Product Name: **PF-100-0050 Herbicide (PCP# 35323)**

Specification ID# **50002853**

PF-100-0050 Herbicide is considered a mechanical mixture of two (2) individual products.

Attached are the component product SDSs which make up **PF-100-0050 Herbicide**:

Express® 50 SG MUP	PCP # **28176** SDS Date: **10/28/2022** Specification ID#: **50000038**
Pyroxasulfone 85 WG MUP	PCP # **35222** SDS Date: **11/20/2024**

Please read the SDS in order to have a complete understanding of all the risks associated with each product before use.

Manufacturer/Distributor:
FMC of Canada Limited
6755 Mississauga Road, Suite 204
Mississauga, ON L5N 7Y2
Canada

Telephone Numbers:
Product Information: 1-833-362-7722
Medical Emergency: 1-800-331-3148 (USA & Canada) Preparation Date: 11/24/2024

SAFETY DATA SHEET

EXPRESS(R) 50 SG MUP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	10/28/2022	50000038	Date of first issue: 03/01/2018

SECTION 1. IDENTIFICATION

Product identifier

Product name EXPRESS(R) 50 SG MUP

Other means of identification

Product code 50000038

Chemical nature Herbicide

Product Registration Number PCP# 28176

Recommended use of the chemical and restrictions on use

Recommended use Can be used as herbicide only.

Restrictions on use Use as recommended by the label.

Details of the supplier of the safety data sheet

Manufacturer

FMC of Canada Ltd
6755 Mississauga Road, Suite 204
Mississauga, ON L5N 7Y2
Canada
Phone (AgHotline): 1-833-FMC-PPAC (1-833-362-7722),
Web: https://ag.fmc.com/ca/en
SDS-Info@fmc.com

Supplier Address

FMC of Canada Limited
6755 Mississauga Road, Suite 204
Mississauga, ON L5N 7Y2
Canada

Emergency telephone

For leak, fire, spill or accident emergencies, call:
1 800 / 424-9300 (CHEMTREC - U.S.A.)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)

Medical emergency:
U.S.A. & Canada: +1 800 / 331-3148
All other countries: +1 651 / 632-6793 (Collect)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Skin sensitization : Category 1

Specific target organ toxicity - repeated exposure : Category 2

GHS label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements :

Prevention:

P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P314 Get medical advice/ attention if you feel unwell.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Herbicide

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
tribenuron-methyl (ISO)	tribenuron-methyl (ISO)	101200-48-0	50

SECTION 4. FIRST AID MEASURES

General advice : Remove victim from exposure and then have him lie down in the recovery position.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

Keep at rest.
Keep warm and in a quiet place.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : If on clothes, remove clothes.
In case of skin contact
If on skin, rinse well with water.
Wash off immediately with soap and plenty of water.
If skin irritation persists, call a physician.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Do NOT induce vomiting.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
May cause damage to organs through prolonged or repeated exposure.

Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Nitrogen oxides (NOx)
Sulfur oxides
Carbon oxides

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Never return spills in original containers for re-use. Mark the contaminated area with signs and prevent access to unauthorized personnel. Only qualified personnel equipped with suitable protective equipment may intervene. For disposal considerations see section 13.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	:	Avoid formation of respirable particles. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.
Further information on storage stability	:	No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection	:	In case of dust exposure wear suitable personal respiratory protection and protective suit.
Hand protection Material	:	Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.
Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles
Skin and body protection	:	Dust impervious protective suit Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Protective measures	:	Plan first aid action before beginning work with this product.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	solid, granules
Color	:	light brown
Odor	:	mild
pH	:	8.4 - 9.4 (20 °C) Concentration: 10 g/l In a 1% aqueous dispersion
Flash point	:	not determined
Flammability (solid, gas)	:	Not highly flammable
Relative vapor density	:	not determined
Bulk density	:	640 kg/m3packed

Solubility(ies)
Water solubility : soluble

Decomposition temperature : Not available for this mixture.

Viscosity
Viscosity, dynamic : not determined

Explosive properties : Not explosive

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reactions : Dust may form explosive mixture in air.
No decomposition if stored and applied as directed.

Conditions to avoid : dust formation
moisture
Heat, flames and sparks.

Incompatible materials : Strong acids and strong bases
Strong oxidizing agents

Hazardous decomposition products : Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: Fixed Dose Method
GLP: yes

Acute inhalation toxicity : Acute toxicity estimate: > 10 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

Skin corrosion/irritation

Not classified based on available information.

