

SAFETY DATA SHEET

BENAZALOX

1095 3.00 GB Current 26.09.2000

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Trade Name	BENAZALOX
Product (Specification) Code	1095
Product Code	AE B107687 02 WP39 A1
Usage	Wettable Powder Herbicide
Appearance	Off white powder
Manufacturer/Supplier	Bayer CropScience Limited
Address	Hauxton Cambridge CB2 5HU
Phone Number	01223 870312
Fax Number	01223 872142
Emergency Phone Number	0800 220876 (24 hr UK) +44 1223 870312 (24 hr Overseas)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components in Product for EC

Component Name	CAS No	Conc. %w/w	R Phrases	Classification
1. Benazolin ethyl ester	25059-80-7	33.50	R51/53	N
2. Clopyralid	1702-17-6	5.00	R41, R51/53	Xi, N
3. Amorphous silica	112926-00-8	5.00 < 25.00		
4. Kaolinite/Mica/Quartz mixture	1332-58-7	25.00 < 50.00		

3. HAZARDS IDENTIFICATION

Main Hazards	Irritating to eyes and skin.
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4. FIRST-AID MEASURES

Eyes	Rinse immediately with clean water for at least 15 minutes and obtain medical aid.
Skin	Carefully remove contaminated clothing. Wash affected area with soap and water. Seek medical aid if at all worried.
Ingestion	Wash out mouth with water. Do not induce vomiting. Keep patient at rest and seek medical advice.
Inhalation	If inhaled, remove to fresh air and keep at rest. Obtain medical aid if at all worried.
Advice to Physicians	Brief Summary of Symptoms and Signs: Local Contamination: May cause skin and eye irritation. Systemic Poisoning: None documented to-date. Treatment: Local Contamination: Symptomatic after decontamination. Treat as documented above under 'First-Aid Measures'. Systemic Poisoning: Initial treatment should be symptomatic and supportive. Recovery is normally spontaneous. Further advice is available from; Bayer CropScience Limited via the emergency telephone number above or from the nearest Poisons Unit.

5. FIRE-FIGHTING MEASURES

Extinguishing Media	Product is not readily combustible. If product is involved in a fire, use waterspray, foam, dry powder, carbon dioxide or sand.
Unsuitable Extinguishing Media	None.

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5. FIRE-FIGHTING MEASURES (continued)

Special Exposure Hazards	May give off toxic fumes if heated to decomposition.
Protective Equipment for Fire-Fighting	Do not breathe fumes. Wear self contained breathing apparatus.
Fire Fighting Guidance	If possible and without risk, remove intact containers from exposure to fire. Otherwise, spray unopened containers with water to keep cool. Whenever possible, contain fire-fighting water by bunding area with sand or earth.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with spilled material or contaminated surfaces. If ordinary clothing becomes contaminated remove it immediately. When dealing with the spillage do not eat, drink or smoke and wear personal protective clothing as detailed in Section 8.
Environmental Precautions	Keep people and animals away. Prevent entry into drains, sewers and watercourses. In the UK if spillage enters drains leading to sewage works inform local water company plc immediately. If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060). Overseas, inform the appropriate authority immediately.
Spillages	Sweep or preferably vacuum up spillage using equipment fitted with high efficiency final filter. Avoid creating a dust. Transfer collected material to heavy duty plastic drums and keep safe for disposal.
Note	Check also for any local site procedures in force.

7. HANDLING AND STORAGE

Handling	No specific precautions required when handling unopened containers; follow any relevant manual handling guidance. Refer to Section 8 if exposure to product is possible. Wash thoroughly with soap and water after handling and before eating, drinking or smoking.
Storage	Store in original packs/containers in a dry secure area designated for pesticides with access for authorised staff only. Store away from seeds, fertilizers and animal feedstuffs.
Technical Storage Measures	No special measures required.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Standards	None assigned.
1. Product	UK EH40: OES 0mg/m ³ 8h TWA. Dust, total inhalable:
2. Amorphous silica	Dust, respirable: UK EH40: OES 2mg/m ³ 8h TWA.
3. Kaolinite/Mica/Quartz mixture	Refer to any applicable COSHH assessments. Engineering controls should be used where practicable in preference to personal protection.
Engineering Control Measures	Wear dust mask conforming to EN 149 FFP 2S as a minimum. A higher standard of respiratory protective equipment may be indicated by the COSHH assessment.
Respiratory Protection	Wear chemical resistant PVC or nitrile gloves.
Hand Protection	Wear safety goggles with unperforated side shield or goggles (conforming to BS EN 166 or BS 2092 for older goggles).
Eye Protection	Wear PVC or chemical resistant disposable overalls and PVC boots.
Other	
Other Information	If feasible, decontaminate protective clothing before removal. Where decontamination is not feasible (before or after removal) dispose of as contaminated waste.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid.
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9. PHYSICAL AND CHEMICAL PROPERTIES (continued)

Colour	Off-white.
Odour	No data.
pH	No data.
Boiling Range/Point (deg C)	Not applicable
Melting Point/Freezing Point (deg C)	Not determined.
Flash Point (deg C)	Not applicable
Explosion Limits (%)	None known.
Solubility in Water	Insoluble, but forms a flowable suspension
Vapour Pressure	No data.
Density (g/ml)	0.27 (loose) 0.29 (normal) 0.31 (packed)
Flammability	Not readily combustible.
Auto-flammability (deg C)	Not determined.
Explosive Properties	None.
Oxidising Properties	None.
Vapour Density (Air = 1)	Not applicable
Dust Explosion Data	Minimum ignition energy: No data. Minimum explosible concentration: No data. St Class: No data.
Summary/Other Data	A solid that is not readily combustible

