Hallmark Chemicals bv
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SAFETY DATA SHEET

BROMITAR 240 EC

Version 1.0/lsr **Revision date:** 15.01.2021

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifiers

Product name: Bromitar 240 EC
Chemical name: Bromoxynil octanoate
CAS No.: 1689-99-2

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

Identified uses: Herbicide for agricultural use

Details of the supplier of the safety data sheet

Supplier:
Hallmark Chemicals b.v
Wilhelminakade 91
3072 AP Rotterdam
The Netherlands
Tel: +31 10 414 4277
Fax: +31 10 414 3023
info@hallmarkchem.com

Formulator site:
Agrosmart Ltd
Huddersfield, W. Yorks, UK

Emergency telephone number

Tel: +44 20 8995 8391 (SDS support, 9.00-5.00 pm; Mon-Fri only, UK)

SECTION 2: HAZARDS IDENTIFICATION

Acute tox 4
Skin sens 1
Asp. Tox. 1
Repr. 2
Eye Irrit. 2B
STOT SE 2
Aq chronic 1

Pictogram(s):

Signal word: Danger

Hazard statement(s):

H302: Harmful if swallowed
H304: May be fatal if swallowed and enters airways
H317: May cause an allergic skin reaction
H319: Causes serious eye irritation
H332: Harmful if inhaled
H336: May cause drowsiness or dizziness
H361fd: Suspected of damaging fertility or the unborn child
H410: Very toxic to aquatic life with long lasting effects

Precautionary statement(s):	**P301+P312:**	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
	P304+P340:	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P302+P352:	IF ON SKIN: Wash with plenty of water.
	P280:	Wear protective gloves/protective clothing/eye protection/face protection.
	P273:	Avoid release to the environment
	P501:	Dispose of content/container in accordance with local/national regulations.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration (g/L)	Signal word	H-statements
Bromoxynil octanoate	1689-99-2	350	Danger	H361d, H330, H302, H317, H410
Solvent Napththa (petroleum ND)	64742-94-5	<500	Danger	H304, H336, H411
Surfactants	-	<100	Danger	H319, H335, H318, H336, H226

See Sections 2 and 16 for full H-Statements.

SECTION 4: FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre and follow the advice given. Show this Safety Data Sheet to the doctor.

Inhalation: If inhaled, remove to fresh air, keep warm and at rest. Administer oxygen or artificial respiration if needed. Seek medical attention immediately.

Skin contact: Avoid contact with skin. Carefully remove contaminated clothing and footwear. Wash affected areas with large amounts of water for at least 10 minutes. Seek medical advice if concerned.

Eye contact: Rinse eyes with plenty of water keeping the eyelids open for at least 15 minutes. Get medical attention.

Ingestion: DO NOT induce vomiting. Seek medical attention immediately. Never give anything by mouth to an unconscious person. If vomiting occurs, solvent present may cause pulmonary pneumonitis.

Treatment: No specific antidote. Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing media: Water fog, fine water spray, foam, dry chemical, carbon dioxide. Do not use water jet.

Hazards from combustion products: Combustion products are toxic and/or irritant.

Advice for fire fighters: Fire-fighters should wear full protective gear, including self-contained breathing apparatus. Keep unnecessary people away. Use water spray to cool containers.

Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of fire control water or other extinguishing agent and spillage safely.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear PPE as recommended in section 8. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid contact with spilled material or contaminated surfaces. Keep people and animals away.

Environmental precautions: Prevent product from entering drains or water courses. Warn the local water authority if water-courses become contaminated.

Clean-up methods: Pick up and arrange disposal without creating aerosol. Contain spill and absorb with earth, sand, clay, or other absorbent material, collect and store in sealed drums for safe disposal. Decontaminate the area and equipment by washing areas with water. Keep in suitable, closed containers for disposal. Contaminated extinguishing water must be disposed of in accordance with official regulations.

SECTION 7: HANDLING AND STORAGE

Handling: Keep out of reach of children. May be irritating to eyes. Avoid breathing vapour or spray. For product in eyes, wash immediately with water. For product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

Storage: Store between 5-30°C in the closed original container, in a cool, dry, well-ventilated area, away from direct sunlight and sources of ignition.

Incompatibility: Keep away from strong oxidising agents.

Flammability: Not flammable under normal conditions of use. The product does not sustain combustion.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure limits:

Bromoxynil octanoate OES TWA (8 hrs.) 0.31 mg/m^3.
Aromatic hydrocarbon 50 ppm TWA

Engineering controls:	Use only in well-ventilated areas. If necessary, use local exhaust ventilation to keep airborne concentration below exposure limits.
Personal protective Equipment:	Wear face shield or goggles. Wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat, heavy-duty shoes or boots. Wear elbow length butyl rubber gloves. If working in a poorly ventilated area or if occupational exposure levels are likely to be exceeded, wear a respirator with filter for vapours. After each day's use, wash gloves, goggles or face shield, respirator if worn, and contaminated clothing.

