SAFETY DATA SHEET

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

Revision date 03/26/2026 **Revision Number** 2

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

1.1. Product identifier

Safety data sheet number 000110

Product Name GRF224 CLOTHING REPEL 5L

Other means of identification

Pure substance/mixture Mixture

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

Recommended use Garment care product

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer
Grangers International Ltd
Enterprise Way
Duckmanton
Derbyshire
S44 5FD
United Kingdom

EU Authorised Representative:
Authorised Rep Compliance Ltd
Ground Floor, 71 Lower Baggot Street
Dublin
DO2 P593
Ireland
For further information, please contact

E-mail address technical@grangers.co.uk

1.4. Emergency telephone number

Emergency Telephone +44 (0)1773 521521 (MON-FRI 08.00-17.00 UK TIME)

Emergency Telephone - §45 - (EC)1272/2008	
Europe	**112**

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

2.2. Label elements

Hazard statements
EUH208 - Contains 1,2-benzisothiazol-3(2H)-one May produce an allergic reaction.

Precautionary Statements - EU (§28, 1272/2008)
P102 - Keep out of reach of children.

2.3. Other hazards

Other hazards No information available.

PBT or vPvB properties This product does not contain any substances that are assessed to be a PBT or a vPvB.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical name	Weight-%	REACH registration number	EC No. (Index No.)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	Notes
WATER 7732-18-5	50 - <100%	No data available	231-791-2	No data available	-	-	-	-
2-methylpentane-2,4-diol 107-41-5	5 - <10%	No data available	(603-053-00-3) 203-489-0	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	-	-	-	-
Synthetic polymer 75718-16-0	1 - <2.5%	No data available	-	No data available	-	-	-	-
acetic acid … % 64-19-7	0.025 - <0.25%	No data available	(607-002-00-6) 200-580-7	Flam. Liq. 3 (H226) Skin Corr. 1A (H314)	Eye Irrit. 2 :: 10%<=C<25 % Skin Corr. 1A :: C>=90% Skin Corr. 1B :: 25%<=C<90 % Skin Irrit. 2 :: 10%<=C<25 %	-	-	B
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	<0.025%	No data available	223-296-5 (613-344-00-7)	Acute Tox. 4 (H302) Acute Tox. 3 (H311) Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Eye Irrit. 2 (H319) Acute Tox. 3 (H331) STOT RE 1 (H372) Aquatic Acute 1	-	100	100	-

				(H400) Aquatic Chronic 2 (H411) (EUH070)				
1,2-benzisothiazol-3(2H)-one 2634-33-5	<0.025%	No data available	(613-088-00-6) 220-120-9	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Skin Sens. 1A (H317) Eye Dam. 1 (H318) Acute Tox. 2 (H330) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	Skin Sens. 1A :: C>=0.036%	1	1	-

CLP Notes:

Note B - Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid … %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

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 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapor - mg/L	Inhalation LC50 - 4 hour - gas - ppm
WATER 7732-18-5	89838.9	No data available	No data available	No data available	No data available
2-methylpentane-2,4-diol 107-41-5	3700	12300	0.0776	No data available	No data available
acetic acid … % 64-19-7	3310	1060	11.4	No data available	No data available
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	500 +	790 + 1800	0.5 +	No data available	No data available
1,2-benzisothiazol-3(2H)-one 2634-33-5	450 + 1020	2002	0.21 +	No data available	No data available

+ This value is the harmonized acute toxicity estimate (ATE) listed in CLP Annex VI, Part 3. This harmonized ATE value must be used when calculating the acute toxicity estimate (ATEmix) for classifying a mixture containing the listed substance

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.

Inhalation Remove to fresh air.

Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.
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. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective equipment as required. See section 8 for more information.

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

Symptoms	Coughing and/ or wheezing. Difficulty in breathing. Prolonged contact may cause redness and irritation. May cause allergic skin reaction.
Effects of Exposure	No information available.

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

Note to physicians	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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. Use personal protective equipment as required.
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 See Section 12 for additional Ecological Information.