10. STABILITY AND REACTIVITY

Stability	Stable at ambient conditions.
Conditions to Avoid	None in particular.
Materials to Avoid	None under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Inhalation	Low toxicity.
Skin and Eye Contact	Low toxicity; rat dermal LD50 > 5000 mg/kg. Irritating to the skin and eyes.
Ingestion	Low toxicity; rat oral LD50 > 14000 mg/kg.
Carcinogenicity	Benazolin ethyl ester; Not carcinogenic in the rat. Clopyralid; Not carcinogenic.
Genotoxicity	Benazolin ethyl ester; Not mutagenic in the Ames assay. Positive in the 'in vitro chromosome aberration' test. Clopyralid; Not mutagenic.
Reproductive Toxicity	Benazolin ethyl ester; Not teratogenic in the rat or rabbit, with no effects on fertility or reproductive performance. Clopyralid; Not teratogenic.

12. ECOLOGICAL INFORMATION

Mobility	Benazolin ethyl ester; Benazolin-ethyl is non-leaching but the acid metabolite is found in leachate. Clopyralid; No data.
Persistence/Degradability	Benazolin ethyl ester; Soil DT50 1 to 3 days (laboratory) , 4 to 6 days (field) . Stable to water at pH 7. Sediment/Water System DT50 3 days (followed by degradation of the acid, DT50 16 weeks).

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12. ECOLOGICAL INFORMATION (continued)

Bio-accumulation	Clopyralid; Soil DT50 12 to 62 days. Benazolin ethyl ester; Koc = 200 to 500. Kow = 302. Bio-accumulation factor is; 32 to 40x (rapid elimination during depuration phase).
Aquatic Toxicity	Clopyralid; Log P = 1.81 (pH 5.0), -2.63 (pH 7.0), -2.55 (pH 9.0). Benazolin ethyl ester; 96 hr LC50 rainbow trout 5.4 mg/l, bluegill sunfish 2.8 mg/l, 48 hr EC50 daphnia 6.2 mg/l, 96 hr IC50 algae 16.0 mg/l.
Other Toxicity	Clopyralid; 96 hr LC50 rainbow trout 103.5 mg/l, bluegill sunfish 125.4 mg/l, 48 hr EC50 daphnia 225 mg/l. Benazolin ethyl ester; Acute oral LD50 japanese quail > 9709 mg/kg, mallard duck > 3000 mg/kg, bobwhite quail > 6000 mg/kg. Low toxicity to the following species; bees and earthworms . Clopyralid; Acute oral LD50 mallard duck 1465 mg/kg, bobwhite quail > 2000 mg/kg. Low toxicity to the following species; bees .


13. DISPOSAL CONSIDERATIONS

Product Disposal	Disposal of product would usually be by incineration in an appropriately licensed commercial incinerator. Small quantities may be accepted in licensed landfill sites. Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK). In the UK disposal arrangements should be in accordance with the Duty of Care Regulations and, where applicable, with the Special Waste Regulations.
Container Disposal	Lightly contaminated packaging may be acceptable for landfill, otherwise incineration will be required. See above for advice.

14. TRANSPORT INFORMATION

UN Number	3077
UN Proper Shipping Name	Environmentally hazardous substances, solid, n.o.s. (contains benazolin ethyl ester 33.5 %)
UN Class	9
UN Packaging Group	III
ADR/RID - Description	3077, Environmentally hazardous substance, solid, n. o. s (contains benazolin ethyl ester 33.5 %), 9, 12*(c), ADR
CDG(CPL) - Description	3077, Environmentally hazardous substance, solid, n.o.s (contains benazolin ethyl ester 33.50 %), Class: 9. Hazard Identification Number: 90. Packing Group: III.
IMDG - Proper Shipping Name	Not dangerous for transport
IMDG - Ems Number	None.
IMDG - MFAG Table Number	None.
ICAO - Proper Shipping Name	As for UN.

15. REGULATORY INFORMATION

Risk symbol	 Irritant
Hazard Classification	Xi - Irritant
Designated Name	Benazalox (contains benazolin ethyl ester 33.5 % and clopyralid 5.0 %)
R phrases	36/38-Irritating to eyes and skin.
S phrases	22-Do not breathe dust. 36/37/39-Wear suitable protective clothing, gloves and eye/face protection. 45-In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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15. REGULATORY INFORMATION (continued)

**Control of Pesticides Regulations 1986:
Precautions**

WEAR SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate.
WHEN USING DO NOT EAT, DRINK OR SMOKE.
WASH CONCENTRATE from skin or eyes immediately.
AVOID ALL CONTACT BY MOUTH.
DO NOT BREATHE SPRAY
WASH HANDS AND EXPOSED SKIN before eating, drinking or smoking and after work.
KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.
KEEP OUT OF REACH OF CHILDREN.
KEEP LIVESTOCK out of treated areas until foliage of any poisonous weeds such as ragwort has died and become unpalatable.
HARMFUL TO FISH OR AQUATIC LIFE. Do not contaminate surface waters or ditches with chemical or used container.
KEEP IN ORIGINAL CONTAINER, tightly closed in a safe place.
EMPTY CONTAINER COMPLETELY and dispose of safely.
DO NOT RE-USE THIS CONTAINER for any purpose.

16. OTHER INFORMATION

MSDS first issued 6 October 1995
MSDS data revised 26 September 2000
Revisions Highlighted ADR/RID - Description

Disclaimer

The above information is intended to give general health and safety guidance on the storage and transport of the substance or product to which it relates. It is not intended to apply to the use of the substance or product for which purposes the substance or product label and any appropriate technical usage literature available should be consulted and any relevant licences, consents or approvals complied with. The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given. The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate. No liability will be accepted for any injury loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.
