

Safety Data Sheet

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2024 and GHS Rev 07

Date of issue: 08/20/2025

Revised on 08/20/2025

1 Identification

- **Product Identifier**
- **Trade Name: FluoSolv 71IPA**
- **Relevant identified uses of the substance or mixture and uses advised against:**
Cleaning, drying and rinse agent for co-solvents and degreasers
- **Product Description:** For Industrial Use Only.
- **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:**
The product does not need classification according to OSHA HazCom Standard 29 CFR paragraph (d) of §1910.1200(g) and GHS Rev 03.
- **Label elements:**
- **Hazard pictograms:** Non-Regulated Material
- **Signal word:** Non-Regulated Material
- **Hazard-determining components of labeling:**
Isopropanol
- **Hazard statements:** Non-Regulated Material
- **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.
- **Information pertaining to particular dangers for man and environment:**
- **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
- **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 1
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 0
Fire = 1
Physical Hazard = 0

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

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· **Classification according to (d)(1)(ii) of § 1910.1200**

The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

· **Hazards not otherwise classified**

There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

3 Composition/Information on Ingredients

· **Non-hazardous components:**

163702-08-7	Methyl nonafluoroisobutyl ether	50-90%
163702-07-6	Methyl nonafluorobutyl ether	5-45%

· **Chemical characterization: Substance**

· **Description:**

Mixture of substances listed with non-hazardous additions and/or components that are less than listing threshold. All non-hazardous, components listed under threshold, and listed component total 100%.

· **Dangerous Components:**

CAS: 67-63-0	Isopropanol	4-5%
RTECS: NT 8050000	⚠ Flammable liquids 2, H225; ⚠ Eye irritation 2A, H319; Specific target organ toxicity (single exposure) 3, H336	

· **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:** If symptoms persist, call a physician.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Wash with soap and water.

If skin irritation continues, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes under running water.

If easy to do so, remove contact lenses if worn.

If eye irritation occurs, consult a doctor.

· **After swallowing:**

Rinse mouth with water.

If swallowed and symptoms occur, consult a doctor.

· **Most important symptoms and effects, both acute and delayed:**

Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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- **Indication of any immediate medical attention and special treatment needed:**
Treat symptomatically.

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:**
Carbon monoxide, Carbon dioxide, and Hydrogen Fluoride during combustion. Exposure to extreme heat can give rise to thermal decomposition. Material displays no closed-cup flash point but may form flammable/explosive vapor air mixture.
- **Advice for firefighters**
- **Special protective equipment for firefighters:**
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:**
Keep away from sparks, flames, and extreme heat. Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.
- **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.

· PAC-1:

163702-08-7	Methyl nonafluoroisobutyl ether	2500 ppm
163702-07-6	Methyl nonafluorobutyl ether	2500 ppm
67-63-0	Isopropanol	400 ppm

· PAC-2:

163702-08-7	Methyl nonafluoroisobutyl ether	8200 ppm
163702-07-6	Methyl nonafluorobutyl ether	8200 ppm
67-63-0	Isopropanol	2000* ppm

· PAC-3:

163702-08-7	Methyl nonafluoroisobutyl ether	15000 ppm
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163702-07-6	Methyl nonafluorobutyl ether	15000 ppm
67-63-0	Isopropanol	12000** ppm

· **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.

7 Handling and Storage

· **Precautions for safe handling:**

Do not breathe thermal decomposition products. Avoid skin contact with hot material. For industrial or professional use only. Not for consumer sale or use. Store work clothes separately from other clothing, food and tobacco products. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Keep away from sparks/flames/extreme heat. Keep away from sparks, flames, and extreme heat.

· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**

· **Storage**

· **Requirements to be met by storerooms and receptacles:**

Store at temperatures not exceeding 38C/100F. Store away from strong bases. Store away from oxidizing agents.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** None.

· **Specific end use(s):** No further relevant information available.

8 Exposure Controls/Personal Protection

· **Control parameters:**

· **Components with occupational exposure limits:**

163702-08-7 Methyl nonafluoroisobutyl ether

TWA 750 ppm (AIHA)

163702-07-6 Methyl nonafluorobutyl ether

TWA 750 ppm (AIHA)

67-63-0 Isopropanol

PEL Long-term value: 980 mg/m³, 400 ppm

REL Short-term value: 1225 mg/m³, 500 ppm
Long-term value: 980 mg/m³, 400 ppm

TLV Short-term value: 984 mg/m³, 400 ppm
Long-term value: 491 mg/m³, 200 ppm
BEI, A4

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· **Ingredients with biological limit values:**

67-63-0 Isopropanol

BEI	40 mg/L
	urine
	end of shift at end of workweek
	Acetone (background, nonspecific)

· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· **Exposure controls:**

· **Appropriate engineering controls** No further data; see section 7.

· **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:** Use suitable respiratory protective device in case of insufficient ventilation.

· **Protection of hands:** Not required.

· **Material of gloves:** Not applicable.

· **Penetration time of glove material:** Not applicable.

· **Eye protection:**



Tightly sealed goggles

· **Limitation and supervision of exposure into the environment:** None

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Liquid

· **Color:**

Clear, Colorless

· **Odor:**

Mild

· **Odor threshold:**

Not determined.

· **Melting point/Melting range:**

Not determined.

· **Boiling point/Boiling range:**

54 °C (129.2 °F)

· **Flammability:**

Has flammable limits

· **Explosion limits:**

· **Lower:**

4 Vol %

· **Upper:**

16.7 Vol %

· **Flash point:**

None

· **Auto igniting:**

443 °C (829.4 °F)

· **Decomposition temperature:**

Not determined.

