

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 06/28/2024

Reviewed on 06/28/2024

1 Identification

- **Product Identifier**
- **Trade Name:** FluoSolv 71DE
- **Relevant identified uses of the substance or mixture and uses advised against:**
For professional use only
- **Product Description:** Vapor Degreasing Solvent Blend
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**
NuGeneration Technologies, LLC (dba NuGenTec)
1155 Park Ave, Emeryville, CA 94608
fluosolv@nugentec.com
For Product Info call 1-(800) 409-3142
www.fluosolv.com
www.nugentec.com/fluosolv
- **Emergency telephone number:**
PERS Emergency Response: US and Canada - 1-800-633-8253, International 1-801-629-0667

2 Hazard(s) Identification

- **Classification of the substance or mixture:**



Eye Irritation 2A

H319 Causes serious eye irritation.

Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness.

- **Label elements:**
- **Hazard pictograms:**



- **Signal word:** Warning
- **Hazard statements:**
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
- **Precautionary statements:**

P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection / face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a poison center/doctor if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

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P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Unknown acute toxicity:**

This value refers to knowledge of known, established toxicological or ecotoxicological values.
0 % of the mixture consists of component(s) of unknown toxicity.

· **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	0	Fire = 0
REACTIVITY	0	Physical Hazard = 0

· **Hazard(s) not otherwise classified (HNOC):** None known

3 Composition/Information on Ingredients

· **Chemical characterization:** Substance

· **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous Components:**

CAS: 156-60-5	trans-dichloroethylene	25-50%
RTECS: KV 9400000	⚠ Flammable Liquids 2, H225; ⚠ Acute Toxicity - Inhalation 4, H332	
CAS: 163702-07-6	Methyl nonafluorobutyl ether	15-35%
CAS: 163702-08-7	Methyl nonafluoroisobutyl ether	15-35%

· **Additional information:**

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

4 First-Aid Measures

· **Description of first aid measures**

· **General information:**

Symptoms of poisoning may occur after exposure to dust, fumes or particulates; seek medical attention if feeling unwell.

· **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in the side position for transportation.

· **After skin contact:** If skin irritation occurs, consult a doctor.

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- **After eye contact:**
If eye irritation occurs, consult a doctor.
Rinse opened eye for several minutes under running water.
- **After swallowing:** If swallowed and symptoms occur, consult a doctor.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed:**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

5 Fire-Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Advice for firefighters**
- **Special protective equipment for firefighters:**
Mouth respiratory protective device.
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Dispose of the collected material according to regulations.
- **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

· **PAC-1:**

156-60-5	trans-dichloroethylene	280 ppm
163702-07-6	Methyl nonafluorobutyl ether	2,500 ppm
163702-08-7	Methyl nonafluoroisobutyl ether	2,500 ppm

· **PAC-2:**

156-60-5	trans-dichloroethylene	1,000 ppm
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163702-07-6	Methyl nonafluorobutyl ether	8,200 ppm
163702-08-7	Methyl nonafluoroisobutyl ether	8,200 ppm
· PAC-3:		
156-60-5	trans-dichloroethylene	1,700 ppm
163702-07-6	Methyl nonafluorobutyl ether	15,000 ppm
163702-08-7	Methyl nonafluoroisobutyl ether	15,000 ppm

7 Handling and Storage

- **Handling**
- **Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s):** No further relevant information available.

8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**

· Components with occupational exposure limits:

156-60-5 trans-dichloroethylene

PEL	Long-term value: 790 mg/m ³ , 200 ppm
REL	Long-term value: 790 mg/m ³ , 200 ppm
TLV	Long-term value: 793 mg/m ³ , 200 ppm

163702-07-6 Methyl nonafluorobutyl ether

TWA	750 ppm (AIHA)
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163702-08-7 Methyl nonafluoroisobutyl ether

TWA	750 ppm (AIHA)
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- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

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- **Exposure controls:**
- **Personal protective equipment**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:** Not required.
- **Material of gloves:** Not required.
- **Penetration time of glove material:** Not applicable.
- **Eye protection:**



Tightly sealed goggles

9 Physical and Chemical Properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	Colorless
Odor:	Mild solvent
Odor threshold:	Not determined.

