SHTG 1230 (FK-5-1-12) SAFETY DATA SHEET

Version: 4.0
Issue Date: 15 January 2019
Revision: 18 September 2025
UL File: EX27856

SECTION 1 IDENTIFICATION

Product Name	SHTG 1230 (FK-5-1-12)
Chemical Name	1,1,1,2,2,4,5,5,5-Nonafluoro-4-(trifluoromethyl)-3-pentanone
Synonym	Dodecafluoro-2-methyl-3-pentanone / Perfluoro(2-methyl-3-pentanone)
CAS No.	756-13-8
EC No.	N/A
Recommended Use	Clean agent fire extinguishing system
Supplier	Safety Hi-Tech Global LLC
Address	16192 Coastal Highway, Lewes, Delaware 19958, USA
Phone	+1 (302) 510-1465
Email	info@sht-global.com
Emergency Tel.	+1 (302) 510-1465

SECTION 2 HAZARDS IDENTIFICATION

GHS Classification — Pressurized product (cylinders)

Classification	Gas under pressure — Compressed gas · Chronic hazard to aquatic environment, Category 3 (H412)
Signal Word	Warning
Hazard Statements	H412 — Harmful to aquatic life with long lasting effects. Contents under pressure; may explode if heated.
Precautionary Statements	P273 — Avoid release to the environment. P410 — Protect from sunlight. P403 — Store in a well-ventilated place. P501 — Dispose of contents/container to an approved waste disposal plant.

GHS Classification — Non-pressurized (agent only)

Classification	Chronic hazard to aquatic environment, Category 3 (H412)
Signal Word	None
Hazard Statements	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.
Other Hazards	Contact with liquid or escaping vapor may cause frostbite.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
1,1,1,2,2,4,5,5,5-Nonafluoro-4-(trifluoromethyl)-3-pentanone	756-13-8	≥ 99.0%

SECTION 4 FIRST AID MEASURES

General	Do not get in eyes, on skin, or on clothing. In case of accident, seek medical advice immediately.
Inhalation	Move victim to fresh air. Obtain medical attention immediately for any breathing difficulty. Administer oxygen if required.
Skin Contact	Wash with soap and plenty of water. In case of contact with liquefied gas, thaw frosted parts with lukewarm water. Remove contaminated clothing. If irritation persists, call a physician.

Eye Contact	Immediately flood the eye with plenty of water for several minutes, holding the eye open. Remove contact lenses if present. Obtain medical attention if soreness or redness persists.
Ingestion	Rinse mouth. Not an expected route of exposure. Seek medical advice if you feel unwell. Do not induce vomiting.
Treatment	Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing Media	This substance is used as an extinguishing agent. Use extinguishing measures appropriate to other materials involved. Keep pressurized containers cool with water spray.
Special Hazards	Thermal decomposition may release: carbon monoxide (CO), carbon dioxide (CO2), hydrogen fluoride (HF), and perfluoroisobutylene — all potentially toxic. Pressurized containers may rupture or explode in fire.
Advice for Firefighters	Wear full protective clothing and self-contained breathing apparatus. Evacuate personnel to safe areas. Stay upwind.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Evacuate personnel to safe areas. Remove all sources of ignition. Ensure adequate ventilation. Wear appropriate protective clothing. Avoid contact with eyes and skin.
Environmental Precautions	Prevent entry into waterways, sewers, basements, or confined areas. Notify local authorities if spillage cannot be contained.
Containment & Cleanup	Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal. Avoid breathing vapors.

SECTION 7 HANDLING AND STORAGE

Handling	Handle with good industrial hygiene and safety practices. Keep away from heat, sparks, flame, and sources of ignition. Ensure adequate ventilation. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product.
Storage	Keep container tightly closed in a dry, well-ventilated place. Storage temperature: ≤ 38°C (100°F). Protect from sunlight. Pressurized containers must be properly secured to prevent falling. Keep out of reach of children. Store in original container in accordance with local regulations.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limit	Manufacturer recommended exposure limit: 150 ppm, 8 hr TWA (per 3M). NOAEL (cardiac sensitization): 10,000 ppm.
Engineering Controls	Ensure adequate ventilation. Provide showers and eyewash stations.
Respiratory Protection	Wear suitable respiratory equipment when ventilation is insufficient or vapor concentrations may be elevated.
Hand Protection	Wear protective gloves.
Eye/Face Protection	Chemical goggles or safety glasses with side shields.
Skin Protection	Normal work wear; wear protective clothing when risk of skin contact with liquid.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless liquid
Odor	Faint / slight odor
Boiling Point	49.2°C (120.6°F)
Melting / Freezing Point	-108.0°C (-162.4°F)
Flash Point	Not applicable — non-flammable
Flammability	Not flammable
Vapor Pressure	0.404 bar at 25°C (5.87 psi)