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 Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. Following product recovery, flush area with water.

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.

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

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union
acetic acid … % 64-19-7	TWA: 25 mg/m³; TWA: 10 ppm; STEL: 50 mg/m³; STEL: 20 ppm;

Chemical name	Austria	Belgium	Bulgaria	Croatia
2-methylpentane-2,4-diol 107-41-5	TWA-TMW: 10 ppm; TWA-TMW: 49 mg/m³; STEL-KZGW: 10 ppm (); STEL-KZGW: 49	STEL: 25 ppm; STEL: 123 mg/m³;	-	TWA-GVI: 25 ppm; TWA-GVI: 123 mg/m³; STEL-KGVI: 25 ppm; STEL-KGVI: 123 mg/m³;

	mg/m³ (); Ceiling: 10 ppm; Ceiling: 49 mg/m³;			Sk
acetic acid … % 64-19-7	TWA-TMW: 10 ppm; TWA-TMW: 25 mg/m³; STEL-KZGW: 20 ppm (8 X 5 min); STEL-KZGW: 50 mg/m³ (8 X 5 min);	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 15 ppm; STEL: 38 mg/m³;	TWA: 25 mg/m³; TWA: 10 ppm; STEL: 50 mg/m³; STEL: 20 ppm;	TWA-GVI: 10 ppm; TWA-GVI: 25 mg/m³; STEL-KGVI: 20 ppm; STEL-KGVI: 50 mg/m³;
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	TWA-TMW: 1 mg/m³; STEL-KZGW: 4 mg/m³ (4 X 15 min); Sk	-	-	-
Chemical name	Cyprus	Czech Republic	Denmark	Estonia
2-methylpentane-2,4-diol 107-41-5	-	-	Ceiling: 25 ppm; Ceiling: 125 mg/m³;	-
acetic acid … % 64-19-7	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 50 mg/m³; STEL: 20 ppm;	TWA: 25 mg/m³; Ceiling: 50 mg/m³;	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 50 mg/m³; STEL: 20 ppm;	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 10 ppm; STEL: 25 mg/m³;
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	-	-	TWA: 1 mg/m³; STEL: 2 mg/m³; pSk	-
Chemical name	Finland	France	Germany TRGS	Germany DFG
2-methylpentane-2,4-diol 107-41-5	TWA: 25 ppm; TWA: 120 mg/m³; STEL: 40 ppm; STEL: 200 mg/m³;	STEL-VLCT: 25 ppm; STEL-VLCT: 125 mg/m³;	-	TWA-MAK: 10 ppm; I(2); TWA-MAK: 49 mg/m³; I(2);
acetic acid … % 64-19-7	TWA: 5 ppm; TWA: 13 mg/m³; STEL: 10 ppm; STEL: 25 mg/m³;	TWA-VME (restrictif): 10 ppm; TWA-VME (restrictif): 25 mg/m³; STEL-VLCT (indicatif): 20 ppm; STEL-VLCT (indicatif): 50 mg/m³;	TWA-AGW; 10 ppm (2(I)); TWA-AGW; 25 mg/m³ (2(I));	TWA-MAK: 10 ppm; I(2); TWA-MAK: 25 mg/m³; I(2);
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	-	-	TWA-AGW; 0.2 mg/m³ (2(II)); inhalable fraction Sk	TWA-MAK: 0.2 mg/m³; II(2); inhalable fraction
Chemical name	Greece	Hungary	Italy MDLPS	Italy AIDII
2-methylpentane-2,4-diol 107-41-5	TWA: 25 ppm; TWA: 125 mg/m³; STEL: 25 ppm; STEL: 125 mg/m³;	-	-	TWA: 25 ppm; vapor STEL (REL): 50 ppm; vapor STEL (REL): 10 mg/m³; inhalable fraction and aerosol
acetic acid … % 64-19-7	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 15 ppm; STEL: 37 mg/m³;	TWA-AK: 10 ppm; TWA-AK: 25 mg/m³; STEL-CK: 20 ppm; STEL-CK: 50 mg/m³;	TWA: 25 ppm; TWA: 10 mg/m³; STEL: 50 mg/m³; STEL: 20 ppm;	TWA: 10 ppm; TWA: 25 mg/m³; STEL (REL): 15 ppm; STEL (REL): 37 mg/m³;
Chemical name	Ireland	Latvia	Lithuania	Luxembourg
2-methylpentane-2,4-diol 107-41-5	STEL: 25 ppm; STEL: 125 mg/m³;	-	Ceiling (NRD): 25 ppm; Ceiling (NRD): 120 mg/m³;	-
acetic acid … % 64-19-7	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 20 ppm; STEL: 50 mg/m³;	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 50 mg/m³; STEL: 20 ppm;	TWA-IPRD: 10 ppm; TWA-IPRD: 25 mg/m³; STEL-TPRD: 50 mg/m³; STEL-TPRD: 20 ppm;	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 50 mg/m³; STEL: 20 ppm;

