CEASEFIRE INDUSTRIES PRIVATE LIMITED

E-6, Industrial Area, Selaqui, Dehradun-248011, Uttarakhand, India.

Material Safety Data Sheet of Clean Agent Fire Extinguisher

Date of Issue: 23/12/2020

1. IDENTIFICATION OF MATERIAL AND SUPPLIER

Product Name	:	Clean Agent FK-5-1-12 Fire Extinguisher
Recommended Use	:	Fire extinguishing agent for use on electrical, flammable solids, liquids and gases.
Supplier Name	:	CEASEFIRE INDUSTRIES PRIVATE LIMITED
Address	:	E-6, Industrial Area, Selaqui, Dehradun-248011, Uttarakhand, India.

2. HAZARDS IDENTIFICATION

Emergency overview	:	DANGER Contents under pressure. Heat may cause the containers to explode. Health injuries are not known or expected under normal use.
OSHA regulatory status	:	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication)
Potential health effects	:	
Routes of exposure	:	Not applicable.
Eyes	:	Health injuries are not known or expected under normal use.
Skin	:	Health injuries are not known or expected under normal use.
Inhalation	:	P261 Avoid breathing vapors.
	:	Vapors may cause dizziness or asphyxiation without warning.
Ingestion	:	Health injuries are not known or expected under normal use.
Potential environmental Effects	:	Ecological injuries are not known or expected under normal use.
Other Hazard	:	Overheating and over pressurizing may cause gas release or violent container bursting.
	:	H412 Harmful to aquatic life with lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance		
Substance Name	:	Not applicable- This is a mixture/ preparation
CAS No.	:	Not applicable- This is a mixture/ preparation
Mixture		
Ingredient Name	:	1,1,1,2,2,4,5,5,5,-Nonafluoro-4-(trifluoromethyl)-3-pentanone
Proportion	:	100%
CAS No.	:	756-13-8
Ingredient Name	:	Nitrogen UN1066
Proportion	:	Unknown (gas varies)
CAS No.	:	7727-37-9

4. FIRST AID MEASURES

Eye Contact	:	Immediately flush eyes with plenty of water for 15 minutes whilst holding lids open. If redness, itching or burning persists get medical attention.
Skin Contact	:	Wash material off skin with copious amounts of water and removeexposed clothing (if required). If frostbitten or If itching or burning persists get medical attention.
Inhalation	:	In case of inhalation to respiratory track, immediately extricate from the exposed area. If unconscious or irritation persists seek medical attention.
Ingestion	:	DO NOT induce vomiting unless instructed to do so by a physician. Get medical attention immediately if symptoms develop.
General advice	:	If you feel unwell, seek medical advice

5. FIRE FIGHTING MEASURES

Special hazards arising from the substance or mixture	:	Thermal decomposition can lead to release of toxic gases/vapors Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.
Suitable Extinguishing Media	:	1,1,1,2,2,4,5,5,5,-Nonafluoro-4-(trifluoromethyl)-3-pentanone is a fire extinguishing media. Use media appropriate for surrounding material.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus with a full face-piece operated in positive pressure mode and chemical-protective clothing. Prevent fire extinguishing water from contaminating surface water or the ground water System

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Refer to SECTION 8 for personal protective equipment. Prevention of skin and eye contact. Ensure adequate ventilation. Shut off gas supply if this can be done safely. Isolate area until gashas dispersed Do not discharge into drains/surface waters/groundwater
Environmental precautions	:	Evacuate area. Keep upwind. Stop leak if without risk. Ventilate area
Methods and Materials for Containment and Clean Up	:	especially low places remove open flames and heating elements. Disperse gas with floor level forced air

7. HANDLING AND STORAGE

Handling	:	Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop.
Storage	:	Store in dry area in original container or fire extinguisher away from heat and ignition sources. Keep tightly sealed until used.
Incompatible Materials	:	Strong oxidizing agents. Strong acids. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters Occupational exposure limit values	:	150 ppm, 8 hr. TWA
8.2 Exposure controls Appropriate engineering controls	:	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits
Personal protective equipment Respiratory Protection	:	Self-contained breathing apparatus or full facepiece supplied-air respirator must be available in case of emergency.
Skin Protection	:	Wear protective gloves/clothing to prevent contact
Eye Protection	:	Safety glasses/chemical splash goggles
Environmental exposure Controls	:	Do not empty into drains

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Colour	:	Colourless
Odour	:	Low Odor
pH	:	Not available
Vapour Pressure	:	40.4 Kpa. (25^{o}C)
Vapour Density	:	Not applicable
Boiling Point	:	49^{o}C
Freezing/Melting Point	:	-108^{o}C
Solubility in Water	:	Not available
Specific Gravity or Density	:	1.6 g/cm^{3}
Flash point	:	Not available
Flammability range	:	Non flammable
Ignition Temperature	:	Does not ignite
Partition coefficient: n-octanol / water	:	Log Kow= 2.11

10. STABILITY AND REACTIVITY

Reactivity	:	Stable under recommended storage and handling conditions (see SECTION 7, handling and storage)
Chemical Stability	:	Stable under normal conditions of use
Conditions to Avoid	:	Keep away from heat and ignition sources. Protect from sunlight
Incompatible Materials	:	Strong oxidizing materials, Strong acids and bases
Hazardous Reactions	:	No known hazardous reactions
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating or toxic gases/vapors: carbon oxides, hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Eye Contact	:	May cause frostbite.
Skin Contact	:	May cause frostbite.
Inhalation	:	In high concentration the gas may cause suffocation. Victim may not be aware of asphyxiation. In confined or poorly ventilated areas, vapors can readily accumulate and can cause unconsciousness and death.
Ingestion	:	Not an expected route of entry
Acute Toxicity	:	> 1227 mg/1/4h (> 10% by volume). (LC50 Inhalation rat)
Reproductive toxicity	:	Not available
Carcinogenicity	:	Not listed as a carcinogen by NTP, IARC, or OSHA

12. ECOLOGICAL INFORMATION

Toxicity (LC 50)		
Zebra fish (Danio rerio) 96h	:	> 1200 mg/L
Degradability	:	Atmospheric lifetime is approximately 0.014 years (5 days)
Bioaccumulation/ Accumulation	:	No data available
Mobility in Environmental Media	:	Not available
Other adverse effects	:	Ozone Depletion Potential (CFC 11 = 1.0): 0.00 Global Warming Potential (CO2 = 1.0): 1.00

13. DISPOSAL CONSIDERATIONS

General	:	Disposal must be made according to local and national regulations. Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

UN Number	:	1044
UN Proper Shipping Name	:	Fire extinguisher
Class and Subsidiary Risk	:	2.2
Packing Group	:	NA

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Listed in international inventories:

Ingredient name	TSCA	DSL	NDSL	ELINCS	ENCS	CHINA	KECL	PICCS	AICS
1,1,1,2,2,4,5,5,5-Nonafluoro-4-(trifluoromethyl)-3-pentanone	YES	YES	NDA	YES	YES	YES	YES	YES	YES

16. OTHER INFORMATION

In accordance with good practices of personal cleanliness and hygiene handle with the care and avoid unnecessary contact with this product.

This information is being supplied to you under OSHA Hazard Communication Standard 29 CFR 1910.1200 and is offered in good faith as typical values and not as a product specification. The information contained herein is based on the data available to us and is believed to be true and accurate.