

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 07/06/2023 Revision date: 07/06/2023 Supersedes version of: 13/12/2018 Version: 4.0

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

1.1. Product identifier

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

1.2.1. Relevant identified uses

Intended for general public	
Main use category	: Professional use, Consumer use
Use of the substance/mixture	: Corrosion inhibitors

action or use category

 Corrosion inhibitors scale inhibitor
 Corrosion inhibitors

Function or use category

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier B.E.S. Ltd Unit 12 Junction 6 Industrial Park Electric Avenue B6 7JJ Birmingham United Kingdom T 0121 322 6400 technical@bes.ltd.uk - www.bes.co.uk

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	Only for healthcare professionals
United Kingdom	Helpline	Newmarket	+44 845 880 60 50	Mon - Fri 9am - 5pm GMT

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

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2.2. Label elements	
Labelling according to Regulation (EC)	No. 1272/2008 [CLP]
Precautionary statements (CLP)	 P102 - Keep out of reach of children. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
EUH-statements	: EUH210 - Safety data sheet available on request.
2.3. Other hazards	

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,2',2"-nitrilotriethanol	CAS-No.: 102-71-6 EC-No.: 203-049-8 REACH-no: 01-2119486482- 31	< 5	Not classified
Disodium molybdate	CAS-No.: 7631-95-0 EC-No.: 231-551-7 REACH-no: 01-2119489495- 21	< 5	Not classified
MPG (propane-1,2-diol)	CAS-No.: 57-55-6 EC-No.: 200-338-0 REACH-no: 01-2119456809- 23	< 2	Not classified
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3- one	CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6 REACH-no: 01-2120761540- 60	< 0.004	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

Specific concentration limits:			
Name	Product identifier	Specific concentration limits	
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3- one	CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6 REACH-no: 01-2120761540- 60	(0.05 ≤C ≤ 100) Skin Sens. 1, H317	

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

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SECTION 4: First aid measures			
4.1. Description of first aid measures			
First-aid measures general	: If you feel unwell, seek medical advice. If medical advice is needed, have product container or label at hand.		
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.		
First-aid measures after skin contact	: Wash skin with plenty of water.		
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse eyes with water as a precaution.		
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.		
4.2. Most important symptoms and effects, both acute and delayed			
Symptoms/effects Symptoms/effects after inhalation Symptoms/effects after skin contact Symptoms/effects after eye contact Symptoms/effects after ingestion	 Not expected to present a significant hazard under anticipated conditions of normal use. Inhalation may cause irritation (cough, short breathing, difficulty in breathing). Contact during a long period may cause light irritation. May cause eye irritation. Ingestion may cause nausea and vomiting. 		

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media			
Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.		
5.2. Special hazards arising from the substance or mixture			
Hazardous decomposition products in case of fire	: Toxic fumes may be released.		
5.3. Advice for firefighters			
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.		

SECTION 6: Accidental release measures			
6.1. Personal precautions, protective equipment and emergency procedures			
6.1.1. For non-emergency personnel			
Protective equipment	: Wear recommended personal protective equipment.		
Emergency procedures	: Ventilate spillage area.		
6.1.2. For emergency responders			
Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".		
Emergency procedures	: Cover spill with non combustible material, e.g.: sand/earth.		
6.2. Environmental precautions			
Avoid release to the environment.			
6.3. Methods and material for containment and cleaning up			
Methods for cleaning up	: Take up liquid spill into absorbent material.		
Other information	: Dispose of materials or solid residues at an authorized site.		
6.4. Reference to other sections			

For further information refer to section 13.

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SECTION 7: Handling and storage			
7.1. Precautions for safe handling			
Precautions for safe handling Hygiene measures	Ensure good ventilation of the work station. Wear personal protective equipment.Do not eat, drink or smoke when using this product. Always wash hands after handling the product.		
7.2. Conditions for safe storage, including any incompatibilities			
Storage conditions	: Store in a well-ventilated place. Keep cool.		

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

MPG (propane-1,2-diol) (57-55-6)		
United Kingdom - Occupational Exposure Limits		
Local name	Propane-1,2-diol	
WEL TWA (OEL TWA) [1]	10 mg/m ³ particulates 474 mg/m ³ total vapour and particulates	
WEL TWA (OEL TWA) [2]	150 ppm total vapour and particulates	
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE	

Exposure limit values for the other components

sodium hydroxide; caustic soda (1310-73-2)		
United Kingdom - Occupational Exposure Limits		
Local name	Sodium hydroxide	
WEL STEL (OEL STEL)	2 mg/m ³	
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE	

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

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8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection: Safety glasses (EN 166). Safety glasses

8.2.2.2. Skin protection

Skin and body protection: Wear suitable protective clothing

Hand protection:

Protective gloves against chemicals (EN 374)

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

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
Colour	:	light yellow.
Appearance	:	Liquid.
Odour	:	mild. aromatic.
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Non flammable.
Explosive limits	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
рН	:	≈ 8.2 (8 – 8.5)
Viscosity, kinematic	:	Not available
Solubility	:	Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	Not available
Relative density	:	≈ 1.09 (1.05 – 1.09)
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

