SAFETY DATA SHEET

Section 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	SF 1230™ Fire Protection Fluid
Other Identifiers:	Multi-purpose Liquid Chemical (Pressurized and Non-pressurized)
Product Code(s):	1230
Model Code(s) for Extinguishers:	775
Recommended Use:	Streaming and Flooding Fire suppression, not for human or animal drug use.
Manufacturer:	AMEREX CORPORATION
Internet Address:	www.amerex-fire.com
Address:	7595 Gadsden Highway, P.O. Box 81 Trussville, AL 35173-0081
Company Telephone:	(205) 655-3271
E-mail Address:	info@amerex-fire.com
Emergency Contacts:	Chemtrec 1(800) 424-9300 or (703) 527–3887
Revised:	

Section 2. HAZARDS IDENTIFICATION

GHS – Classification

Hazard Class	Category	Signal Word
Aerosols	Category 3	Warning
Hazardous to the aquatic environment, long-term hazard	Category 3	None

GHS – Label Symbol(s):

If Pressurized: Gas Under Pressure

GHS – Signal Word(s): **Warning**

Other Hazards Not Resulting in Classification: May displace oxygen and cause rapid suffocation (simple asphyxiant).

GHS – Hazard Phrases

GHS Hazard	GHS Code(s)	Code Phrase(s)
Physical	H229	*Pressurized container; may burst if heated.
Health	None	
Environmental	H412	Harmful to aquatic life with long lasting effects.
Precautionary:		
General	P101 102	If medical advice is needed, have product container or label at hand. Keep out of reach of children.
Prevention	P210 251 273	*Keep away from heat, hot surface, sparks, open flames, and other ignition sources. No smoking. *Do not pierce or burn, even after use. Avoid release to the environment.
Response	None	
Storage	410+412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.
Disposal	P501	Dispose of contents/container through a licensed disposal company. Contaminated container should be disposed of as unused product.

*- Fire extinguishers are designed to be used to extinguish fires.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No.	Weight %
1,1,1,2,2,4,5,5,5- Nonafluoro-4-(trifluoromethyl)-3-pentanone (SF 1230™)	436-710-6	NA	756-13-8	>=99.5
Nitrogen	231-783-9	Annex IV/V	7727-37-9	<1

Note: Pressurized extinguisher uses nitrogen as an expellant

Emergency overview: Clear liquid, low odor.

Section 4. FIRST AID MEASURES

Eye Exposure: May cause mild irritation. Irrigate eyes with water and repeat until pain free. Seek medical attention if irritation develops, or if vision changes occur.

Skin Exposure: May cause mild skin irritation. In case of contact, wash with plenty of soap and water. Seek medical attention if irritation persists.

Inhalation: No need for first aid is anticipated.

Ingestion: Rinse mouth. Obtain medical attention if ingestion problems continue.

Medical conditions possibly aggravated by exposure: No other medical conditions are anticipated.

Section 5. FIRE-FIGHTING MEASURES

Flammable Properties:	Not flammable
Flash Point:	None
Suitable Extinguishing Media:	Non-combustible. Use extinguishing media suitable for surrounding conditions.
Hazardous Combustion Products:	Main decomposition product is hydrogen fluoride in fire situations. By products are irritating and potentially toxic. Pressurized container can explode in heat of fire.
Explosion Data:	
Sensitivity to Mechanical Impact:	Not sensitive
Sensitivity to Static Discharge:	Not sensitive
Unusual fire/explosion hazards:	Pressurized container can explode in heat of fire
Protective Equipment and Precautions for Firefighters:	As in any fire, wear self-contained breathing apparatus in pressure-demand, NIOSH approved or equivalent and full protective gear.

Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Evacuate area. Ventilate the area with fresh air. Use eye/face protection.
Personal Protective Equipment:	Minimum – If a large release occurs in a closed environment, evacuate immediately. Until oxygen concentrations are known, personnel entering the environment should wear self-contained breathing apparatus (positive pressure supplied air respirator). If ventilation is obviously adequate, wear an air-purifying respirator. If thermal decomposition products are present, wear a full-face air purifying respirator.
Emergency Procedures:	NA
Methods for Containment:	Prevent further leakage or spillage if safe to do so. Contain with sorbent material and booms.
Methods for Clean Up:	Contain and collect using sorbent material. Transfer to properly labeled containers for disposal.
Environmental Precautions:	Prevent material from entering waterways, drains, and sewer systems.
Other:	If product is contaminated, use PPE and containment appropriate to the nature of the most toxic chemical/material in the mixture.

