

Safety Data Sheet

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

Date of issue: 08/19/2025

Revised on 08/19/2025

1 Identification

· **Product Identifier**

· **Trade Name:** Fluosolv 7100 Aerosol

· **Relevant identified uses of the substance or mixture and uses advised against:**

· **Product Description:**

For Industrial Use only. Not intended for consumer sale or use. Not intended for use as a medical device or drug.

Contact cleaner., Industrial use

· **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:**



Gas cylinder

Gases under pressure - Dissolved gas H280 Contains gas under pressure; may explode if heated.

· **Label elements:**

· **Hazard pictograms:**



· **Signal word:** Warning

· **Hazard statements:**

H280 Contains gas under pressure; may explode if heated.

· **Precautionary statements:**

P410+P403 Protect from sunlight. Store in a well-ventilated place.

· **Unknown acute toxicity:**

This value refers to knowledge of known, established toxicological or ecotoxicological values.

5 % 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

(Contd. on page 2)

US

Safety Data Sheet

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

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· HMIS-ratings (scale 0 - 4)

HEALTH	0	Health = 0
FIRE	1	Fire = 1
REACTIVITY	0	Physical Hazard = 0

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

 · **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	53.35-87.3%
163702-07-6	Methyl nonafluorobutyl ether	9.7-43.65%

 · **Chemical characterization: Substance**

 · **CAS No. Description**

Non-Regulated Material

 · **Identification number(s)** Not Applicable

 · **Additional information:**

Trade secret made in accordance with paragraph (i) of §1910.1200 of 29 CFR 1910.1200, the OSHA Hazard Communication Standard and U.S. Code of Federal Regulations.

 · **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: 124-38-9	Carbon Dioxide	1-5%
RTECS: FF 6400000	⚠ Gases under pressure - Compressed gas, H280; Simple Asphyxiant	

 · **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:** No need for first aid is anticipated

 · **After skin contact:** No need for first aid is anticipated

 · **After eye contact:** No need for first aid is anticipated

(Contd. on page 3)

US

Safety Data Sheet

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

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- **After swallowing:** No need for first aid is anticipated
- **Most important symptoms and effects, both acute and delayed:**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**
Treat symptomatically.

5 Fire-Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** No further relevant information.
- **Special hazards arising from the substance or mixture:**
Closed containers exposed to heat from fire may build pressure and explode. Exposure to extreme heat can give rise to thermal decomposition.
- **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 heat/sparks/open flames/hot surfaces. - No smoking. Ventilate the area with fresh air. 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:**
Dispose of the collected material according to regulations.
If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

· PAC-1:

163702-08-7	Methyl nonafluoroisobutyl ether	2500 ppm
163702-07-6	Methyl nonafluorobutyl ether	2500 ppm
124-38-9	Carbon Dioxide	54000 mg/m3

(Contd. on page 4)

US

Safety Data Sheet

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

Date of issue: 08/19/2025

Revised on 08/19/2025

Trade Name: Fluosolv 7100 Aerosol
· PAC-2:

163702-08-7	Methyl nonafluoroisobutyl ether	8200 ppm
163702-07-6	Methyl nonafluorobutyl ether	8200 ppm
124-38-9	Carbon Dioxide	72000 mg/m3

· PAC-3:

163702-08-7	Methyl nonafluoroisobutyl ether	15000 ppm
163702-07-6	Methyl nonafluorobutyl ether	15000 ppm
124-38-9	Carbon Dioxide	90000 mg/m3

· 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. For industrial/occupational use only. Not for consumer sale or use. Store work clothes separately from other clothing, food and tobacco products. Do not pierce or burn, even after use. No smoking: Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to the formation of hazardous decomposition products.

· 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 in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50C/122F. Store away from strong bases.

