AUTOMATIC FIRE SUPPRESSION SYSTEMS

BLAZE CUT®

BlazeCut Automatic Fire Suppression System

Safety Data Sheet

BlazeCut FK-5-1-12 Clean Agent

According to Regulation (EU) No. 1907/2006 (REACH), Annex II
(COMMISSION REGULATION (EU) No 453/2010)

Version: SDS-FK-2403-EN
Product name: BlazeCut FK-5-1-12

Compilation date: 2015-01-12
Revision date: 2024-03-25

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name:	FK-5-1-12
Synonyms:	FLUOROKETONE, Perfluoro(2-Methyl-3-Pentanone), Novec™ 1230
CAS No.:	756-13-8

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses:	Fire extinguishing agent.
Uses advised against:	No information available.

1.3 Details of the supplier of the SDS

Supplier:	BlazeCut Pty Ltd.
Address:	Level 24, Three International Towers, 300 Barangaroo Avenue, Sydney, NSW 2000, Australia
E-mail:	technical@blazecutgroup.com
Telephone:	+61 2 8006 1300
Distributor:	To be input
Address:	To be input
E-mail:	To be input
Telephone:	To be input

1.4 Emergency telephone number

+61 403 006 070 or call local emergency number

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008[CLP]

Aquatic Chronic 3; H412

Classification according to Directive 67/548/EEC[DSD] or Directive 1999/45/EC[DPD]

This product is not classified as hazardous.

Additional information

Full text of R-phrase(s)/H-statement(s): see SECTION 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008[CLP]

Hazard pictogram(s): GHS07: Exclamation mark

Signal word: Warning

Hazard statement(s): Harmful to aquatic life with long lasting effects.

Precautionary statement(s):
P261: Avoid breathing vapours.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing.

Supplemental Hazard information (EUH):

No information available.

Special rules for supplemental label elements for certain mixtures:

No information available.

2.3 Other hazards

None known

SECTION 3: Composition/information on ingredients

3.1 Substance/Preparation information

Substance name:	1,1,1,2,2,4,5,5,5-Nonafluoro-4-(Trifluoromethyl)-3-pentanone
CAS No.:	756-13-8
EC No.:	436-710-6
Purity:	≥ 99.0 %

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes:

In all cases of doubt, or when symptoms persist, seek medical attention.

Following inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Following skin contact:

Remove and isolate contaminated clothing and shoes. Wash immediately with plenty of soap and water.

Following eye contact:

Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Following ingestion:

Wash out mouth with water. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Immediate effects can be expected after short-term exposure.

4.3 Indication of the immediate medical attention and special treatment needed

No information available.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media:	Product is a fire extinguishing agent. Use a firefighting agent suitable for the surrounding fire.
Unsuitable extinguishing media:	No information available.

5.2 Special hazards arising from the substance or mixture

In combustion emits toxic fumes of carbon dioxide / carbon monoxide. Hydrogen fluoride (HF).

5.3 Advice for fire-fighters

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear mask and appropriate protective clothing for daily operation. Prevent skin and eye contact. Keep unprotected persons away. If outside do not approach from downwind.

6.2 Environmental precautions

Avoid release to the environment. Do not discharge or let it flow into drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4 Reference to other Section's

See SECTION 7 for information on safe handling.

See SECTION 8 for information on personal protection equipment.

See SECTION 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid direct contact with the substance. Wash thoroughly after handling. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air. Contents may be under pressure, open carefully. Do not breathe thermal decomposition products. For industrial or professional use only. Do not eat, drink or smoke when using this product. Do not drag, slide or roll containers. Do not drop containers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the container.

7.2 Conditions for safe storage, including any incompatibilities

Store in dry, cool, well-ventilated area. Keep container tightly closed. Keep out of direct sunlight and ultraviolet, keep away from incompatible materials, water, keep away from sources of heat or ignition. Containers should be properly stored and secured to prevent falling or being knocked over.

7.3 Specific end use(s)

Apart from the uses mentioned in SECTION 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

Manufacturer's recommended exposure limit: 150 ppm, 8 hr TWA

DNEL (Derived No Effect Level) for workers and the general population

Not available.

PNEC (Predicted No Effect Concentration) values:

Not available.

8.2 Exposure controls

Engineering controls

Use only with adequate ventilation. The floor of the storage room must be impermeable to prevent the escape of liquids. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid. Remove leaking container to a safe place.

Personal protective Equipment

Eye and face protection: Safety glasses/chemical splash goggles.
Skin protection: Wear protective gloves/clothing to prevent contact.
Respiratory protection: Self-contained breathing apparatus or full facepiece supplied-air respirator must be available in case of emergency.

Environmental exposure controls

Do not empty into drains

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid.
Appearance/Odour	Low odour
pH	No data available.
Boiling point/boiling range	49 °C
Melting point	-108 °C
Flammability (solid, gas)	Not flammable
Flash point	No flash point
Autoignition temperature	No data available.
Flammability (solid, gas)	Not flammable
Upper/lower flammability or explosive limits	No data available.
Vapour pressure	40.4 kPa [@ 25 °C]
Relative density	1.6 [@ 20 °C] [WATER=1]
Solubility	No data available.
Partition coefficient: n-octanol/water	log Kow = 2.11.
Evaporation rate	> 1 [BUOAC=1]
Viscosity	0.6 mPa.s [@ 25 °C]

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
Stable under recommended storage and handling conditions (see SECTION 7, handling and storage).