Product:

Species	:	Rabbit
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	yes
Remarks	:	May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Species	:	Rabbit
Result	:	No eye irritation
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 405
GLP	:	yes
Remarks	:	Product dust may be irritating to eyes, skin and respiratory system.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Product:

Species	:	Guinea pig
Assessment	:	The product is a skin sensitizer, sub-category 1B.
Method	:	Maximization Test
Result	:	The product is a skin sensitizer, sub-category 1B.

Germ cell mutagenicity

Not classified based on available information.

Product:

Genotoxicity in vitro	:	Remarks: The product contains no ingredients known to be mutagenic.

Carcinogenicity

Not classified based on available information.

Product:

Remarks	:	The product contains no ingredients known to be carcinogenic.

Reproductive toxicity

Not classified based on available information.

Product:

Effects on fertility : Remarks: The product contains no ingredients found to have adverse effects on reproduction.

STOT-single exposure

Not classified based on available information.

Product:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Product:

Assessment : May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

tribenuron-methyl (ISO):

Species : Rabbit
LOAEL : 80 mg/kg
Target Organs : Thyroid, Nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.
Remarks : Increased mortality or reduced survival

Aspiration toxicity

Not classified based on available information.

Components:

tribenuron-methyl (ISO):

The substance does not have properties associated with aspiration hazard potential.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 120 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia): > 120 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	EbC50 (Pseudokirchneriella subcapitata (green algae)): 0.0162 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 GLP: yes EC50 (Lemna gibba (duckweed)): 0.00652 mg/l End point: Frond Exposure time: 7 d Method: US EPA Test Guideline OPP 122-2 & 123-2

Components:

tribenuron-methyl (ISO):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 738 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Crustaceans): > 320 mg/l Exposure time: 48 h EC50 (Daphnia magna (Water flea)): > 894 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0.0208 mg/l Exposure time: 120 h EC50 (Lemna gibba (duckweed)): 0.00424 mg/l Exposure time: 14 d
Toxicity to fish (Chronic toxicity)	:	NOEC (Cyprinodon variegatus (sheepshead minnow)): 114 mg/l Exposure time: 21 d Method: OECD Test Guideline 211

NOEC (Oncorhynchus mykiss (rainbow trout)): 560 mg/l
Exposure time: 21 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 41 mg/l
Exposure time: 21 d

Toxicity to soil dwelling organisms : NOEC (Eisenia fetida (earthworms)): 3.2 mg/kg
Exposure time: 56 d

Toxicity to terrestrial organisms : LD50 (Colinus virginianus (Bobwhite quail)): > 2,250 mg/kg

LD50 (Colinus virginianus (Bobwhite quail)): > 5,620 ppm
Remarks: Dietary

LD50 (Anas platyrhynchos (Mallard duck)): > 5,620 ppm
Remarks: Dietary

LD50 (Apis mellifera (bees)): > 98.4 µg/bee
Exposure time: 48 h
End point: Acute contact toxicity

LD50 (Apis mellifera (bees)): > 9.1 µg/bee
Exposure time: 48 h
End point: Acute oral toxicity

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

tribenuron-methyl (ISO):

Biodegradability : Biodegradation: 29.4 %
Exposure time: 28 d

Bioaccumulative potential

Components:

tribenuron-methyl (ISO):

Bioaccumulation : Bioconcentration factor (BCF): < 1
Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: -0.38

Mobility in soil

Product:

Distribution among environmental compartments : Remarks: Under normal conditions the active ingredient/s is/are of high to intermediate mobility in soil. There is a potential for leaching to groundwater.

Components:

tribenuron-methyl (ISO):

Distribution among environmental compartments : Remarks: Under normal conditions the active ingredient/s is/are of high to intermediate mobility in soil. There is a potential for leaching to groundwater.

Other adverse effects

Product:

Additional ecological information : Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark.
Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Tribenuron-methyl)
Class : 9
Subsidiary risk : ENVIRONM.

Packing group	:	III
Labels	:	9 (ENVIRONM.)