Chemical name	Malta	Netherlands	Norway	Poland
2-methylpentane-2,4-diol 107-41-5	-	-	Ceiling: 20 ppm; Ceiling: 100 mg/m³;	TWA-NDS: 50 mg/m³; vapor and inhalable fraction STEL-NDSCh: 100 mg/m³; vapor and inhalable fraction
acetic acid … % 64-19-7	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 20 ppm; STEL: 50 mg/m³;	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 20 ppm; STEL: 50 mg/m³;	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 20 ppm (value from the regulation); STEL: 50 mg/m³ (value from the regulation); As	TWA-NDS: 25 mg/m³; STEL-NDSCh: 50 mg/m³;

Chemical name	Portugal	Romania	Slovakia	Slovenia
2-methylpentane-2,4-diol 107-41-5	Ceiling (VLE-CM): 25 ppm;	-	-	-
acetic acid … % 64-19-7	TWA (VLE-MP): 10 ppm; TWA (VLE-MP): 25 mg/m³; STEL (VLE-CD): 20 ppm; STEL (VLE-CD): 50 mg/m³;	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 20 ppm; STEL: 50 mg/m³;	TWA: 10 ppm; TWA: 25 mg/m³; Ceiling: 50 mg/m³;	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 50 mg/m³; STEL: 20 ppm;
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	-	-	-	TWA: 1 mg/m³; inhalable fraction STEL: 2 mg/m³; inhalable fraction pSk

Chemical name	Spain	Sweden	Switzerland	United Kingdom
2-methylpentane-2,4-diol 107-41-5	STEL (VLA-EC): 25 ppm; STEL (VLA-EC): 123 mg/m³;	STEL (Bindande KGV): 25 ppm; STEL (Bindande KGV): 120 mg/m³;	TWA-MAK: 10 ppm; aerosol, vapour TWA-MAK: 49 mg/m³; aerosol, vapour STEL-KZGW: 20 ppm; aerosol, vapour STEL-KZGW: 98 mg/m³; aerosol, vapour	TWA: 25 ppm; TWA: 123 mg/m³; STEL: 25 ppm; STEL: 123 mg/m³;
acetic acid … % 64-19-7	TWA-(VLA-ED): 10 ppm; TWA-(VLA-ED): 25 mg/m³; STEL (VLA-EC): 20 ppm; STEL (VLA-EC): 50 mg/m³;	TLV-NGV: 5 ppm; TLV-NGV: 13 mg/m³; STEL (Bindande KGV): 10 ppm; STEL (Bindande KGV): 25 mg/m³;	TWA-MAK: 10 ppm; TWA-MAK: 25 mg/m³; STEL-KZGW: 20 ppm; STEL-KZGW: 50 mg/m³;	TWA: 10 ppm; TWA: 25 mg/m³; STEL: 20 ppm; STEL: 50 mg/m³;
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	-	-	TWA-MAK: 0.2 mg/m³; inhalable dust STEL-KZGW: 0.4 mg/m³; inhalable dust Sk	-

