

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 12-Oct-2021 Revision Number 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code(s) DRE-C10810000

Product Name Bronopol

NOTE [8] - No registration number is given for this substance because it is under the threshold in REACH Article 6(1) and not subject to the registration requirements according to REACH Title II

EC No 200-143-0

CAS No 52-51-7

Chemical name Bronopol (INN)

Pure substance/mixture Substance

Formula C3H6BrNO4

Molecular weight 200.01

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

Recommended use Laboratory use

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier

LGC Limited Queens Road Teddington Middlesex TW11 0LY UNITED KINGDOM :+44 (0) 20 8943 7000 Fax :+44 (0) 20 8943 2767 eMail : gb@lgcstandards.com

Web: www.lgcstandards.com

For further information, please contact

E-mail address sds-request@lgcgroup.com

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1.4. Emergency telephone number

Emergency Telephone For Hazardous Materials or Dangerous Goods Incident

Spill, Leak, Fire Exposure, or Accident

Call CHEMTREC:

USA & Canada 1-800-424-9300 Rest of the world +1 703-741-5970

Emanuary Talanhana SAF	(FCM 979/9999
Emergency Telephone - §45	
Europe	112
Austria	No information available
Bulgaria	
Croatia	
Cyprus	
Czech Republic	
Denmark	
France	
Hungary	
Ireland	
Italy	
Lithuania	
Luxembourg	(+352) 8002 5500 Free telephone number with a 24/7 access in French, Dutch and English.
Netherlands	
Norway	
Portugal	
Romania	
Slovakia	
Slovenia	
Spain	
Sweden	
Switzerland	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 3 - (H301)
Acute toxicity - Dermal	Category 4 - (H312)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)
Specific target organ toxicity — single exposure	Category 3 - (H335)
Category 3 Respiratory irritation	
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 2 - (H411)

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2.2. Label elements

200-143-0

Contains Bronopol (INN)



Signal word Danger

Hazard statements

H301 - Toxic if swallowed

H312 - Harmful in contact with skin

H315 - Causes skin irritation

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P264 - Wash face, hands and any exposed skin thoroughly after handling

P273 - Avoid release to the environment

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

P391 - Collect spillage

2.3. Other hazards

No information available.

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

Chemical name	EU - REACH (1907/2006) - Article 59(1)	EU - REACH (1907/2006) - Endocrine
	- Candidate List of Substances of Very	Disruptor Assessment List of
	High Concern (SVHC) for Authorisation	Substances
Bronopol (INN)	-	-

SECTION 3: Composition/information on ingredients

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3.1 Substances

Chemical name	Weight-%	REACH registration number	EC No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Bronopol (INN) 52-51-7	100	-	200-143-0	Acute Tox. 3 (H301) Acute Tox. 4 (H312) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411)	M=10	10	10

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
	mg/kg	mg/kg	hour - dust/mist - mg/L	hour - vapour - mg/L	hour - gas - ppm
Bronopol (INN) 52-51-7	180	1600	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur. IF exposed or

concerned: Get medical advice/attention.

Eye contact Get immediate medical advice/attention. Rinse immediately with plenty of water, also under

the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do.

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Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

Skin contact Wash off immediately with soap and plenty of water for at least 15 minutes. If symptoms

persist, call a doctor.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious

person. Get medical attention.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination. Wear personal protective clothing

(see section 8). Avoid contact with skin, eyes or clothing.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the

chemical

No information available.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout

gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal

protective equipment as required. Evacuate personnel to safe areas.

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Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with

skin, eyes or clothing. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Avoid breathing vapours or mists. In case of insufficient ventilation, wear suitable respiratory equipment.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this

product. Wash hands before breaks and after work. Wear suitable gloves and eye/face

protection.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach

of children. Store locked up. Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless

other advice is given on the CoA.

7.3. Specific end use(s)

Identified uses

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	France	Germany	Germany MAK	Greece	Hungary
Bronopol (INN)	-	-	*	-	=
52-51-7			skin sensitizer		

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Derived No Effect Level (DNEL)
Predicted No Effect Concentration
(PNEC)

No information available. No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection Tight sealing safety goggles. Avoid contact with eyes. Wear safety glasses with side shields

(or goggles).

Hand protection Wear suitable gloves. Impervious gloves. The protective gloves to be used must comply

with the specifications of EC Directive 89/686/EEC and the related standard EN374.

Gloves				
Duration of contact	PPE - Glove material	Glove thickness	Break through time	
	Wear protective butyl			
	rubber gloves			

Skin and body protectionLong sleeved clothing. Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are

exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this

product. Wash hands before breaks and after work. Wear suitable gloves and eye/face

protection.

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Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Solid

Appearance Crystalline powder

Colour white

Odour No information available. **Odour threshold** No information available

Remarks • Method Property Values

129 °C None known Melting point / freezing point Boiling point / boiling range No data available None known Flammability (solid, gas) No data available None known Flammability Limit in Air None known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Flash point No data available None known **Autoignition temperature** No data available None known **Decomposition temperature** None known

No data available None known No information available pH (as aqueous solution) No data available

Kinematic viscosity No data available None known **Dynamic viscosity** No data available None known Water solubility Soluble in water 286 g/L None known No data available None known

Solubility(ies) Partition coefficient No data available None known Vapour pressure 0.000051 hPa None known Relative density 1.905 None known

Bulk density No data available **Liquid Density** No data available

Relative vapour density No data available None known

Particle characteristics

Particle Size No information available **Particle Size Distribution** No information available

9.2. Other information

Molecular weight 200.01 Molecular formula C3H6BrNO4

9.2.1. Information with regards to physical hazard classes Not applicable

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9.2.2. Other safety characteristics No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None. Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoidNone known based on information supplied.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

Hazardous decomposition products Carbon monoxide. Carbon dioxide (CO2). Nitrogen oxides (NOx). Hydrogen bromide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. May cause irritation of

respiratory tract.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye

damage. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Causes skin irritation. (based

on components).

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Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause

gastrointestinal irritation, nausea, vomiting and diarrhoea. Toxic if swallowed. (based on

components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. May cause redness and tearing of the eyes.

Numerical measures of toxicity

Acute toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Bronopol (INN)	= 180 mg/kg (Rat)	= 1600 mg/kg (Rat)	> 5 g/m³(Rat)6 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritationClassification based on data available for ingredients. Irritating to skin.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes burns. Risk of serious

damage to eyes.

Respiratory or skin sensitisation No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure May cause respiratory irritation.

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STOT - repeated exposure No information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Bronopol (INN)	-	LC50: >20 mg/L (96h, Oncorhynchus mykiss)	-	EC50: >1.4 mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product contains substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
Bronopol (INN)	The substance is not PBT / vPvB

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12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number UN3241

14.2 UN proper shipping name 2-Bromo-2-nitropropane-1,3-diol

14.3 Transport hazard class(es) 4.1 14.4 Packing group

Description UN3241, 2-Bromo-2-nitropropane-1,3-diol, 4.1, III

14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions A20, A803

ERG Code

IMDG

14.1 UN number or ID number UN3241

14.2 UN proper shipping name 2-Bromo-2-nitropropane-1,3-diol

14.3 Transport hazard class(es) 4.1 14.4 Packing group Ш

Description UN3241, 2-Bromo-2-nitropropane-1,3-diol, 4.1, III, Marine pollutant

14.5 Marine pollutant Yes **Environmental hazards**

14.6 Special precautions for user

Special Provisions

EmS-No F-J. S-G No information available

14.7 Maritime transport in bulk according to IMO instruments

No information available

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RID 14.1 UN number or ID number UN3241

14.2 UN proper shipping name 2-Bromo-2-nitropropane-1,3-diol

14.3 Transport hazard class(es)4.114.4 Packing group

Description UN3241, 2-Bromo-2-nitropropane-1,3-diol, 4.1, III, Environmentally Hazardous

14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions 638 Classification code SR1

ADR

14.1 UN number or ID number UN3241

14.2 UN proper shipping name 2-Bromo-2-nitropropane-1,3-diol

14.3 Transport hazard class(es) 4.1 **14.4 Packing group**

Description UN3241, 2-Bromo-2-nitropropane-1,3-diol, 4.1, III, (D), Environmentally Hazardous

14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions638Classification codeSR1Tunnel restriction code(D)

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Water hazard class (WGK) obviously hazardous to water (WGK 2)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors

Not applicable

Persistent Organic Pollutants

Not applicable

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Dangerous substance category per Seveso Directive (2012/18/EU)

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA Contact supplier for inventory compliance status **DSL/NDSL** Contact supplier for inventory compliance status **EINECS/ELINCS** Contact supplier for inventory compliance status Contact supplier for inventory compliance status **ENCS** Contact supplier for inventory compliance status **IECSC** Contact supplier for inventory compliance status **KECL** Contact supplier for inventory compliance status **PICCS AICS** Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment has been carried out for this substance

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H301 - Toxic if swallowed

H312 - Harmful in contact with skin

H315 - Causes skin irritation

H318 - Causes serious eye damage

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H335 - May cause respiratory irritation

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value * Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

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National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

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This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 Disclaimer

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

End of Safety Data Sheet

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