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9.2. Other information

- 9.2.1. Information with regard to physical hazard classes
- No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information		
11.1. Information on hazard classes as defined	d in Regulation (EC) No 1272/2008	
Acute toxicity (oral):Acute toxicity (dermal):Acute toxicity (inhalation):	Not classified Not classified Not classified	
2,2',2"-nitrilotriethanol (102-71-6)		
LD50 oral rat	6400 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)	
Disodium molybdate (7631-95-0)		
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:	
MPG (propane-1,2-diol) (57-55-6)		
LD50 oral rat	22000 mg/kg bodyweight Animal: rat, Remarks on results: other:	
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit	
LC50 Inhalation - Rat	> 44.9 mg/l air Animal: rat, Guideline: other:, Remarks on results: other:	
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)		
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation :	Not classified	
Serious eye damage/irritation :	pH: ≈ 8.2 (8 – 8.5) Not classified pH: ≈ 8.2 (8 – 8.5)	

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Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity	 Not classified Not classified Not classified
2,2',2"-nitrilotriethanol (102-71-6)	
NOAEL (chronic, oral, animal/male, 2 years)	63 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 451 (Carcinogenicity Studies)
Reproductive toxicity	: Not classified
1,2-benzisothiazol-3(2H)-one; 1,2-benzisoth	iazolin-3-one (2634-33-5)
NOAEL (animal/female, F1)	56.6 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: EPA OPPTS 870.3800 (Reproduction and Fertility Effects)
STOT-single exposure STOT-repeated exposure	Not classified Not classified
2,2',2"-nitrilotriethanol (102-71-6)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90- Day Oral Toxicity Study in Rodents)
Disodium molybdate (7631-95-0)	
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	 > 0.1 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
MPG (propane-1,2-diol) (57-55-6)	
NOAEL (subchronic, oral, animal/male, 90 days)	443 mg/kg bodyweight Animal: cat, Animal sex: male
Aspiration hazard	: Not classified
1,2-benzisothiazol-3(2H)-one; 1,2-benzisoth	iazolin-3-one (2634-33-5)
Viscosity, kinematic	Not applicable

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general :	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term : (acute)	Not classified
Hazardous to the aquatic environment, long-term : (chronic) Not rapidly degradable	Not classified
2,2',2"-nitrilotriethanol (102-71-6)	
LC50 - Fish [1]	11800 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	609.88 mg/l Test organisms (species): Ceriodaphnia dubia
EC50 72h - Algae [1]	512 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	216 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
NOEC chronic fish	> 1 mg/l Test organisms (species): other:

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MPG (propane-1,2-diol) (57-55-6)		
_C50 - Fish [1]	51600 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)	
_C50 - Fish [2]	51400 mg/l Test organisms (species): Pimephales promelas	
EC50 72h - Algae [1]	24200 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
EC50 72h - Algae [2]	19300 mg/l Test organisms (species): Skeletonema costatum	
EC50 96h - Algae [1]	19000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
EC50 96h - Algae [2]	19100 mg/l Test organisms (species): Skeletonema costatum	
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)		
_C50 - Fish [1]	≈ 16.7 mg/l Test organisms (species): Cyprinodon variegatus	
_C50 - Fish [2]	2.15 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)	
EC50 - Crustacea [1]	2.94 mg/l Test organisms (species): Daphnia magna	
EC50 - Crustacea [2]	2.9 mg/l Test organisms (species): Daphnia magna	

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

Product/Packaging disposal recommendations

: Dispose of contents/container in accordance with licensed collector's sorting instructions. : Clean with water.

SECTION 14: Transport information				
In accordance with ADR / IMDG / IATA / ADN / RID				
ADR	IMDG	ΙΑΤΑ	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

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IMDG	ΙΑΤΑ	ADN	RID
y name			
Not applicable	Not applicable	Not applicable	Not applicable
lass(es)	· · · · · ·		
Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable
ards			
Not applicable	Not applicable	Not applicable	Not applicable
	Not applicable Not applicable Not applicable Not applicable Not applicable	Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable	Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

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Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Supersedes version of	Added	
	Revision date	Added	

Abbreviations and acr	onyms:
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
ΙΑΤΑ	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
РВТ	Persistent Bioaccumulative Toxic

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Abbreviations and acronyms:		
PNEC	Predicted No-Effect Concentration	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
SDS	Safety Data Sheet	
STP	Sewage treatment plant	
ThOD	Theoretical oxygen demand (ThOD)	
TLM	Median Tolerance Limit	
VOC	Volatile Organic Compounds	
CAS-No.	Chemical Abstract Service number	
N.O.S.	Not Otherwise Specified	
vPvB	Very Persistent and Very Bioaccumulative	
ED	Endocrine disrupting properties	

Full text of H- and EUH-statements:		
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1	
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2	
EUH210	Safety data sheet available on request.	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1	
H302	Harmful if swallowed.	
H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H318	Causes serious eye damage.	
H400	Very toxic to aquatic life.	
H411	Toxic to aquatic life with long lasting effects.	
Skin Irrit. 2	Skin corrosion/irritation, Category 2	
Skin Sens. 1	Skin sensitisation, Category 1	

Safety Data Sheet (SDS), EU

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