Note See section 16 for terms and abbreviations

Biological occupational exposure limits This product, as supplied, contains materials that do not have reportable biological exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
2-methylpentane-2,4-diol 107-41-5	-	63 mg/kg bw/day [4] [6]	44.43 mg/m³ [4] [6] 49 mg/m³ [5] [6] 98 mg/m³ [5] [7]
1,2-benzisothiazol-3(2H)-one 2634-33-5	-	0.966 mg/kg bw/day [4] [6]	6.81 mg/m³ [4] [6]

Notes
[1]
[4] Systemic health effects.
[5] Local health effects.
[6] Long term.
[7] Short term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
2-methylpentane-2,4-diol 107-41-5	2.25 mg/kg bw/day [4] [6]	-	7.83 mg/m³ [4] [6] 25 mg/m³ [5] [6] 49 mg/m³ [5] [7]
1,2-benzisothiazol-3(2H)-one 2634-33-5	-	-	1.2 mg/m³ [4] [6]

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

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
2-methylpentane-2,4-diol 107-41-5	0.429 mg/L	4.29 mg/L	0.0429 mg/L	-	-
propane-1,2-diol 57-55-6	260 mg/L	183 mg/L	26 mg/L	-	-
acetic acid … % 64-19-7	3.058 mg/L	30.58 mg/L	0.3058 mg/L	-	-
1,2-benzisothiazol-3(2H)-one 2634-33-5	4.03 µg/L	1.1 µg/L	0.403 µg/L	110 ng/L	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
2-methylpentane-2,4-diol 107-41-5	1.59 mg/kg sediment dw	0.159 mg/kg sediment dw	20 mg/L	0.066 mg/kg soil dw	-
propane-1,2-diol 57-55-6	572 mg/kg sediment dw	57.2 mg/kg sediment dw	20000 mg/L	50 mg/kg soil dw	-
acetic acid … % 64-19-7	11.36 mg/kg sediment dw	1.136 mg/kg sediment dw	85 mg/L	0.47 mg/kg soil dw	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
1,2-benzisothiazol-3(2H)-one 2634-33-5	49.9 µg/kg sediment dw	4.99 µg/kg sediment dw	1.03 mg/L	3 mg/kg soil dw	-

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

Hand protection Appropriate hand protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

Skin and body protection Appropriate skin and body protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

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.

Thermal hazards No information available.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Liquid
Physical state Liquid
Color white
Odor Slight, Characteristic
Odor threshold No information available

Property	Values	Remarks • Method
Melting point / freezing point	No data available	None known
Boiling point or initial boiling point and boiling range	100 °C	100°C/212°F
Flammability	No data available	None known
Lower and upper explosion limit/flammability limit		None known
Lower explosion limit	No data available	
Upper explosion limit	No data available	
Flash point	N/A	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
SADT (°C)	No data available	None known
pH	No data available	pH (concentrated solution): 5.00 @ 21°C (+/- 1.00)
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Solubility	No data available	None known
Water solubility	Soluble in water	None known
Partition coefficient n-octanol/water (log value)	No data available	None known
Vapor pressure	No data available	None known
Density and/or relative density	~ 1.00 @ 21°C	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapor density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

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

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 avoid Excessive heat. Do not freeze.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

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.

Eye contact Specific test data for the substance or mixture is not available. May cause irritation.

Skin contact Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

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

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Coughing and/ or wheezing. Difficulty in breathing. Prolonged contact may cause redness and irritation. May cause allergic skin reaction.

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

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

ATEmix (oral)	45,629.50 mg/kg
ATEmix (dermal)	151,687.40 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-vapor)	99,999.000 mg/L
ATEmix (inhalation-dust/mist)	0.956 mg/L

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
WATER	> 90 mL/kg (Rat)	-	-
2-methylpentane-2,4-diol	= 3700 mg/kg (Rat)	= 12300 mg/kg (Rabbit)	> 310 mg/m³ (Rat) 1 h
acetic acid … %	= 3310 mg/kg (Rat)	= 1060 mg/kg (Rabbit)	= 11.4 mg/L (Rat) 4 h
pyridine-2-thiol 1-oxide, sodium salt	-	= 1800 mg/kg (Rabbit)	-
1,2-benzisothiazol-3(2H)-one	= 1020 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

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.

