

Date: April 22, 2025 Rev. 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Unisolv-FC
Chemical Name: 1,1,1,2,2,4,5,5,5- Nonafluoro-4-(Trifluoromethyl)-3-Pentanone
Uses: Extinguishing agents, cleaning agents, solvents, heat transfer/cooling liquid
Synonyms: Dodecafluoro-2-methyl-3-pentanone / Perfluoro(2-methyl-3-pentanone)
Supplier Information: Unistar Chemical Inc.
425 Huehl Road, Bldg 1,
Northbrook, IL, 60062
1-847-724-8869
E-mail: info@unistarchemical.com
Emergency Contact: (800) 424-9300 CHEMTREC

2. HAZARD IDENTIFICATION

Signal word: NONE

Hazard classification:

Aquatic Environment, long term (chronic) Category 3

HAZARDS

H412 Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS

P273 Avoid release to the environment
P501 Dispose of contents/ container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS	Concentration %
1,1,1,2,2,4,5,5,5-Nonafluoro-4-(Trifluoromethyl)-3-Pentanone	756-13-8	>= 99.0

4. FIRST AID MEASURES

General Advice:	Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Inhalation :	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing. Administer oxygen if breathing is difficult. Get medical advice/attention if you feel unwell.
Skin contact:	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.
Eye contact:	IF IN EYES: 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:	Not an expected route of exposure. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. Never give anything by mouth to an unconscious person.
Notes to physician:	Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable extinguishing media:	The substance can be used as extinguishing agent. Wear suitable respiratory equipment to protect from harmful gases caused by thermal decomposition.
Unsuitable extinguishing media:	No information available.
Specific hazards arising from the chemical:	Thermal decomposition can lead to release of irritating and toxic gases and vapors, such as carbon monoxide, carbon dioxide, hydrogen fluoride.
Protective equipment and precautions for firefighters:	Evacuate personnel to safe areas. Move containers from fire area if you can do it without risk. Cool drums with water spray. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Stay upwind. Ensure adequate ventilation, especially in confined areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective

equipment and emergency procedures:

Evacuate personnel to safe areas. Remove all sources of ignition. Ensure adequate ventilation, especially in confined areas. Avoid contact with eyes and skin. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Environmental precautions:

Local authorities should be advised if significant spillages cannot be contained. Prevent entry into waterways, sewers, basements or confined areas.

Methods/materials for containment:

Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid release to the environment.

7. HANDLING AND STORAGE

Handling:

Handle in accordance with good industrial hygiene and safety practice. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, flame and other sources of ignition. Ensure adequate ventilation, especially in confined areas. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Storage:

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition. Keep locked up and out of reach of children. Keep away from food, drink and animal feeding stuffs. Store in accordance with local regulations.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Control Parameters

Exposure limits:

No data applicable

Engineering Controls:

Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations. Remove all sources of ignition.

Protective equipment

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection

Wear protective gloves.

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Liquid
Color	Colorless
Odor	Faint odor
Odor threshold	Not determined
pH	Not determined
Melting point/freezing point	-108.0 °C
Boiling point / boiling range	49.2 °C
Flammability (solid, gas)	Not flammable
Flammability limit in air	Not determined
Flash point	Not determined
Autoignition temperature	Not determined
Decomposition temperature	Not determined
Kinematic viscosity	Not determined
Dynamic viscosity	Not determined
Solubility(ies)	Practically insoluble in water
Partition coefficient (LogPow)	Not determined
Vapor pressure	0.3260 bar (20 °C)
Density	1.60 g/mL
Relative density	Not determined
Vapor density	11.6
Evaporation rate	Not determined
Explosive properties	Not an explosive
Oxidizing properties	Not determined

10. STABILITY AND REACTIVITY

Reactivity:	No information available.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	No information available.
Incompatible materials:	None known based on information supplied.
Hazardous decomposition products:	Carbon monoxide, carbon dioxide, hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
3-Pentanone, 1,1,1,2,2,4,5,5,5-nonafluoro-4-(trifluoromethyl)- (CAS #: 756-13-8)	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 98 658 ppm (Rat) 4 h

Skin Corrosion:	Not irritating to the skin
Serious eye damage:	No eye irritation
Sensitization	No sensitization responses were observed
Germ cell mutagenicity	No information available.
Carcinogenicity:	No information available.
Reproductive Toxicity:	No information available.
STOT- single exposure:	No information available.
STOT- repeated exposure:	No information available.
Aspiration Hazard:	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants EC50	Fish LC50	Crustacea EC50
3-Pentanone, 1,1,1,2,2,4,5,5,5-nonafluoro-4-(trifluoromethyl)- (CAS #: 756-13-8)	10.6 mg/L 96h Pseudokirchneriella subcapitata	> 1 070 mg/L 96h Pimephales promelas	> 1 080 mg/L 48h Daphnia magna

Persistence and biodegradability:	Not readily biodegradable.
Bio accumulation:	BCF = 1.2 - 4.8
Mobility:	No information available.
Other adverse effects:	No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products :

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging:

Disposal should be in accordance with applicable regional, national and local laws and regulations.

EU waste code (product as sold): 07 01 03* Organic halogenated solvents, washing liquids and other mother liquors

14 06 02* Other halogenated solvents and solvent mixtures

14. TRANSPORTATION INFORMATION

UN number	Not regulated
UN proper shipping name	Not regulated
Hazard class	Not regulated
Packing group	Not regulated
Environmental hazards	Non-marine pollutant
Special precautions	No information available.
Transport in bulk according to Annex II of MARPOL and the IBC Code	Not applicable

15. REGULATORY INFORMATION:

International inventories "-" Not Listed "X" Listed

Component	AICS	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	TSCA
3-Pentanone, 1,1,1,2,2,4,5,5,5-nonafluoro-4-(trifluoromethyl)- 756-13-8 (≥ 99)	X	X	X	X	X	X	-	X

16. OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the SDS

TWA - TWA (Time Weighted Average)

STEL - STEL (Short Term Exposure Limit)

Ceiling - Maximum limit value

TSCA - Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

IECSC - Chinese Inventory of Existing Chemical Substances

EINECS/ELINCS - European Inventory of Existing Commercial chemical Substances/European List of Notified Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

KECL - Korea Existing Chemicals List

NZIoC - New Zealand Inventory of Chemicals

PICCS - The Philippine Inventory of Chemicals and Chemical Substances

AICS - The Australian Inventory of Chemical Substances

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