


**KUMIAI CHEMICAL INDUSTRY CO., LTD.**

 4-26, IKENOHATA 1-CHOME, TAITOH-KU  
 TOKYO 110-8782, JAPAN

## SAFETY DATA SHEET

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

#### 1.1 Product identifier

Reference No.

Product name

KIH-485 85%WG

Synonyms

Pyroxasulfone, Pyroxasulfone 85WG, Sakura<sup>®</sup>, Zidua<sup>®</sup>

#### 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.  
 4-26, Ikenohata 1-chome, Taitoh-ku, Tokyo 110-8782  
 Japan

Person responsible for SDS

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#### 1.4 Emergency telephone (not available outside office hours)

Telephone in Japan

+81-(0)3-3822-5065

### 2. Hazard identification

Classification of the mixture

#### 2.1 Physical hazards

Not hazardous according to GHS

#### 2.2 Health hazards

Acute toxicity

Oral

Not classified

Dermal

Not classified

Inhalation (gas)

Not applicable

(vapor)

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

Not classified

(single exposure)

Specific target organ toxicity

Category 1 (nervous system)

(Repeated exposure)

Category 2 (liver, kidney, heart, urinary bladder)

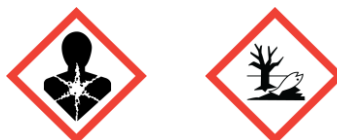
Aspiration hazard Classification not possible

### 2.3 Environmental hazard

Hazardous to the aquatic environment  
Acute aquatic toxicity Category 1  
Chronic aquatic toxicity Category 1

### 2.4 Label elements

Pictograms or hazard symbols



Signal words	Danger	
Hazard statements	Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.	(code) H372 H410
Precautionary statements		
Safety precautions	Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling Do not eat, drink or smoke when using this product. Avoid release to the environment if this is not the intended use.	P260 P264 P270 P273
First-aid measures	Get medical advice/attention if you feel unwell. Collect spillage.	P314 P391
Storage conditions	Store locked up.	P405
Disposal methods	Dispose of contents/container in accordance with local regulation.	P501

### 3. Composition/information on ingredients

Substance/Mixture	Mixture	
<u>CAS Number</u>	<u>Content (w/w)</u>	<u>Chemical name</u>
447399-55-5	85.0%	Pyroxasulfone
	15.0%	Inert ingredients

### 4. First aid measures

#### 4.1 Description of necessary first-aid measures

Inhalation Get medical advice/attention if you feel unwell.  
Skin contact Wash with plenty of water and soap.  
If skin irritation occurs: Get medical advice/ attention.  
Eye contact Cautiously rinse eyes with water for several minutes.  
If irritation persists: Get medical advice/attention.  
Ingestion Call a doctor if you feel unwell.

#### 4.2 Most important symptoms/effects, acute and delayed

*Pyroxasulfone caused salivation and decreased locomotor activity in dogs administered 2000 mg/kg bodyweight in a pharmacological test .*

#### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

Treat according to symptoms.  
There is no specific antidote.

## 5. Fire-fighting measures

### 5.1 Suitable extinguishing media

Suitable extinguishing media                      Carbon dioxide (CO<sub>2</sub>), extinguishing powder A/B/C, foam, atomized water, or sand.

Unsuitable extinguishing media                      Rod-like water

### 5.2 Special hazards arising from the chemical

CO, CO<sub>2</sub>, nitrogen oxides, sulphur oxides, hydrogen fluoride and hydrogen cyanide may be released in a fire.

### 5.3 Special protective actions for firefighters

Wear self-contained breathing apparatus and full protective equipment. If possible and without risk, remove intact containers from exposure to fire. Contain firefighting water by bounding area with sand or earth to prevent it entering any bodies of water. Dispose of fire control water or other extinguishing agent and spillage safely later.

## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate protective gears to avoid breathing vapor and contact with skin, eyes or clothing when working on a spill (see Section 8).

Ventilate the closed area.

### 6.2 Environmental precautions

Contain contaminated water and fire fighting water.

If the product contaminates rivers and lakes or drains inform respective authorities.

### 6.3 Methods and materials for containment and cleaning up

Collect by sweeping or suction into hermetically sealed containers and dispose of according to local regulations.

Prevent spills from entering sewers, watercourses or low areas.

Remove all sources of ignition; flares, smoking or flames in the area immediately.

## 7. Handling and storage

### 7.1 Precautions for safe handling

Keep out of reach of children. Avoid ingestion. Avoid contact with skin, eyes or clothing.

Avoid inhalation of dust. When preparing the spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist, elbow-length gloves and goggles.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing/PPE before reuse.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in the closed, original container in a cool, well-ventilated area.

Do not store for prolonged periods in direct sunlight.

Keep away from heat, steam pipe or combustible materials. Keep away from food, drink and animal feeding stuffs.

## 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

Avoid creation of dust. Control process conditions to avoid contact.  
Use in a well ventilated area only. Refer to the product label  
Make available emergency shower and eye washes in a work area and storage area.  
Make available local exhaust ventilation and use sealed equipment to avoid exposure.

