cardiac sensitization has occurred in dogs dosed at concentrations greater than 25%.

Eye/Skin: Eye contact can result in discomfort, pain, irritation and discharge. Washing of the eyes with water may result in corneal injury. Prolonged contact such as occurs when material is trapped on the skin (e.g. under a glove) may result in severe irritation. Skin absorption is not expected to be of toxicological significance under normal industrial use.

Ingestion: Swallowing may irritate the mouth and GI tract as well as cause the effects listed for inhalation exposure. Vomiting may cause aspiration into the lungs that may lead to potentially fatal chemical pneumonia and pulmonary edema.

SUBCHRONIC

A 90-day inhalation study exposing rats to 1,2-dichloroethylene reported no adverse effects on body weight, clinical observations, food consumption, clinical or anatomical pathology parameters, or liver cell proliferation. The no - observed-effect level (NOEL) for this study was 4000 ppm in rats that suggests a low order of toxicity by the inhalation. In an NTP study, rats and mice were dose fed for a period of 13 weeks. No mortality, clinical observations of toxicity, or food consumption effects was noted in mice or rats. Minor reductions in body weights were observed in mice. Liver organ weights changes were reported in rats. Rats dosed at the highest level (50,000 ppm) showed a few abnormal clinical pathology findings. Histopathology reports revealed no microscopic evidence of treatment-related target organ effects. In separate 90-day drinking water studies, 1,2-dichloroethylene exposed rats and mice showed no does related effects in hematological, serological, and gross pathological, or urinary parameters.

Mutagenesis: Trans-1,2-dichloroethylene was not mutagenic to E-coli or S. Typhimurium when tested with microsomal activation. In another study, trans-1,2-dichloroethylene did not product mutations in Saccharomyces cerevisiae with or without microsomal activation. No genetic effects were reported in a vivo host mediated mutagenic assay.

Reproductive/Developmental: In a teratology study conducted in rats by the inhalation route of exposure, significant fetal toxicity (i.e., decreased body weight, increased skeletal variations) was observed only at maternally toxic concentrations (12,000 ppm). Based on the results of this study, trans-1,2-dichloroethylene would not be considered to be a developmental toxicant.

Methyl Nonafluorobutyl Ether

Carcinogenicity:

NTP	No	IARC	No	OSHA	No

Acute Toxicity:

Acute dermal toxicity, LD_{50}	Estimated > 5,000 mg/kg
Acute inhalation toxicityLC_{50}	> 1,000 mg/l
Acute ingestion toxicity, LD_{50}	> 5,000 mg/kg

Skin Corrosion/Irritation:	No irritation to rabbit skin
Serious Eye Damage/Eye Irritation:	No irritation to rabbit eyes
Respiratory Tract Sensitization:	Current data are insufficient for classification
Skin Sensitization:	Current data are insufficient for classification
Inhalation Hazard:	Current data are insufficient for classification
Germ Cell Mutagenicity:	Not mutagenic
Reproductive/Developmental Effects:	Not Classified
Specific Target Organ Toxicity:	Not Classified
Aspiration Hazard:	Not Classified

Ethanol

Inhalation LC50	Derived Value 4,073 ppm (Rate/Mouse 4 hr.) (CDC report)
Oral lethal Dose LD50	Derived Value 2,581 ppm (Rate/Mouse 4 hr.) (CDC report)
RD50 (mouse)	27,314 ppm
Skin Corrosion/Irritation	No significant irritation (Rabbit)
Serious Eye Damage/Irritation	Severe Irritant
Skin Sensitization	Not classified
Germ Cell Mutagenicity	Negative
Carcinogenicity	IARC: No NTP: No OSHA: No
Reproductive Toxicity	Not classified
Developmental Toxicity	Not classified

Human data: (CDC report)
It was reported in a clinical study that concentrations greater than 20,900 ppm were intolerably irritating and 15,000 ppm caused continuous lacrimation and coughing while concentrations between 5,200 and 10,400 ppm allowed work to be carried on, but with a certain amount of discomfort [Lester and Greenberg 1951]. In this same study, it was determined that 62% of the ethyl alcohol inhaled was absorbed [Lester and Greenberg 1951].

The chosen IDLH (15,000 ppm) is based on human inhalation data and is conservative. At 15,000 ppm “there was continuous lachrymation and coughing” in the exposed individuals [Lester and Greenberg 1951]. Further evidence of the IDLH being conservative is the report in Patty [1963] that a 2-hour exposure to 19,260 ppm only produced light narcosis in the rat; a 255-minute exposure to 19,260 ppm produced no signs of intoxication in the guinea pig; a 75-minute exposure to 23,940 ppm produced narcosis in the mouse; and a 80-minute exposure to 13,300 ppm caused ataxia in the mouse.