IATA-DGR

UN/ID No.	:	UN 3077
Proper shipping name	:	Environmentally hazardous substance, solid, n.o.s. (Tribenuron-methyl)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	956
Packing instruction (passenger aircraft)	:	956
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Tribenuron-methyl)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

TDG

Not regulated as a dangerous good

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

The ingredients of this product are reported in the following inventories:

TCSI	:	Not in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AIIC	:	Not in compliance with the inventory
DSL	:	This product contains the following components that are not on the Canadian DSL nor NDSL. METHYL 2-[4-METHOXY-6-METHYL-1,3,5-TRIAZIN-2-YL(METHYL)CARBAMOYLSULFAMOYL]BENZOATE

D-Glucopyranose, 4-O-.beta.-D-galactopyranosyl-, monohydrate

ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	Not in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
TECI	:	Not in compliance with the inventory

Canadian lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recom-

mendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Disclaimer

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. You can contact FMC Corporation to insure that this document is the most current available from FMC Corporation. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the information provided herein. The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. The user is responsible for determining whether the product is fit for a particular purpose and suitable for the user's conditions and methods of use. Since the conditions and methods of use are beyond the control of FMC Corporation, FMC Corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

CA / EN

Prepared by:

FMC Corporation

End of Material Safety Data Sheet

Date: August 21, 2012
Revision: November 20, 2024

KUMIAI CHEMICAL INDUSTRY CO., LTD.
4-26, IKENOHATA 1-CHOME, TAITO-KU
TOKYO 110-8782, JAPAN

SAFETY DATA SHEET

According to GHS (10th revised edition, 2023)

1. Identification of the substance or mixture and of the supplier

1.1 Product identifier

Reference No.	KE029-03_E-2
Product name	KIH-485 85%WG
Synonyms	Pyroxasulfone, Pyroxasulfone 85WG, AXEEV® 85WG Sakura®, Zidua®, KELT®, YAMATO®WG 85, FULL SWING®, Momiji®, SOLISTE Pyroxasulfone 85WG MUP
Chemical group	pyrazole, oxazole

1.2 Recommended use of the chemical and restrictions on use

Herbicide for agricultural use

1.3 Supplier's details

Manufacturer and address	Kumiai Chemical Industry Co., Ltd. Planning Section Overseas Planning Department Overseas Sales Division 4-26, Ikenohata 1-chome, Taito-ku, Tokyo 110-8782 Japan
Person responsible for SDS	Akira Watanabe
Telephone	+81 (0)3 3822 5065
Telefax	+81 (0)3 3828 6148
e-mail	soumu@kumiai-chem.co.jp

1.4 Emergency phone number (not available outside office hours)

Telephone number in Japan	+81 (0)3 3822 5065

2. Hazard identification

Classification of the substance or mixture

2.1 Physical hazards

Self-heating substance and mixture	Not classified
Pyrophoric solids	Not classified
Flammable solids	Not classified
Substance which, in contact with water, emits flammable gases	Not classified

2.2 Health hazards

Acute toxicity	Oral		Not classified
	Dermal		Not classified
	Inhalation	(gas)	Not classified
		(vapour)	Classification not possible
		(mist/dust)	Not classified
Skin corrosion/irritation			Not classified
Serious eye damage/eye irritation			Not classified

Respiratory sensitization	Classification not possible	
Skin sensitization	Not classified	
Germ cell mutagenicity	Not classified	
Carcinogenicity	Classification not possible	
Reproductive toxicity	Not classified	
Specific target organ toxicity (single exposure)	Not classified	
Specific target organ toxicity (repeated exposure)	Category 2 (liver, kidney, circulatory, urinary bladder)	H373
Aspiration hazard	Classification not possible	

2.3 Environmental hazard

Hazardous to the aquatic environment - Acute	Category 1	H400
Hazardous to the aquatic environment - Chronic	Category 1	H410

The items not listed above are "Not classified" or "Classification not possible" for the substance/mixture.

2.4 GHS Label elements, including precautionary statements

Product identifier KIH-485 85%WG

Pictograms or hazard symbols

Signal word ***Warning***

		(code)
Hazard statements	May cause damage to organs through prolonged or repeated exposure.	H373
	Very toxic to aquatic life	H400
	Very toxic to aquatic life with long lasting effects	H410

Precautionary statements

Safety precautions	Do not breathe dust/fume/gas/mist/vapours/spray.	P260
	Avoid release to the environment if this is not the intended use.	P273
First-aid measures	Get medical help if you feel unwell.	P319
	Collect spillage.	P391
Safety storage	Not applicable	
Disposal methods	Dispose of contents/container in accordance with local regulation.	P501

2.5 Other hazards which to not result in classification

No data available

3. Composition/information on ingredients

Substance/Mixture Mixture

Product identifier KIH-485 85%WG

Hazardous ingredients and composition

CAS Number	Content (%, w/w)	Name
447399-55-5	85.0	pyroxasulfone
(not applicable)	15.0	(non-classified constituent)

4. First aid measures

4.1 Description of necessary first-aid measures

Eye contact	Immediately rinse eyes thoroughly with clean flowing water for several minutes. Get medical help.
Skin contact	Remove contaminated clothing, shoes, etc., and rinse affected areas thoroughly with water or lukewarm water, and clean with soap.
Inhalation	Immediately remove person to fresh air. Loosen clothes and take deep breaths. If inhalated in large quantities: Get medical help.
Ingestion	Remove person to a safe place and get medical help immediately. Remove any remaining material in the mouth by wiping etc,. Give the person large amounts of milk or water to induce vomiting. If person is unconscious, do not give anything by mouth and do not induce vomiting.