#### 8.4 Individual protection measures, such as personal protective equipment

Eye protection	Wear safety goggles as appropriate.
Skin protection	Wear gloves, protective garment (coverall) and boots as appropriate.
Respiratory protection	Wear chemical cartridge respirator with an organic vapor cartridge, airline respirator, positive pressure self-contained breathing apparatus as appropriate.

#### 9. Physical and chemical properties

Appearance (physical state, color etc.)	Light brown, granule
Odor	Characteristic odor
Odor threshold	Not relevant
pH	~9.5 (1% aqueous solution)
Melting point/freezing point	130.7°C: <i>Information on the active ingredient pyroxasulfone</i>
Initial boiling point/boiling range	362.4°C: <i>Information on the active ingredient pyroxasulfone</i>
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	Not applicable
Vapor pressure	$2.4 \times 10^{-6}$ Pa (25°C): <i>Information on the active ingredient pyroxasulfone</i>
Vapor density	No data available
Relative density	1.60 g/cm <sup>3</sup> : <i>Information on the active ingredient pyroxasulfone</i>
Bulk density	0.72 g/cm <sup>3</sup>
Solubilities	(Disperses in water) <i>Information on the active ingredient pyroxasulfone</i>
water	3.48 mg/L (20°C)
acetone	250 g/L (20°C)
methanol	11.4 g/L (20°C)
n-hexane	0.0721 g/L (20°C)
toluene	11.3 g/L (20°C)
dichloromethane	151 g/L (20°C)
ethyl acetate	97.0 g/L (20°C)
Partition coefficient: n-octanol/water	log Pow 2.39 (25°C): <i>Information on the active ingredient</i>
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

#### 10. Stability and reactivity

##### 10.1 Reactivity

No data available

##### 10.2 Chemical stability

Stable under normal conditions of storage and use

##### 10.3 Possibility of hazardous reactions

Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

##### 10.4 Conditions to avoid

Avoid sources extremes of temperature and direct sunlight

## 10.5 Incompatible materials

None known

## 10.6 Hazardous decomposition products

Carbon dioxide, carbon monoxide, nitrogen oxides, sulphur oxides, hydrogen fluoride and hydrogen cyanide may be released in a fire.

## 11. Toxicological information

### Acute toxicity

Oral	(rat)	LD <sub>50</sub> > 2,000 mg/kg	Not classified
Dermal	(rat)	LD <sub>50</sub> > 2,000 mg/kg	Not classified
Inhalation	(mist/dust)	LC <sub>50</sub> > 5.8 mg/L	Not classified

Skin corrosion/irritation  
Mild irritant

Not classified

Serious eye damage/irritation  
Moderately irritating

Not classified

Respiratory or skin sensitization

Respiratory: Classification not possible  
Skin: Not classified

Respiratory sensitization: No data available  
Skin sensitization: Not sensitizing

Germ cell mutagenicity

Not classified

Not classified because the product does not contain any ingredients classified as Category 1 nor 2 mutagen.

Carcinogenicity

Not classified

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

Pyroxasulfone did not cause reproductive toxicity in a two-generation study in rats.

STOT-single exposure

Not classified

Pyroxasulfone did not cause specific target organ toxicity in experimental animal studies after single exposure.

STOT-repeated exposure

Category 1 (nervous system)  
Category 2 (liver, kidney, heart, urinary bladder)

Pyroxasulfone caused specific target organ toxicity in experimental animal studies in the following organs : nervous system, liver, kidneys, heart, urinary bladder

Aspiration hazard

No data available

Classification not possible

## 12. Ecological information

Acute aquatic toxicity

Category 1

Chronic aquatic toxicity

Category 1

### 12.1 Toxicity

Fish (carp)

LC<sub>50</sub> (96 h) > 1,000mg/L

<i>Daphnia magna</i>	EC <sub>50</sub> (48 h) > 1,000mg/L
Algae	ErC <sub>50</sub> (96 h) 0.00263mg/L
Honeybee	LD <sub>50</sub> (48 h) > 100 µg/bee: <i>Information on the active ingredient pyroxasulfone</i>
Earthworm	LC <sub>50</sub> (14d) > 997mg/kg: <i>Information on the active ingredient pyroxasulfone</i>
Bird (bobwhite quail)	LD <sub>50</sub> > 2,250 mg/kg: <i>Information on the active ingredient pyroxasulfone</i>

#### 12.2 Persistence and degradability

DT <sub>50</sub> soil	16-28 days: <i>Information on the active ingredient pyroxasulfone</i>
Biodegradability	No data available

#### 12.3 Bioaccumulative potential

No data available

#### 12.4 Mobility in soil

Soil adsorption coefficient:  $K_F^{ads}$  oc 57 - 110 : *Information on the active ingredient pyroxasulfone*

#### 12.5 Other adverse effects

Very toxic to terrestrial/aquatic plants

### 13. Disposal considerations

Do not contaminate water, food, or feed by storage or disposal of this product. Empty bag may be disposed of in a sanitary landfill or by incineration, or, if allowed by state and authorities, by burning. If burned, stay out of smoke.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a local regulation. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority.

### 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  
Not relevant

15. Regulatory information  
Not available

16. Other information

The SDS summarized our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the work place including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.