12. ECOLOGICAL INFORMATION

1,2 trans-dichloroethylene

INVERTEBRATE TOXICITY: <110,000 ug/L 48 hour(s) (Mortality) Water flea (Daphnia magna)

Methyl Nonafluorobutyl Ether

Ecotoxicity:	Not acutely/chronically toxic to aquatic life

Persistence and Degradability:	No reference data are known or current data are insufficient for classification.
Potential Bioaccumulation:	No reference data are known or current data are insufficient for classification.
Mobility in Soil:	No reference data are known or current data are insufficient for classification.
Life cycle of environmental impacts:	No reference data are known or current data are insufficient for classification.

Ethanol

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - 15,300 mg/l - 96 h (US-EPA)
Toxicity to daphnia	test LC50 - Ceriodaphnia dubia (water flea) - 5,012 mg/l -48h Remarks: (ECHA)
Toxicity to algae	static test ErC50 - Chlorella vulgaris (Fresh water algae) - 275 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test IC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)
Toxicity to fish (Chronic toxicity)	semi-static test NOEC - Danio rerio (zebra fish) - 250 mg/l - 120 h Remarks: (ECHA)
Toxicity to daphnia	semi-static test NOEC - Daphnia magna (Water flea) - 9.6 mg/l - 9 d Remarks: (ECHA)
Biodegradability	aerobic - Exposure time 15 d Result: ca.95 % - Readily biodegradable. (OECD Test Guideline 301E)
BOD	930 - 1,670 mg/g
Theoretical oxygen demand	2,100 mg/g
Bioaccumulative potential	Accumulation in organisms is not expected.
Mobility in soil	No data available
PBT and vPvB assessment	PBT/vPvB assessment not available/not required/not conducted
Endocrine disrupting properties	No data available

13. DISPOSAL CONSIDERATIONS

Disposal Follow Federal, State and Local governmental regulations. DO NOT flush into sanitary sewer or waterway. Do not reuse empty container. Dispose of waste in licensed industrial waste disposal facilities or by incineration in a licensed waste incineration facility. Proper destruction may use additional fuel in the incineration process. Combustion products include HF. Equipment must be capable of handling halogenated materials. Contaminated sand, sawdust, vermiculite, soil or porous surface 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. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination. It is your duty to dispose of the chemical materials and/or their containers in accordance with the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery

Act, as well as any other relevant Federal, State, or local laws/regulations regarding disposal.

14. TRANSPORTATION INFORMATION

US DOT PROPER SHIPPING NAME : Not regulated for shipping pursuant to DOT, IATA and IMDG regulations.

The above transportation information is valid as of the date of publication of this SDS. Given that regulatory changes are made on an ongoing basis, ETI recommends checking new transportation regulations regularly.

15. REGULATORY INFORMATION

USA TSCA:	All components of this product are listed and active on the TSCA Inventory. This material contains a chemical which requires export notification under TSCA Section 12[b]: 1,2-Trans-Dichloroethylene CAS: 156-60-5
SARA 302:	None
SARA (311, 312) Hazard Class:	1,2 trans-dichloroethylene: Acute Health Hazard.
SARA (313) Chemicals:	Not listed
SARA Extremely Hazardous Substance:	Not listed
CERCLA Hazardous Substance:	1,2 trans-dichloroethylene: Listed in 40 CFR 302 (302.4) as a hazardous substance with a reportable quantity (RQ) of 1,000 pounds. Releases which exceed the RQ must be reported to the National Response Center, 800-424-8802.
RCRA:	1,2 trans-dichloroethylene: Waste product and contaminated soils/materials from spill cleanup are U079 hazardous waste as per 40 CFR 261.33 and must be disposed of accordingly under RCRA. If discarded or spilled product may exhibit one or more hazardous waste characteristics under 40 CFR 261.24, including D001 – ignitable.
HAP:	No component listed
USEPA SNAP:	All components approved.
Right to Know:	1,2 trans-dichloroethylene: Massachusetts, Pennsylvania, New Jersey Ethanol: Massachusetts, Pennsylvania

16. OTHER INFORMATION

Only trained personnel should use this material. Since empty containers retain product residue, follow label warnings, even after container is emptied. For further Health and Safety information contact: Health and Safety Officer. Each user of this product should study this SDS carefully and consult appropriate expertise as necessary to become aware of and understand the data contained in this SDS and any hazards that may be associated with this product. The information provided in this Safety Data Sheet relates only to the specific material designated herein. The user is responsible for determining the conditions of safe use of this product and for complying with all Federal, State and Local governmental laws and regulations concerning its use. Enviro Tech International, Inc. makes no warranty, express or implied, including the warranty of

merchantability and fitness for a particular purpose, and assumes no liability or responsibility for the accuracy, completeness, timeliness or usefulness of this information. Enviro Tech International, Inc assumes no liability for any damages incurred, whether directly or indirectly, as a result of any errors, omissions or discrepancies in this information. Enviro Tech International, Inc. assumes no liability for reliance on this data and assumes no liability for damages related to the use or misuse of this product.

NFPA Rating:	Health: 2	Flammability: 1	Instability: 0
HMIS Classification:	Health: 2	Flammability: 1	Physical: 0

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