5. Fire-fighting measures

5.1 Extinguishing media

For initial fires, use powder, inert gas extinguishers, dry sand, etc. For large fires, use foam extinguishers to cut off the air. Move movable containers to a safe place as soon as possible.

5.2 Extinguishing media

Suitable extinguishing media	Water, loaded stream, foam, inert gas, halogenated, dry chemical fire extinguisher
Unsuitable extinguishing media	No data available

5.3 Precautions for fire fighting

Wear respiratory protection as combustion or high temperature may generate toxic gases. Take appropriate measures to prevent the release of substances that may affect the environment by spraying water.

6. Accidental release measures

6.1 Personal precautions

If indoors, provide adequate ventilation until disposal of spillage is completed. Wear suitable protective equipment (see Section 8) to avoid contact of droplets with skin and breathing dust when disposing of spillage.

6.2 Environmental precautions

Take precautions to prevent spilled product from being released in large quantities into rivers and affecting the environment.

6.3 Methods and materials for containment and cleaning up

Sweep up and gather scattered materials, and collect in an airtight container. Remove the dust by vacuum cleaner or other methods to prevent it from scattering.

7. Handling and storage

7.1 Precautions for safe handling

Use in a well-ventilated. Do not leak, overflow, or scatter. Do not generate dust unnecessarily.

7.2 Prevention of fires and explosions

No special precautions required.

7.3 Conditions for safe storage, including any incompatibilities

Store in a cool, dark and dry place, away from direct sunlight. Avoid contamination with foreign substances. Keep away from heat and ignition sources.

8. Exposure controls/personal protection

8.1 Control parameters

Not established

8.2 Occupational exposure limit values or biological limit values
Not established

8.3 Appropriate engineering controls
Use sealed equipment with local exhaust ventilation for handling. Provide detoxification equipment in the ventilation system to prevent the release of hazardous materials into the enviranment.

8.4 Individual protection measures, such as personal protective equipment

Respiratory protection	Protective mask
Skin protection	Rubber gloves
Eye protection	Safety glasses with side shields or safety goggles
Protective clothing	Work clothes, cap, impervious clothes

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance (physical state, colour etc.)	Light brown, granule
Odour	No data available
pH (5 fold dilution)	9.0 (reference data)
Melting point/freezing point	No data available
Initial boiling point/boiling range	No data available
Flash point	No data available
Auto-ignition temperature	No data available
Flammability (solid/liquid)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour density	No data available
Vapour pressure	No data available
Relative density	0.72 (reference data)
Solubilities	No data available
Partition coefficient: n-octanol/water	No data available
Decomposition temperature	No data available
Viscosity	No data available
Particle characteristics	No data available

10. Stability and reactivity

10.1 Chemical stability
Stable under normal conditions.

10.2 Reactivity
No data available

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
No data available

11. Toxicological information

Acute toxicity

Oral	(rat)	LD_{50}	> 2000 mg/kg	Not classified

Dermal	(rat)	LD_{50} > 2000 mg/kg	Not classified
Inhalation	(gas)	Not applicable	Not classified
	(vapour)	Data lacking	Classification not possible
	(mist/dust)	LC_{50} > 5.8 mg/L	Not classified

Skin corrosion/irritation — Not classified

Not classified because the average score after 24, 48 and 72 hours was less than 2.3 in a rabbit skin irritation study though slight irritation (erythema and oedema) was observed.

Serious eye damage/irritation — Not classified

Not classified. It is reported that the mixture is moderately irritating to eyes in a rabbit eye irritation study, however, average scores at 24, 48 and 48 hours after application are lower than the criteria (<1.5) to be classified as eye irritant.

Respiratory or skin sensitisation — Respiratory: Classification not possible; Skin: Not classified

Respiratory sensitisation: Data lacking

Skin sensitisation: Not classified because negative result was reported in a guinea pig study with Buehler method.

