

Safety Data Sheet

Revision date 7th October 2011

Version 1 replaces previous versions

KEYSTONE

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY OR UNDERTAKING

Identification of the Substance or Preparation

Tradename KEYSTONE
Design Code A19400A

Company Identification

Company Syngenta Crop Protection UK Ltd
 CPC4, Capital Park, Fulbourn, Cambridge, CB21 5XE
Phone (01223) 883400
Fax (01223) 882195
Website www.syngenta-crop.co.uk
Emergency **+44 (0) 1484 538444 (24h)**
Phone

2. HAZARDS IDENTIFICATION

Harmful by inhalation. Limited evidence of a carcinogenic effect. May cause sensitisation by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility. Possible risk of harm to the unborn child.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	CAS No.	EC number	Symbol	Risk phrases (R)	Concentration
Isopyrazam	881685-58-1	-	Xn, N	R40 R43 R50/53 R63	11.6%w/w
Epoxiconazole	133855-98-8	406-850-2	Xn, N	R40 R51/53 R62 R63	9.2%w/w
Propane-1,2-diol	57-55-6	200-338-0	-	-	5-10%w/w
poly(oxy-1,2-ethanediyl), alpha-butyl-omega-a-hydroxy-, C16-18 and C18-unsatd. alkyl ethers*	146340-16-1	-	Xn, N	R22 R36 R43 R50	10-20%w/w

*Substances for which there are Community workplace exposure limits.
For the full text of the R phrases mentioned in this Section, see Section 16.

4. FIRST-AID MEASURES

General advice: Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control centre or physician, or going for treatment.

Inhalation: Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or Poison Control Centre immediately.

Skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting.

Medical advice: There is no specific antidote available. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Extinguishing media - small fires: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media - large fires: Use alcohol-resistant foam or water spray.

Extinguishing media which must not be used for safety reasons: Do not use a solid water stream as it may scatter and spread fire.

Specific hazards during fire fighting: As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health.

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

Further information: Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Refer to protective measures listed in sections 7 and 8.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up: Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

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

7. HANDLING AND STORAGE

HANDLING

Advice on safe handling: No special protective measures against fire required. Avoid contact with skin and eyes. When using, do not eat, drink or smoke. For personal protection see section 8.

STORAGE

Requirements for storage areas and containers: No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	Exposure limit(s)	Value type	Source
propane-1,2-diol	10 mg/m ³ (particulates) 150 ppm, 470 mg/m ³ (Total (vapour & particulates))	8 h TWA 8h TWA	UK HSE UK HSE
isopyrazam	1 mg/m ³	8 h TWA	SYNGENTA

ENGINEERING MEASURES

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. If airborne mists or vapours are generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit. Where necessary, seek additional occupational hygiene advice.

PERSONAL PROTECTIVE EQUIPMENT

When using this product refer to the label for details. In all other cases, use the following Personal Protective Equipment:

Protective measures: The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.

Respiratory protection: No personal respiratory protective equipment normally required. A particulate filter respirator may be necessary until effective technical measures are installed.

Hand protection: Chemical resistant gloves should be used. Gloves should be certified to an appropriate standard. Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure. The breakthrough time of gloves varies according to the thickness, material and manufacturer. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Suitable material: nitrile rubber.

Eye protection: Eye protection is not usually required.

Skin and body protection: Assess the exposure and select chemical resistant clothing based on the potential for contact and the permeation / penetration characteristics of the clothing material. Wash with soap and water after removing protective clothing. Decontaminate clothing before re-use, or use disposable equipment (suits, aprons, sleeves, boots, etc.). Wear as appropriate: impervious protective suit.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	liquid.
Form:	opaque viscous.
Colour:	off-white to beige.
pH:	5-9 at 1.0%w/v
Oxidising properties:	not oxidising
Explosive properties:	not explosive
Density:	1.075 g/cm ³ at 20 °C

10. STABILITY AND REACTIVITY

Hazardous decomposition products: Combustion or thermal decomposition will evolve toxic and irritant vapours.

Hazardous reactions: None known. Hazardous polymerisation does not occur. Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity: LD50 female rat, >2,000 mg/kg.

The toxicological data has been taken from products of similar composition.

Acute inhalational toxicity: LC50 male and female rat, 1.16 - 4.66 mg/l, 4h.

The toxicological data has been taken from products of similar composition.

Acute dermal toxicity: LD50 male and female rat, >2,000 mg/kg.

The toxicological data has been taken from products of similar composition.

Skin Irritation: Rabbit: Non- irritating.

The toxicological data has been taken from products of similar composition.

Eye Irritation : Rabbit: Moderately irritating.

The toxicological data has been taken from products of similar composition.

Sensitisation: Guinea pig: A skin sensitizer in animal tests.

The toxicological data has been taken from products of similar composition.

Long term toxicity

Isopyrazam: Did not show mutagenic effects in animal experiments. Limited evidence of carcinogenicity in animal experiments. Animal testing did not show any effects on fertility. Evidence of developmental toxicity at high doses (reduction in eye size).

Epoxiconazole: Limited evidence of carcinogenicity in animal studies. Evidence of developmental toxicity and effects on fertility in animal tests.

12. ECOLOGICAL INFORMATION

ELIMINATION INFORMATION (PERSISTENCE AND DEGRADATION)

Biodegradability: Isopyrazam is not readily biodegradable.

Stability in water

Isopyrazam degradation half life: 21d. Isopyrazam is not persistent in water.

Stability in soil

Isopyrazam: Degradation half life: 70d. Isopyrazam is not persistent in soil.

Mobility

Isopyrazam has low to slight mobility in soil.

Bioaccumulation

Isopyrazam does not bioaccumulate.

ECOTOXICITY

Toxicity to fish: LC50 *Oncorhynchus mykiss* (rainbow trout) 0.47 mg/l, 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 *Daphnia magna* (water flea): 0.47 mg/l, 48h.

Toxicity to algae: EC50 *Pseudokirchneriella subcapitata* (green algae): >10 mg/l, 72 h

FURTHER INFORMATION ON ECOLOGY

Additional ecological information: GHS-Classification Category 1.

13. DISPOSAL CONSIDERATIONS

Product: Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging: Empty remaining contents. Triple rinse containers. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION

Rail / Road / Sea / Air (RID / ADR / IMDG / IATA)

	Class	UN number	Packaging group
Proper Shipping Name	9	3082	III
Marine pollutant:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (ISOPYRAZAM)		
	Marine pollutant		

15. REGULATORY INFORMATION

Hazard Symbols/ Classifications	Xn	HARMFUL
R-phrases(s)	N	DANGEROUS FOR THE ENVIRONMENT
	R20	Harmful by inhalation.
	R40	Limited evidence of a carcinogenic effect.
	R43	May cause sensitisation by skin contact.
	R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	R62	Possible risk of impaired fertility.
	R63	Possible risk of harm to the unborn child.
S- phrase(s)	S2	Keep out of reach of children.
	S13	Keep away from food, drink and animal feeding stuffs.
	S24	Avoid contact with skin.
	S35	This material and its container must be disposed of in a safe way.
	S36/37	Wear suitable protective clothing and gloves.
	S46	If swallowed, seek medical advice immediately and show this container or label.
	S57	Use appropriate containment to avoid environmental contamination.
Special label		To avoid risks to man and the environment, comply with the instructions for use.
Note		This preparation is classified as dangerous in accordance with Directive 1999/45/EC.

16. OTHER INFORMATION

Based on SDS version 1 dated 26/09/11 with local amendment.

Product registration number: MAPP 15493.

Use plant protection products safely. Always read the label and product information before use.

Text of R phrases mentioned in Section 3:

R22 Harmful if swallowed.

R36 Irritating to eyes.

R40 Limited evidence of a carcinogenic effect.

R43 May cause sensitisation by skin contact.

R50 Very toxic to aquatic organisms.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R62 Possible risk of impaired fertility.

R63 Possible risk of harm to the unborn child.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