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

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

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

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

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

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

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

Aspiration hazard Based on available data, the classification criteria are not met.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disruption for human health Based on available data, the classification criteria are not met.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity The environmental impact of this product has not been fully investigated.

Aquatic toxicity

Component Information

Chemical name	Fish	Crustacea	Algae/aquatic plants	Toxicity to microorganisms
2-methylpentane-2,4-diol	LC50: 10500 - 11000mg/L (96h, Pimephales promelas) LC50: =10000mg/L (96h, Lepomis macrochirus) LC50: =8690mg/L (96h, Pimephales promelas) LC50: =10700mg/L (96h, Pimephales promelas)	EC50: 2700 - 3700mg/L (48h, Daphnia magna)	-	-
acetic acid … %	LC50: =79mg/L (96h, Pimephales promelas) LC50: =75mg/L (96h, Lepomis macrochirus)	EC50: =65mg/L (48h, Daphnia magna)	-	-
pyridine-2-thiol 1-oxide, sodium salt	-	EC50: =0.022mg/L (48h, water flea)	-	-

12.2. Persistence and degradability No information available.

12.3. Bioaccumulative potential

Chemical name	Partition coefficient	Bioconcentration factor (BCF)	Trophic magnification factor (TMF)
2-methylpentane-2,4-diol	0.14	-	-
acetic acid … %	-0.17	-	-
pyridine-2-thiol 1-oxide, sodium salt	-2.38	-	-
1,2-benzisothiazol-3(2H)-one	0.99	-	-

12.4. Mobility in soil Soluble in water.

12.5. Results of PBT and vPvB assessment This product does not contain any substances that are assessed to be a PBT or a vPvB.

Chemical name	PBT and vPvB assessment
2-methylpentane-2,4-diol	Not PBT/vPvB
acetic acid … %	Not PBT/vPvB
1,2-benzisothiazol-3(2H)-one	Not PBT/vPvB

12.6. Endocrine disrupting properties Based on available data, the classification criteria are not met.

12.7. Other adverse effects No information available.

PMT or vPvM properties Based on available data, the classification criteria are not met.

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 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

ADN
14.1 UN number or ID number No information available
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group No information available
14.5 Environmental hazard Not applicable
14.6 Special precautions for user
Special Provisions No information available

SECTION 15: Regulatory information

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

National regulations

France
Occupational Illnesses (R-463-3, France)

Chemical name	French RG number
2-methylpentane-2,4-diol 107-41-5	RG 84
1,2-benzisothiazol-3(2H)-one 2634-33-5	RG 65,RG 66

Germany
Water hazard class (WGK) non-hazardous to water (nwg)

Chemical Prohibition Ordinance (ChemVerbotsV)
This product is subject to requirements and restrictions regarding handling and delivery.

TA Luft (German Air Pollution Control Regulation)

Chemical name	Number	Class
acetic acid … % 64-19-7	5.2.5	Class II

TRGS 905 Not applicable

Switzerland
Ordinance on the Incentive Tax on Volatile Organic Compounds (OVOC) SR 814.018 Group I
Storage of Hazardous Material Not applicable
WPO (GSchV) SR 814.201; WPA (GSchG) SR 814.20 Class B
Major Accidents Ordinance SR 814.012 Not applicable

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.