Germ cell mutagenicity — Not classified

The mixture does not contain any ingredients classified as mutagenic toxicants.

Carcinogenicity — Classification not possible

Information on: Pyroxasulfone

Pyroxasulfone was not carcinogenic in lifetime feeding studies in mice. Pyroxasulfone caused an increased incidence of tumors in rats in the following organ(s): urinary bladder.

The tumors seen with Pyroxasulfone were caused through a non-genotoxic mechanism, which is not relevant at low doses.

Reproductive toxicity — Not classified

The mixture does not contain any ingredients classified as reproductive toxicant.

STOT-single exposure — Not classified

The mixture does not contain any ingredients classified as specific target organ toxicant (single exposure).

STOT-repeated exposure — Category 2 (liver, kidney, circulatory, urinary bladder)

Classified as Category 2 because effects on liver, kidney, circulatory and urinary bladder were observed by repeated exposure at doses classified as Category 1.

Aspiration hazard — Classification not possible

Data lacking

12. Ecological information

Acute aquatic toxicity — Category 1

Classified as Category 1 because ErC_{50} (72h) to algae was 0.00263 mg/L.

Chronic aquatic toxicity — Category 1

Classified as Category 1 because NOEC (72h) to algae was 0.00060 mg/L.

12.1 Toxicity

Acute toxicity

Fish	(carp)	LC_{50} (96h)	>1000mg/L

Crustacea	*(Daphnia magna)*	LC_{50} (48h)	>1000mg/L
Green algae		ErC_{50} (72h)	0.00263 mg/L
		NOEC (72h)	0.00060 mg/L
Honeybee	*Acute contact*	*LD_{50} (48h)*	*>100 µg/bee: Information on the active ingredient pyroxasulfone*
Earthworm		*LC_{50} (14d)*	*>997 mg/kg: Information on the active ingredient pyroxasulfone*
Bird	*(bobwhite quail)*	*LD_{50}*	*>2250 mg/kg: Information on the active ingredient pyroxasulfone*

Long-term toxicity

Fish	*(fathead minnow)*	*NOEC (28 days)*	*2.0 mg/L: Information on the active ingredient pyroxasulfone*
Crustacea	*(Daphnia magna)*	*NOEC (21 days)*	*1.9 mg/L: Information on the active ingredient pyroxasulfone*

12.2 Persistence and degradability
Information on: Pyroxasulfone
Degradation in soil *DT_{50} soil 16-28 days*
Biodegradability *No data available*

12.3 Bioaccumulative potential
Bioconcentration factor (BCF) No data available

12.4 Mobility in soil
Information on: Pyroxasulfone
Adsorption/desorption *K_{oc} 57-110*

12.5 Other adverse effects
Very toxic to aquatic/terrestrial plants

13. Disposal considerations

13.1 Waste treatment methods
Prepare the solution according to the used volume and use it up. Do not drain the washing water of container into rivers. Dispose of contents/container in accordance with local regulation. Drain the washing water after treating with coagulating sedimentation, activated sludge, etc. Dispose of empty containers after cleaning the contents thoroughly.

14. Transport information

14.1 UN number
3077

14.2 UN proper shipping name
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(3-[5-(difluoromethoxy)-1-methyl-3-(trifluoromethyl)pyrazol-4-ylmethylsulfonyl]-4,5-dihydro-5,5-dimethyl-1,2-oxazole)

14.3 Transport hazard class(es)
9

14.4 Packing group

III

14.5 Environmental hazards
Marine pollutant (P)

14.6 Special precautions for user
Do not transport the product with food and/or feed.
For the transportation, avoid elevated temperature and direct sunlight. Load the product without crushing, corroding of container and/or leaking from container. Prevent collapse of cargo.
Do not load heavy goods on the top.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. Regulatory information

US, FIFRA information for SDS Section 15

This chemical is a pesticide product registered by the Environmental Protection Agency and issubject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for the data sheets (SDS), and for workplace labels of non-pesticide chemicals.

Following is the hazard information as required on the pesticide label:

CAUTION.
Harmful if absorbed through skin. Harmful if swallowed. Avoid contact with skin, eyes or clothing.
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
When handlers use closed systems or enclosed cabs that meet the requirements listed in the Worker Protection Standards (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

JAPAN

Fire Servise Act:	Not relevant
Industrial Safety and Health Act:	Not relevant
PRTR law:	Not relevant
Poisonous and Deleterious Substance Control Act:	Not relevant

16. Other information

To the best of our knowledge, the information contained herein is accurate. However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein.