

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Revision date 03-Feb-2026

Revision Number 2

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

1.1. Product identifier

Product Code(s) 127196

Safety data sheet number 127196

Product Name BRAD-CHEM 587

Additional Product Information This product is not classified as hazardous, the information in this datasheet is given for guidance only.

Pure substance/mixture Mixture

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

Recommended use Corrosion inhibitor

1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified

2.2. Label elements

Not classified

Hazard statements

Not classified
EUH210 - Safety data sheet available on request

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
MONOPROPYLENE GLYCOL 57-55-6	1 - 5%	200-338-0	UK-01-6702687939-4-XXXX	Not Classified	-	-	-
1H-BENZOTRIAZOLE 95-14-7	< 2.5%	202-394-1 (613-350-00-X)	-	Aquatic Chronic 2 (H411) Acute Tox. 4 (H302) Eye Irrit. 2 (H319)	-	-	-

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

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation**

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Get medical attention if symptoms occur.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if symptoms occur.

Ingestion

Rinse mouth thoroughly with water. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

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

May cause temporary eye irritation.

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

Suitable Extinguishing Media Use extinguishing agent suitable for type of surrounding fire.

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 Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Hazardous combustion products Thermal decomposition can lead to release of irritating and toxic gases and vapours.

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. Cool containers with flooding quantities of water until well after fire is out.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Provide adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Avoid release to the environment. Do not allow runoff to sewer, waterway or ground.

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 Absorb with earth, sand or other non-combustible material and transfer to containers for later 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 Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using the product. Wash hands and face before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from food, drink and animal feedingsuffs.

7.3. Specific end use(s)

Specific use(s)

See section 1 for more information.

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	United Kingdom
MONOPROPYLENE GLYCOL 57-55-6	TWA: 150 ppm TWA: 470 mg/m ³ (Total vapour and particulates) TWA: 10 mg/m ³ (Particulates)

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) - Workers

Chemical name	Oral	Dermal	Inhalation
MONOPROPYLENE GLYCOL 57-55-6			168 mg/m ³ [4] [6] 10 mg/m ³ [5] [6]
1H-BENZOTRIAZOLE 95-14-7		1.08 mg/kg bw/day [4] [6]	19 mg/m ³ [4] [6]

[4] Systemic health effects.

[5] Local health effects.

[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
MONOPROPYLENE GLYCOL 57-55-6			50 mg/m ³ [4] [6] 10 mg/m ³ [5] [6]
1H-BENZOTRIAZOLE 95-14-7	0.54 mg/kg bw/day [4] [6] 0.54 mg/kg bw/day [4] [7]		9.55 mg/m ³ [4] [6]

[4]	Systemic health effects.
[5]	Local health effects.
[6]	Long term.

Predicted No Effect Concentration (PNEC) No information available.

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
MONOPROPYLENE GLYCOL 57-55-6	260 mg/L	183 mg/L	26 mg/L		
1H-BENZOTRIAZOLE 95-14-7	0.0194 mg/L	0.158 mg/L	0.0194 mg/L		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
MONOPROPYLENE GLYCOL 57-55-6	572 mg/kg sediment dw	57.2 mg/kg sediment dw	20 g/L	50 mg/kg soil dw	
1H-BENZOTRIAZOLE 95-14-7	0.2204 mg/kg sediment dw	0.2204 mg/kg sediment dw	0.1 mg/L	0.03 mg/kg soil dw	

8.2. Exposure controls

Engineering controls	Ensure adequate ventilation. Ensure that eyewash stations and safety showers are close to the workstation location.
Personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles). Use eye protection according to EN ISO 16321-1.
Hand protection	Wear protective gloves. Gloves must conform to standard EN 374. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Examples of preferred glove barrier materials include: Ethyl vinyl alcohol laminate ("EVAL"). Polyethylene (PE).
Skin and body protection	No special protective equipment required.
Respiratory protection	None under normal use conditions. In case of inadequate ventilation wear respiratory protection. EN 136/140/141/145/143/149.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using the product. Wash hands and face before breaks and immediately after handling the product.
Environmental exposure controls	Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear liquid
Colour	yellow
Odour	Slight.
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point		No information available.
Initial boiling point and boiling range	~ 100 °C	No information available.
Flammability		No information available.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point		No information available.
Autoignition temperature		No information available.
Decomposition temperature		No information available.
pH	8.2	No information available.
pH (as aqueous solution)		No information available.
Kinematic viscosity		No information available.
Dynamic viscosity		No information available.
Water solubility	Miscible with water	No information available.
Solubility(ies)		No information available.
Partition coefficient		No information available.
Vapour pressure		No information available.
Relative density	~ 1.1	@ 20 °C.
Bulk density		No information available
Liquid Density	No information available	No information available
Relative vapour density		No information available.
Particle characteristics		No information available.
Particle Size	No information available	
Particle Size Distribution	No information available	
Explosive properties	No information available	
Oxidising properties	No information available	

9.2. Other information**SECTION 10: Stability and reactivity****10.1. Reactivity**

Reactivity	Stable under recommended storage conditions.
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10.2. Chemical stability

Stability	Stable under normal conditions.
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Explosion data

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

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Stable under normal conditions.
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Hazardous polymerisation	Hazardous polymerisation does not occur.
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10.4. Conditions to avoid

Conditions to avoid Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition can lead to release of irritating and toxic gases and vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation Inhalation of vapours in high concentration may cause irritation of respiratory system.

Eye contact May cause temporary eye irritation.

Skin contact Prolonged exposure not likely to cause significant skin irritation.

Ingestion May cause gastrointestinal discomfort if consumed in large amounts.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause temporary eye irritation.

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
MONOPROPYLENE GLYCOL	> 20000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	317.042 mg/l (Rat) (2h)
1H-BENZOTRIAZOLE	= 560 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	= 1910 mg/m ³ (Rat) 3 h

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

Skin corrosion/irritation Based on available data the classification criteria are not met.

MONOPROPYLENE GLYCOL (57-55-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Prolonged contact is essentially nonirritating to skin. Repeated contact may cause flaking and softening of skin.

Serious eye damage/eye irritation Based on available data the classification criteria are not met.

MONOPROPYLENE GLYCOL (57-55-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					May cause slight eye irritation Corneal injury is unlikely Mist may cause eye irritation.

Respiratory or skin sensitisation Based on available data the classification criteria are not met.

MONOPROPYLENE GLYCOL (57-55-6)

Method	Species	Exposure route	Results
	Human evidence	Dermal	Not a skin sensitiser

Germ cell mutagenicity Based on available data the classification criteria are not met.

Component Information

MONOPROPYLENE GLYCOL (57-55-6)

Method	Species	Results
	in vitro	Negative
		Negative Did not show mutagenic effects in animal experiments

1H-BENZOTRIAZOLE (95-14-7)

Method	Species	Results
Ames Test	in vitro	Positive
In vivo Micronucleus Test	Mouse	Negative

Carcinogenicity Based on available data the classification criteria are not met.

Component Information

MONOPROPYLENE GLYCOL (57-55-6)

Method	Species	Results
		Did not cause cancer in laboratory animals.

Reproductive toxicity Based on available data the classification criteria are not met.

MONOPROPYLENE GLYCOL (57-55-6)

Method	Species	Results
		In animal studies, did not interfere with reproduction In animal studies, did not interfere with fertility

STOT - single exposure Based on available data the classification criteria are not met.

MONOPROPYLENE GLYCOL (57-55-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Evaluation of

					available data suggests that this material is not an STOT-SE toxicant
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STOT - repeated exposure

Based on available data the classification criteria are not met.

Component Information

MONOPROPYLENE GLYCOL (57-55-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effect.

Aspiration hazard

Not applicable.

Other adverse effects

No information available.

SECTION 12: Ecological information**12.1. Toxicity****Ecotoxicity**

Based on available data, the classification criteria are not met. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

MONOPROPYLENE GLYCOL (57-55-6)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test	Oncorhynchus mykiss (rainbow trout)	LC50	40613 mg/L	96 hours	
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test	Ceriodaphnia dubia	LC50	18340 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Pseudokirchneriella subcapitata	ErC50	19000 mg/L	96 hours	
	Pseudomonas putida	NOEC	> 20000 mg/L	18 hours	
Chronic aquatic toxicity	Ceriodaphnia dubia	NOEC	13020 mg/L	7 days	

1H-BENZOTRIAZOLE (95-14-7)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Crustacea	EC50	15.8 - 20 mg/L	48 hours	
	Algae/aquatic plants	EC50	25 - 180 mg/L	72 hours	
	Fish	LC50	25 mg/L	96 hours	

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1H-BENZOTRIAZOLE	EC50: =15.4mg/L (96h, freshwater algae)	LC50: =39mg/L (96h, Oncorhynchus mykiss)	-	EC50: =141.6mg/L (48h, water flea)

12.2. Persistence and degradability

Persistence and degradability No information available.

MONOPROPYLENE GLYCOL (57-55-6)

Method	Exposure time	Value	Results
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F) or Equivalent.	28 days	Biodegradation 81%	Readily biodegradable
OECD Test No. 306: Biodegradability in Seawater or Equivalent.	64 days	Biodegradation 96%	Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation No information available.

Chemical name	Partition coefficient
MONOPROPYLENE GLYCOL	-1.07

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 does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
MONOPROPYLENE GLYCOL	The substance is not PBT / vPvB
1H-BENZOTRIAZOLE	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused products Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information**IATA**

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Authorisations and/or restrictions on use:**

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).

Product restricted per REACH Annex XVII: 3

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
1H-BENZOTRIAZOLE - 95-14-7	3	-

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA	- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL	- 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
AIIC	- Australian Inventory of Industrial Chemicals
NZIoC	- New Zealand Inventory of Chemicals

15.2. Chemical safety assessment**Chemical Safety Report** Not applicable**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**

H302 - Harmful if swallowed

H319 - Causes serious eye irritation

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
+	Sensitisers		

Revision Note **Not applicable****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 - single exposure	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)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
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)
National Institute of Technology and Evaluation (NITE)
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)
U.S. 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

Prepared By J Spenceley

Revision date 03-Feb-2026

This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
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

Disclaimer

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.

End of Safety Data Sheet