10.2 Chemical stability
Stable under normal conditions of use.

10.3 Possibility of hazardous reactions
No known hazardous reactions.

10.4 Conditions to avoid
Keep away from heat and ignition sources. Avoid direct water, sunlight, ultraviolet.

10.5 Incompatible materials
Strong bases.
Amines.
Alcohols.

10.6 Hazardous decomposition products
In combustion emits toxic fumes of carbon dioxide / carbon monoxide. Hydrogen fluoride (HF).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity	**Oral, LD_{50}:**	>2000 mg/kg (rat)
	Inhalation, LC_{50}:	>1227 mg/L/4 h (>10 % by volume) (rat)
	Dermal, LD_{50}:	>2000 mg/kg (rat)
Skin corrosion/irritation:		Contact with the skin during product use is not expected to result in significant irritation.
Serious eye damage/irritation:		Contact with the eyes during product use is not expected to result in significant irritation.
Respiratory or skin sensitization:		Did not cause skin sensitization in a study.
Germ cell mutagenicity:		Not mutagenic in both in vivo and in vitro testing.
Carcinogenicity:		Not listed as a carcinogen by NTP, IARC, or OSHA.
Reproductive toxicity:		Not toxic.
STOT-single exposure:		Not expected to cause target organ effects after single exposure.
STOT-repeated exposure:		Not expected to cause target organ effects after repeat exposure.
Aspiration hazard:		Not an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Ecotoxicity	**Fish, LC_{50}:**	>1200 mg/L (Zebrafish, 96 h)
	Crustacea, EC_{50}:	No data available.
	Algae, EC_{50}:	No data available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

Bioaccumulation is not expected (Log Kow < 3).

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

This substance is not identified as a PBT substance.

12.6 Other adverse effects

Ozone Depletion Potential (CFC 11 = 1.0): 0.00
Global Warming Potential (CO2 = 1.0): 1.00

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

13.2 EU waste code (product as sold)

070103*	Organic halogenated solvents, washing liquids and mother liquors
14 06 02*	Other halogenated solvents and solvent mixtures

SECTION 14: Transport information

14.1 Land transport (ADR)

Proper Shipping Name:	Not classified as dangerous in the meaning of transport regulations.
Class:	---
UN-No.:	---

14.2 Sea transport (IMDG)

Proper Shipping Name:	Not classified as dangerous in the meaning of transport regulations.
Class:	---
UN-No.:	---

Marine pollutant: No

14.3 Air transport (IATA)

Proper Shipping Name: Not classified as dangerous in the meaning of transport regulations.

Class: ---

UN-No.: ---

14.4 Additional information

Mark/Label(s) for transport: None

SECTION 15: Regulatory information

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

EU regulation:

EINECS: CAS# 756-13-8 is listed in.

DSD (67/548/EEC): CAS# 756-13-8 is not listed in.

Other chemical regulation:

CAS No.	*USA TSCA*	*Canada DSL*	*Australia AICS*	*Korea ECL*	*Japan ENCS*	*China IECSC*
756-13-8	Listed	Listed	Listed	Listed	Listed	Listed

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this product.

SECTION 16: Other information

16.1 Revision information

2015-01-12	1.0/EN	BM	First Complied
2018-08-30	1.1/EN	BM	Revision
2018-08-30	1.2/EN	BM	Revision
2019-07-18	1.3/EN	BM	Revision
2020-01-15	1.4/EN	TD	Revision
2021-08-13	SDSFK-2108-EN	DF	Revision
2022-06-14	SDSFK-2206-EN	MS	Revision
2022-07-07	SDSFK-2207-EN	MS	Revision
2022-10-31	SDS-FK-2310-EN	MS	Revision
2024-03-25	SDS-FK-2403-EN	DF	Current Version

16.2 Abbreviations and acronyms

CLP: EU regulation (EC) No 1272/2008 on classification, labelling and packaging of chemical substances and mixtures.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

EINECS: European Inventory of Existing Commercial Chemical Substances.

DSD: Dangerous Substance Directive (67/548/EEC).

TSCA: Toxic Substances Control Act, The American chemical inventory.
DSL: Domestic Substances List, The Canadian chemical inventory.
AICS: The Australian Inventory of Chemical Substances.
ECL: Existing Chemicals List, the Korean chemical inventory.
ENCS: Japanese Existing and New Chemical Substances.
IECSC: Inventory of existing chemical substances in China.

16.3 Key literature references and sources for data

GESTIS-database: Information system on hazardous substances of the German Social Accident Insurance.

ECHA's public database with information on registered substances.

16.4 Relevant R-phrases/H-statements

H412: Harmful to aquatic life with long lasting effects

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

16.5 Training advice

Provide adequate information, instruction and training for operators.

16.6 Declare to reader

The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage. According to REACH Article 31(5), the SDS shall be supplied in an official language of the Member State(s) where the substance or mixture is placed on the market, unless the recipient Member State(s) concerned provide otherwise. It should also be noted that this SDS is applicable to the countries with English as an official language.

---------- **End of the SDS** ----------