Authorizations and/or restrictions on use:

Additional information on Entry 78: The estimated overall proportion of synthetic polymer microparticles in the mixture is approx. 2.75 %. Process the product in closed systems or with suitable extraction/filtering techniques to avoid release to soil/ wastewater/ surface water. Preferably clean equipment/ surfaces mechanically after use e.g. cloths. Collect residues as solid waste. Collect cleaning waters separately and forward them to appropriate disposal. Do not discharge into the sewer system. Collect product residues and contaminated packaging in closed containers. Do not rinse. Dispose of in accordance with legal requirements. For end users, product must be used according to labelled instructions and packaging must not be rinsed out before disposal. Any spillages should be soaked up with a dry cloth and disposed of in general waste.

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
2-methylpentane-2,4-diol 107-41-5	75	-
Synthetic polymer 75718-16-0	78	-
acetic acid … % 64-19-7	75	-
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	75	-
1,2-benzisothiazol-3(2H)-one 2634-33-5	75	-

Persistent Organic Pollutants

Not applicable

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

H2 - ACUTE TOXIC

Ozone-depleting substances (ODS) Regulation (EU) 2024/590

Not applicable.

EU - Plant Protection Products (1107/2009/EC)

Chemical name	EU - Plant Protection Products (1107/2009/EC)
acetic acid … % 64-19-7	Plant protection agent

Biocidal Products Regulation (EU) No 528/2012 (BPR)

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
acetic acid … % 64-19-7	Product-type 2: Disinfectants and algaecides not intended for direct application to humans or animals Simplified procedure - Category 1
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	Product-type 2: Disinfectants and algaecides not intended for direct application to humans or animals Product-type 6: Preservatives for products during storage Product-type 7: Film preservatives Product-type 9: Fiber, leather, rubber and polymerized materials preservatives Product-type 10: Construction material preservatives Product-type 13: Working or cutting fluid preservatives
1,2-benzisothiazol-3(2H)-one 2634-33-5	Product-type 2: Disinfectants and algaecides not intended for direct application to humans or animals Product-type 6: Preservatives for products during storage Product-type 9: Fiber, leather, rubber and polymerized

	materials preservatives Product-type 11: Preservatives for liquid-cooling and processing systems Product-type 12: Slimicides Product-type 13: Working or cutting fluid preservatives

Explosives Precursors Marketing and Use (2019/1148)
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
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	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
TCSI	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 Chemicals Inventory
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Full text of any hazard and/or precautionary statements referred to under Sections 2-15
EUH070 - Toxic by eye contact
H226 - Flammable liquid and vapor
H302 - Harmful if swallowed
H311 - Toxic in contact with skin
H314 - Causes severe skin burns and eye damage
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H330 - Fatal if inhaled
H331 - Toxic if inhaled
H372 - Causes damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H411 - Toxic to aquatic life with long lasting effects
P102 - Keep out of reach of children

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

No information available

ACGIH	American Conference of Governmental Industrial Hygienists
AIDII	Italian Association of Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging Regulation; Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DFG	German Research Foundation
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
ECHA	European Chemicals Agency
EC Number	European Community number
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	U.S. Environmental Protection Agency
EWC	European Waste Codes
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organization
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organization for Standardization
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MAK	Maximum Concentration at the Workplace
MAL	Measuring Technical Hygienic Air Needs
MARPOL	International Convention for the Prevention of Pollution from Ships
MDLPS	Ministry of Labor and Social Policy
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship

REACH	Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
SVHC	Substance of very high concern
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TRGS	Technical Rule for Hazardous Substances
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
As	Allergenic substance
C	Carcinogen
DS	Dermal Sensitizer
Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitizer
RS	Respiratory Sensitizer
S	Sensitizer
poS	Sensitizer - capable of causing occupational asthma
Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption
pSk	Skin notation - potential for cutaneous absorption

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 - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitization	Calculation method
Skin sensitization	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Chronic aquatic toxicity	Calculation method
Acute aquatic toxicity	Calculation method
Aspiration hazard	Calculation method

Ozone	Calculation method

Key literature references and sources for data used to compile the SDS
U.S. 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)
U.S. 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 National Institute of Technology and Evaluation (NITE)
Australia 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)
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set
United Nations World Health Organization (WHO)

Prepared By Technical Department

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Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
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End of Safety Data Sheet