· **pH-value:**

Not determined.

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- **Viscosity:**
- **Kinematic @ 23 °C (73.4 °F):** <10 mPas
- **Dynamic @ 20 °C (68 °F):** 0.45 mPas
- **Solubility in / Miscibility with:**
- **Water @ 20 °C (68 °F):** <10 %
- **Partition coefficient (n-octanol/water):** Not determined.
- **Vapor pressure @ 20 °C (68 °F):** 276 hPa (207 mm Hg)
- **Vapor pressure:**
- **Density @ 20 °C (68 °F):** 1.48 g/cm³ (12.3506 lbs/gal)
- **Relative density:** Not determined.
- **Vapor density @ 20 °C (68 °F):** 7.1 g/cm³ (59.2495 lbs/gal)
- **Particle characteristics** Not applicable.
- **Other information:**
- **Appearance:**
- **Form:** Liquid
- **Important information on protection of health and environment, and on safety.**
- **Ignition temperature:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Solvent content:**
- **VOC content:** 67 g/L
- **Change in condition**
- **Evaporation rate:** Not determined.

10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Product is 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:** Sparks and/or flames
- **Incompatible materials:**
 - Strong bases
 - Strong oxidizing agents
- **Hazardous decomposition products:**
 - Carbon monoxide, Carbon dioxide, Perfluoroisobutylene (PFIB) At Elevated Temperatures - extreme conditions of heat Toxic Vapor, Gas, Particulate At Elevated Temperatures.

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11 Toxicological Information

· **Information on toxicological effects:**

· **Acute toxicity:**

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

67-63-0 Isopropanol

Oral	LD50	5,045 mg/kg (Rat)
Dermal	LD50	12,800 mg/kg (rabbit)
Inhalative	LC50/4 h	30 mg/l (Rat)
	LC50/96 hours	9,640 mg/l (Pimephales)

163702-08-7 Methyl nonafluoroisobutyl ether

Oral	LD50 Oral	>5,000 ml/kg (Rat)
Dermal	LD50	>5,000 mg/kg (not defined)
Inhalative	LC50/4 h	>1,000 mg/l (Rat)

163702-07-6 Methyl nonafluorobutyl ether

Oral	LD50 Oral	>5,000 ml/kg (Rat)
Dermal	LD50	>5,000 mg/kg (not defined)
Inhalative	LC50/4 h	>1,000 mg/l (Rat)

· **Primary irritant effect:**

· **On the skin:**

163702-08-7 Methyl nonafluoroisobutyl ether

Irritation of skin	Skin Irritation	(rabbit)
		No significant irritation

· **On the eye:**

163702-08-7 Methyl nonafluoroisobutyl ether

Irritation of eyes	Eye Irritation	(rabbit)
		No significant irritation

· **Sensitization:**

163702-08-7 Methyl nonafluoroisobutyl ether

Sensitization	Skin Sensitization	(guinea pig)
		Not classified

· **Germ cell mutagenicity** Not mutagenic.

· **Additional toxicological information:**

· **Interactive effects** No interactive effects between components are known.

· **Carcinogenic categories:**

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

67-63-0	Isopropanol	3
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· **NTP (National Toxicology Program):**

None of the ingredients are listed.

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

None of the ingredients are listed.

· **Alternative sources for toxicological information**

No non-standard sources for toxicological information where used.

12 Ecological Information

· **Toxicity:**

· **Aquatic toxicity:**

67-63-0 Isopropanol

EC50 6,851 mg/l (Green algae)

5,102 mg/l (Water flea)

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

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

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

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

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects:**

· **Remark:** Harmful to fish

· **Additional ecological information:**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

13 Disposal Considerations

· **Waste treatment methods**

· **Recommendation:**

Observe all federal, state and local environmental regulations when disposing of this material.

· **Uncleaned packaging**

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

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport Information

· **UN-Number:**

· **DOT, ADR/ADN, IMDG, IATA**

Non-Regulated Material

· **UN proper shipping name:**

· **DOT, ADR/ADN, IMDG, IATA**

Non-Regulated Material

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- | | |
|---|------------------------|
| · Transport hazard class(es): | |
| · DOT, ADR/ADN, ADN, IMDG, IATA | |
| · Class: | Non-Regulated Material |
| · Packing group: | |
| · DOT, ADR/ADN, IMDG, IATA | Non-Regulated Material |
| · Environmental hazards: | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: | Not applicable. |
| · Special precautions for user: | Not applicable. |
| · UN "Model Regulation": | Non-Regulated Material |

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):**

67-63-0 Isopropanol

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

All components have the value ACTIVE.

- **Hazardous Air Pollutants**

None of the ingredients are listed.

- **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:**

67-63-0 Isopropanol

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

67-63-0 Isopropanol

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

67-63-0 Isopropanol

· **Pennsylvania Special Hazardous Substance List:**

67-63-0 Isopropanol

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· **Carcinogenic categories:**

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

None of the ingredients are listed.

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

67-63-0 Isopropanol

A4

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

None of the ingredients are listed.

· **GHS label elements** Non-Regulated Material

· **Hazard pictograms:** Non-Regulated Material

· **Signal word:** Non-Regulated Material

· **Hazard-determining components of labeling:**

Isopropanol

· **Hazard statements:** Non-Regulated Material

· **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.

· **Date of previous version** 07/15/2025

· **Date of preparation** 08/20/2025

· **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

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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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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

BEI: Biological Exposure Limit

Flammable liquids 2: Flammable liquids – Category 2

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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