Do not re-enter treated areas without protective clothing until spray residue has dried.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

a)	Appearance:	Clear brown liquid
b)	Odour:	Organic
c)	Odour threshold:	None set
d)	pH:	6 - 9
e)	Melting point/freezing point:	45-46°C (tech.)
f)	Boiling point/boiling range:	Decomposes >180°C (tech)
g)	Flash point:	68°C (CC)
h)	Evaporation rate:	Not measured
i)	Flammability (solid/gas):	Not flammable
j)	Upper/lower flammability or explosive limits:	Not determined
k)	Vapour pressure:	<1 x10^{-4} mPa (25°C) (tech.)
l)	Vapour density:	5.52 X 10^{-07} Pa m^3 mol^{-1} (tech.)
m)	Relative density:	1.03 – 1.05 g/mL (20°C)
n)	Solubility:	0.03 mg/L (water, 25°C) (tech.)
o)	Partition coefficient:	Log Pow 5.9 (20°C) (tech.)
p)	Auto-ignition temperature:	Not determined
q)	Decomposition temperature:	180°C (tech.)
r)	Viscosity:	Not measured
s)	Explosive properties:	Not explosive
t)	Oxidising properties:	Not an oxidiser

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions of use. Will not polymerise.
Chemical stability	The product is stable if stored and handled as prescribed /indicated.

Possibility of hazardous reactions

No hazardous reactions when stored and handled according to instructions.

Conditions to avoid	Sources of ignition and extremes of temperature and direct sunlight.

Incompatible materials Strong oxidisers, alkalis.

Hazardous decomposition Products: Does not decompose at ambient temperature. Combustion or thermal decomposition will evolve toxic and irritant vapours.

SECTION 11: TOXICOLOGICAL INFORMATION

Oral toxicity: LD_{50} rat: >550-2000 mg/kg (GHS Category 4)

Dermal toxicity: LD_{50} rat: >2000- 5000 mg/kg (GHS Category 5)

Inhalation toxicity: LC_{50} rat (4h) 2.88 mg/L

Skin irritation: Not irritating

Eye irritation: Mild irritant

Skin sensitisation: Not a skin sensitiser

Not classed as carcinogenic or mutagenic.
Reproduction effects: Retardation of development (body weight gain and eye opening) at parental toxic dose level. Increase of malformations in rat and rabbit at maternal toxic dose levels.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity (technical material)

Fish toxicity:	LC_{50} 96 h Rainbow trout	0.041 mg/L
Bird toxicity:	LD_{50} Bobwhite quail	170 mg/kg
***Daphnia* toxicity:**	EC_{50} 48 h *Daphnia magna*	0.046 mg/L
Algal toxicity:	EC_{50} 120 hr *Navicula pelliculosa*	0.043 mg/L

It is practically non-toxic to bees.

LD_{50} (48h) - oral	100 µg/bee
LD_{50} (48h) - contact	120 µg/bee

This substance is not considered to be very persistent and has a moderate potential to bioaccumulate.

SECTION 13: DISPOSAL CONSIDERATIONS

Do not contaminate ponds, waterways or ditches with chemical or used containers. Empty containers should be washed and discarded. Empty containers should not be used for other purposes. Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORTATION INFORMATION

UN number:	3082		
UN Proper Shipping Name:	Environmentally hazardous substance, liquid, N.O.S. (contains bromoxynil octanoate)		
Transport hazard class:	ADR/RID: 9	IMDG: 9	IATA: 9
Packaging group:	ADR/RID: III	IMDG: III	IATA: III
Environmental hazard:	ADR/RID: Yes	IMDG: Marine pollutant: Yes	IATA: yes

SECTION 15: REGULATORY INFORMATION

No additional regulatory information required for this product.

SECTION 16: OTHER INFORMATION

Additional relevant H-statements:
These phrases are for hazardous components in the product but are not at levels that require H statements. They provide additional information on risks.

H-statements:

H226	Flammable liquid and vapour.
H318	Causes serious eye damage
H319	Causes serious eye irritation
H330	Fatal if inhaled
H335	May cause respiratory irritation
H411	Toxic to aquatic life with long lasting effects

TWA: Time weighted average: average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

No liability is accepted for any injury, loss, damage or cost arising directly or indirectly from the use of the product or from the use of information contained within the safety data sheet since the customer's handling of the product is necessarily beyond our control. The supplied data are based on current knowledge and experience. This safety data sheet is intended to describe our product in terms of safety requirements. The customer should determine by appropriate trials that the product is suitable for his intended use.

Reason for revision:
Update to sections 2,3,9,13
Sections 9, 11 and 12 based on available EU and own data.