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

· Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

· 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)

(Contd. on page 5)

US

Safety Data Sheet

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

Date of issue: 08/19/2025

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Trade Name: Fluosolv 7100 Aerosol

124-38-9 Carbon Dioxide

PEL	Long-term value: 9000 mg/m ³ , 5000 ppm
REL	Short-term value: 54,000 mg/m ³ , 30,000 ppm Long-term value: 9000 mg/m ³ , 5000 ppm
TLV	Short-term value: 54000 mg/m ³ , 30000 ppm Long-term value: 9000 mg/m ³ , 5000 ppm

- **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:** 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:** No chemical protective gloves are 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** Gaseous
- **Color:** Clear, Colorless
- **Odor:** Ether-like
- **Odor threshold:** Not determined.
- **Melting point/Melting range:** Not determined.
- **Boiling point/Boiling range:** 61 °C (141.8 °F)
- **Flammability:** Not determined.
- **Explosion limits:**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Flash point:** None
- **Auto igniting:** 405 °C (761 °F)
- **Decomposition temperature:** Not determined.
- **pH-value:** Not determined.
- **Viscosity:**
- **Kinematic @ 20 °C (68 °F):** 0.6 cp
- **Dynamic @ 20 °C (68 °F):** 0.4 mPas

(Contd. on page 6)

US

Safety Data Sheet

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

Date of issue: 08/19/2025

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- **Solubility in / Miscibility with:**
 - **Water @ 20 °C (68 °F):** <12 ppm
 - **Partition coefficient (n-octanol/water):** Not determined.
 - **Vapor pressure @ 20 °C (68 °F):** 20 mmHg
 - **Vapor pressure:**
 - **Density @ 20 °C (68 °F):** 1.52 g/cm³ (12.6844 lbs/gal)
 - **Relative density:** Not determined.
 - **Vapor density @ 20 °C (68 °F):** 8.6
 - **Particle characteristics** Not applicable.
-
- **Other information:**
 - **Appearance:**
 - **Form:** Aerosol
 - **Important information on protection of health and environment, and on safety.**
 - **Ignition temperature:** Product is not self-igniting.
 - **Danger of explosion:** Not determined.
 - **Change in condition**
 - **Evaporation rate:** Not applicable.

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:** None
- **Incompatible materials:** Strong bases
- **Hazardous decomposition products:**
Hydrogen fluoride, Perfluoroisobutylene (PFIB) At extreme heat

11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

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)

(Contd. on page 7)

US

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

Date of issue: 08/19/2025

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· **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		

· **Additional toxicological information:**

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

· **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.

· **Alternative sources for toxicological information**

No non-standard sources for toxicological information where used.

12 Ecological Information

· **Toxicity:**

· **Aquatic toxicity:** No further relevant information available.

· **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:** Harmful to aquatic organisms

US

(Contd. on page 8)

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13 Disposal Considerations

- **Waste treatment methods**
- **Recommendation:**
Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packaging**
- **Recommendation:**
Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. Facility must be capable of handling aerosol cans. Empty and clean product containers may be disposed as non-hazardous waste. Consult your specific regulations and service providers to determine available options and requirements.
- **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 |
| · 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):**
None of the ingredients are listed.

(Contd. on page 9)

US

Safety Data Sheet

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07

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· **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:**

124-38-9 Carbon Dioxide

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

None of the ingredients are listed.

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

124-38-9 Carbon Dioxide

· **Pennsylvania Special Hazardous Substance List:**

None of the ingredients are listed.

· **Carcinogenic categories:**

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

None of the ingredients are listed.

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

None of the ingredients are listed.

· **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:**

H280 Contains gas under pressure; may explode if heated.

(Contd. on page 10)

US

Safety Data Sheet

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07

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· **Precautionary statements:**

P410+P403 Protect from sunlight. Store in a well-ventilated place.

· **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** 12/04/2023

· **Version number of previous version:** 1

· **Date of preparation** 08/19/2025

· **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)

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

Gases under pressure - Compressed gas: Gases under pressure – Compressed gas

Gases under pressure - Dissolved gas: Gases under pressure – Dissolved gas

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

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