· **pH-value:** Not applicable.

· Change in condition

Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	42 °C (107.6 °F)

· **Flash point:** None

· **Flammability (solid, gaseous):** Not applicable.

· **Auto igniting:** 410 °C (770 °F)

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Product is not self-igniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

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· Vapor pressure:	Not determined.
· Density:	
Relative density @ 20 °C (68 °F):	1.39
Vapor density:	Not determined.
Evaporation rate:	Not determined.
· Solubility in / Miscibility with:	
Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic @ 20 °C (68 °F):	0.314 s (DIN 53211/4)
· Other information:	No further relevant information available.

10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** Heat, flame and ignition sources.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

156-60-5 trans-dichloroethylene

Oral LD50 770 mg/kg (Rat)

· **Primary irritant effect:**

· **On the skin:** No irritating effect.

· **On the eye:** No irritating effect.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

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· **Carcinogenic categories:**

· **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

12 Ecological Information

· **Toxicity:**

· **Aquatic toxicity:**

Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

· **Persistence and degradability:** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential:** No further relevant information available.

· **Mobility in soil:** No further relevant information available.

· **Ecotoxicological effects:**

· **Remark:** Harmful to fish

· **Additional ecological information:**

· **General notes:**

Do not allow undiluted product or product that has not been neutralized to reach ground water, water course or sewage system.

Harmful to aquatic organisms

· **Results of PBT and vPvB assessment:**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects:** No further relevant information available.

13 Disposal Considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household waste. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material.

· **Uncleaned packaging**

· **Recommendation:** Disposal must be made according to official regulations.

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Trade Name: FluoSolv 71DE

14 Transport Information

· UN-Number:	UN1150
· DOT, ADR/ADN, IMDG, IATA	
· UN proper shipping name:	1,2-Dichloroethylene
· DOT	UN1150 1,2-Dichloroethylene mixture
· ADR/ADN	1,2-DICHLOROETHYLENE mixture
· IMDG, IATA	
· Transport hazard class(es):	
· DOT, IMDG, IATA	3 Flammable liquids
· Class:	3
· Label:	
· ADR/ADN	3 (F1) Flammable liquids
· Class:	3
· Label:	
· ADN/R Class:	Non-Regulated Material
· Packing group:	
· DOT, ADR/ADN, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user:	Warning: Flammable liquids
· Hazard identification number (Kemler code):	33
· EMS Number:	F-E, S-D
· Segregation groups:	Liquid halogenated hydrocarbons
· Stowage Category	B
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations:	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· ADR/ADN	
· Excepted quantities (EQ):	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ):	1L
· Excepted quantities (EQ):	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

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· **UN "Model Regulation":** UN 1150 ,2-DICHLOROETHYLENE MIXTURE, 3, II

15 Regulatory Information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
No further relevant information available.

· **SARA (Superfund Amendments and Reauthorization):**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

156-60-5 trans-dichloroethylene

163702-07-6 Methyl nonafluorobutyl ether

163702-08-7 Methyl nonafluoroisobutyl ether

· **California Proposition 65:**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **New Jersey Right-to-Know List:**

None of the ingredients are listed.

· **New Jersey Special Hazardous Substance List:**

None of the ingredients are listed.

· **Pennsylvania Right-to-Know List:**

156-60-5 trans-dichloroethylene

· **Pennsylvania Special Hazardous Substance List:**

156-60-5 trans-dichloroethylene

E

· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency):**

156-60-5 trans-dichloroethylene

II

· **TLV (Threshold Limit Value established by ACGIH):**

None of the ingredients are listed.

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· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**



· **Signal word:** Warning

· **Hazard statements:**

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

· **Precautionary statements:**

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear eye protection / face protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a poison center/doctor if you feel unwell.

P337+P313 If eye irritation persists: Get medical advice/attention.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

The product is not subject to be labelled according with the prevailing version of the regulations on hazardous substances.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Contact:**

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety & Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flammable Liquids 2: Flammable liquids – Category 2

Acute Toxicity - Inhalation 4: Acute toxicity – Category 4

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

*** Data compared to the previous version altered.**

SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106

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