Section 7. HANDLING AND STORAGE

Personal Precautions:	Use appropriate PPE when handling or maintaining equipment, and wash thoroughly after handling (see Sections 6 and 8). Do not breathe thermal decomposition products. For industrial or professional use only. Do not use in confined area with minimal air exchange. Do not eat, drink, or smoke while using this product. Wash thoroughly after handling. Avoid release to the environment.
Conditions for Safe Storage/Handling:	Keep product in original container or extinguisher. Contents are under pressure – inspect extinguisher for rust periodically to ensure container integrity. Protect from sunlight. Store in a well-ventilated area. Store away from strong bases, amines, and alcohols.
Incompatible Products:	Incompatible with strong bases.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	CAS NO.	OSHA PEL
1,1,1,2,2,4,5,5,5- Nonafluoro-4-(trifluoromethyl)-3-pentanone	756-13-8	TWA: 40 ppm (520 mg/m3)

Value is an 8 hour time weighted average concentration.

Engineering Controls:

Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment:

Eye/Face Protection:	Wear eye protection.
Skin and Body Protection:	NA
Respiratory Protection:	Use a positive supplied-air respirator if there is a potential for over exposure from an uncontrolled release, if exposure levels are not known, or under

	any other circumstances where air-purifying respirators may not provide adequate protection. If thermal degradation products are expected, use a full face supplied air respirator.
Hygiene Measures:	Good personal hygiene practices essential, such as avoiding food, tobacco products, or other hand-to-mouth contact when handling. Wash thoroughly after handling.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless liquid
Molecular Weight:	316.04 g/mol
Odor:	Low odor
Odor Threshold:	No information available
Decomposition Temperature °C:	No information available
Freezing/Melting Point °C:	-108°C
Initial Boiling Point °C:	49.2 °C at 1 atm
Physical State:	Liquid
pH:	Not applicable
Flash Point °C:	None
Auto-ignition Temperature °C:	Not applicable
Flammability:	Not Flammable
Flammability Limits in Air °C:	Upper – Not Flammable; Lower-Not Flammable
Explosivity	Upper – Not Explosive; Lower-Not Explosive
Volatile Organic Compounds	1600 g/l
Percent Volatile	100%
Evaporation Rate:	>1
Vapor Density:	11.6 (AIR=1)
Vapor Pressure:	40.4 kPa @ 25 °C
Specific gravity at 20 °C:	1.6
Solubility:	Nil
Partition Coefficient: octanol/air	No information available
Viscosity:	0.6 centipoise @ 25 °C

Section 10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage and handling conditions.

Reactivity:	This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.
Incompatibles:	Strong bases, amines, alcohols, water
Conditions to Avoid:	Storage or handling near incompatibles, heat, sunlight. Pressurized containers may rupture or explode if exposed to heat.
Hazardous Decomposition Products:	Heat of fire or elevated temperatures may release hydrogen fluoride and perfluoroisobutylene.
Possibility of Hazardous Reactions:	Slight
Hazardous Polymerization:	Will not occur.

Section 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Inhalation, skin, and eye contact.
Symptoms:	
Immediate:	
Inhalation:	No known health effects.
Eyes:	Normally does not cause significant irritation.
Skin:	Normally does not cause significant irritation.
Delayed:	Normally does not have a delayed reaction.
Acute Toxicity:	Relatively non-toxic.
Chronic Toxicity:	
Short-term Exposure:	None known.
Long-term Exposure:	None known.

Acute Toxicity Values - Health

Chemical Name	LD50		LC50 (Inhalation)
	Oral	Dermal	
1,1,1,2,2,4,5,5,5- Nonafluoro-4-(trifluoromethyl)-3-pentanone	>5000 mg/kg (rat)	>5000 mg/kg (rat)	>1,227 mg/m3 (rat)

Reproductive Toxicity

Chemical Name	Route	Value	Species	Test Result	Exposure Duration
1,1,1,2,2,4,5,5,5-Nonafluoro-4-(trifluoromethyl)-3-pentanone	Inhalation	Not classified for female reproduction	Rat	NOAEL 38.7 mg/l	Premating and during gestation
	Inhalation	Not classified for male reproduction	Rat	NOAEL 38.7 mg/l	Premating and during gestation
	Inhalation	Not classified for female reproduction	Rat	9.5 mg/l	During gestation

Target Organs and Effects (TOST): This product is not known to have any single exposure target organ toxicities. Some data exists concerning impacts on liver, kidney, bladder, but the data are not sufficient for classification; all other potential organ impacts are not apparent.

Other Toxicity Categories

Chemical Name	Germ Cell Mutagenicity	Carcinogenicity	Reproductive	Aspiration
1,1,1,2,2,4,5,5,5- Nonafluoro-4-(trifluromethyl)-3-pentanone	Not a hazard	Not considered carcinogenic	Not classified for male or female reproduction	Not a hazard

Note: Nitrogen, the expellant when in a pressurized container, is a simple asphyxiant.