Vapor Density (air = 1)	11.6
Specific Gravity	1.60 g/mL
Solubility in Water	Practically insoluble (nil)
Kinematic Viscosity	0.6 centipoise at 25°C
Auto-ignition Temperature	Not applicable
Global Warming Potential	< 1 (100-year ITH)
Ozone Depletion Potential	0

SECTION 10 STABILITY AND REACTIVITY

Reactivity	Pressurized containers may rupture or explode if exposed to heat or ultraviolet light.
Chemical Stability	Stable under recommended storage conditions.
Hazardous Polymerization	Does not occur.
Conditions to Avoid	Exposure to direct sunlight, ultraviolet light, high heat sources, and incompatible materials.
Incompatible Materials	Strong bases, amines, alcohols, water.
Hazardous Decomposition	Oxides of carbon (CO, CO2), hydrogen fluoride (HF), perfluoroisobutylene. All products are irritating and potentially toxic.

SECTION 11 TOXICOLOGICAL INFORMATION

Parameter	Value	Species / Conditions
Inhalation LC50	> 1,227 mg/L	Rat, 4h
Oral LD50	> 5,000 mg/kg	Rat (estimated)
Dermal LD50	> 5,000 mg/kg	Rat (estimated)
NOAEL (cardiac sensitization)	10,000 ppm	Dog, 17 min inhalation
NOAEL (90-day repeat)	3,000 ppm	Rat, inhalation
Skin Irritation	No significant irritation	Rabbit study
Eye Irritation	No significant irritation	Rabbit study
Sensitization	Did not cause skin sensitization	Guinea pig study
Mutagenicity	Not mutagenic	In vitro and in vivo
Reproductive Toxicity	Not toxic to reproduction or development	Rat, inhalation NOAEL 3,000 ppm
Carcinogenicity	Not considered carcinogenic (NTP, IARC, OSHA)	—

SECTION 12 ECOLOGICAL INFORMATION

Organism	Value	Conditions
Algae (Pseudokirchneriella subcapitata)	EC50 7.7 mg/L	72h
Fish (Pimephales promelas)	LC50 > 1,070 mg/L	96h
Crustacea (Daphnia magna)	EC50 > 1,080 mg/L	48h

Persistence / Degradability	Not readily biodegradable. Photolytic half-life: 3 to 5 days. Persistent photolytic degradation product: trifluoroacetic acid.
Bioaccumulation	BCF = 1.2 to 4.8; low bioaccumulation potential.
Mobility in Soil	Product is highly insoluble in water and volatile.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal	Dispose in accordance with applicable regional, national and local laws and regulations.
Contaminated Packaging	Dispose in accordance with applicable regional, national and local laws and regulations.

SECTION 14 TRANSPORT INFORMATION

Pressurized containers	DOT: Fire extinguishers, 2.2, UN1044. IATA/IMDG: Consult current regulations prior to shipping.
Non-pressurized	Not regulated (DOT, IATA, IMDG).
Environmental Hazards	Non-marine pollutant
MARPOL / IBC Code	Not applicable

SECTION 15 REGULATORY INFORMATION

Inventory	TSCA	DSL	EINECS	ENCS	IECSC	KECL	AICS
756-13-8	✓	✓	✓	✓	✓	✓	✓

SECTION 16 OTHER INFORMATION

Version	4.0
Issue Date	15 January 2019
Previous Revision	22 August 2023 (v3.0)
Revision Date	18 September 2025
Revision Notes	v4.0: Corrected vapor pressure to 0.404 bar at 25°C; updated oral/dermal LD50 to > 5,000 mg/kg; added cardiac sensitization NOAEL (10,000 ppm) and 90-day NOAEL (3,000 ppm); added perfluoroisobutylene to decomposition products; corrected incompatible materials (strong bases, amines, alcohols, water); updated algae EC50 to 7.7 mg/L; added pressurized/non-pressurized GHS classification; updated transport section.
Compliance	This SDS complies with Regulation (EC) No. 1907/2006 (REACH) and OSHA Hazard Communication Standard (29 CFR 1910.1200).

The information provided in this Safety Data Sheet is correct to the best of our knowledge at the date of its publication. The information is designed as guidance for safe handling, use, processing, storage, transportation, disposal, and release only and is not to be considered a warranty or quality specification. — End of Safety Data Sheet —