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity:	Harmful to aquatic life with long lasting impacts.
Persistence/Degradability:	Insoluble in water; Photolytic half-life 3-5 days.
Probability of rapid biodegradation:	Est: -1.325 (Slow)
Anaerobic biodegradation probability:	Est: 0.2243 (Slow)
Bioaccummulation potential:	63.04 L/Kg (Low)
Bioconcentration factor:	63.02 L/Kg (wet-wt) (Low BFC)
Mobility in soil:	Highly insoluble in water
Log Koc (Kow Method):	Est: 2.66
Log Koa:	Est: 1.529
Log Kow:	Est 2.79

Ecotoxicological Information - 1,1,1,2,2,4,5,5,5- Nonafluoro-4-(trifluromethyl-3-pentanone

Test Organism	Acute (LC50)	EC50
Green algae, *Selenastrum capricornutum*	N/A	7.7 mg/l (72 hours)
Zebra Fish, *Brachydanio rerio*	>1200 mg/l (96 hours)	NA
Water flea, *Daphnia magna*	NA	>1200 mg/l (48 hours)
Green algae, *Selenastrum capricornutum*	NA	1.2 mg/l (72 hours, No obs EC)

Section 13. DISPOSAL CONSIDERATIONS

Safe Handling	Use appropriate PPE when handling and wash thoroughly after handling (see Section 8).
Waste Disposal Considerations	Dispose in accordance with federal, state, and local regulations.
Contaminated Packaging	Dispose in accordance with federal, state, and local regulations. Use a leak-proof container

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel

during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

NOTES:
This product is not a RCRA characteristically hazardous or listed hazardous waste.

Section 14. TRANSPORT INFORMATION

Marine Pollutant: NO

See current applicable transport regulations (DOT - Ground, IATA – Air, IMDG – Maritime) prior to shipping.

NOTES:
This product is not defined as a hazardous material under U.S. Department of Transportation (DOT) 49 CFR 172, or by Transport Canada "Transportation of Dangerous Goods" regulations. This transportation information covers the SF 1230™ (CAS 756-13-8) fire extinguisher agent as shipped in bulk containers and not when contained in fire extinguishers or fire extinguisher systems.

Special Precautions for Shipping:

If shipped in a stored pressure-type fire extinguisher, and pressurized with a non-flammable, non-toxic inert expellant gas, the fire extinguisher is considered a hazardous material by the US Department of Transportation and Transport Canada. The proper shipping name shall be FIRE EXTINGUISHER and the UN designation is UN 1044. The DOT hazard class/division is LIMITED QUANTITY when pressurized to less than 241 psig and when shipped via highway or rail. UN Class 2.2. Non-Flammable Gas, when shipping via air. Packing Group – N/A

Section 15. REGULATORY INFORMATION

International Inventory Status: All ingredients are on the following inventories:

Country(ies)	Agency	Status
United States of America	TSCA	Yes
Canada	DSL	Yes
Europe	EINECS/ELINCS	Yes
Australia	AICS	Yes
Japan	MITI	Yes
South Korea	KECL	Does not comply

U.S. Federal Regulatory Information:

SARA Title III Sect 311/312 Categorization: Pressurized
Pressure Hazard

SARA Title III Sect 311/312 Categorization: Non-pressurized
None

SARA Title III Sect 313
This product does not contain any chemicals that are listed in Section 313 at or above de minimis concentrations.

Clean Water/Clean Air Acts:
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42) or Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61) and Section 112 of the Clean Air Act Amendments of 1990.

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfunds Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, state, or provincial level.

U.S. State Regulatory Information:

Chemicals in this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: None
California – Permissible Exposure Limits for Chemical Contaminants: None
Florida – Substance List: None
Illinois – Toxic Substance List: None
Kansas – Section 302/303 List: None
Massachusetts – Substance List: None
Minnesota – List of Hazardous Substances: None
Missouri – Employer Information/Toxic Substance List: None
New Jersey – Right to Know Hazardous Substance List: None
North Dakota – List of Hazardous Chemicals, Reportable Quantities: None
Pennsylvania – Hazardous Substance List: None
Rhode Island – Hazardous Substance List: None
Texas – Hazardous Substance List: None
West Virginia – Hazardous Substance List: None
Wisconsin – Toxic and Hazardous Substances: None
California Proposition 65: No component is listed on the California Proposition 65 list.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations.

Section 16. OTHER INFORMATION

This SDS conforms to requirements under U.S., U.K., Canadian, Australian, and EU regulations or standards, and conforms to the 2003 ANSI Z400.1 format. No modifications of this SDS are authorized by AMEREX Corporation. Questions or comments should be directed to AMEREX Corporation (See Section 1).

Issuing Date	04-February-2025
Revision Date	-
Revision Notes	None

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