

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

1.1. Product identifier

Product Name	GRF82 GRANGERS MERINO WASH
Safety data sheet number	04678
Unique Formula Identifier (UFI)	3GK1-1KX4-H50K-Q346
Pure substance/mixture	Mixture

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

Recommended use Detergent

Uses advised against

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 info@grangersinternational.co.uk

1.4. Emergency telephone number

Emergency Telephone TEL: +44 (0) 1773 521521 IRELAND TEL: 00353 15133758

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Serious eye damage/eye irritation	Category 2 - (H319)
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2.2. Label elements

**Signal word**

Warning

Hazard statements

H319 - Causes serious eye irritation.

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

P102 - Keep out of reach of children.

P264 - Wash hands thoroughly after handling.

P302 + P352 - IF ON SKIN: Wash with plenty of water.

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

2.3. Other hazards

Harmful to aquatic life.

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 (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
C10 Alcohol ethoxylate 160875-66-1	1 - <2.5%			Acute Tox. 4 (H302) Eye Dam. 1 (H318)
Isotridecanol, ethoxylated 9043-30-5	1 - <2.5%		500-027-2	Aquatic Chronic 3 (H412) Eye Dam. 1 (H318)
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	<0.025%		(613-344-00-7) 223-296-5	Aquatic Chronic 2 (H411) Aquatic Acute 1 (H400) Acute Tox. 2 (H330) Acute Tox. 4 (H302) Eye Dam. 1 (H318)

Full text of H- and EUH-phrases: see section 16Acute 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
Isotridecanol, ethoxylated 9043-30-5	1000	No data available	No data available	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

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

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (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	No information available.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin contact	Wash skin with soap and water.
Ingestion	Rinse mouth thoroughly with water. Get medical attention if symptoms occur.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

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

Symptoms	May cause redness and tearing of the eyes. Burning sensation.
Effects of Exposure	See Section 11 for additional Toxicological Information.

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

Note to physicians	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	No information available.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the	No information available.
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chemical

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters No information available.

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 After cleaning, flush away traces 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. Do not eat, drink or smoke when using this product.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container closed when not in use.

7.3. Specific end use(s)

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	European Union	Austria	Belgium	Bulgaria	Croatia
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	-	TWA: 1 mg/m ³ STEL 4 mg/m ³ H*	-	-	-
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	-	-	TWA: 1 mg/m ³ H* STEL: 2 mg/m ³	-	-
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	-	TWA: 0.2 mg/m ³ H*	TWA: 0.2 mg/m ³ Peak: 0.4 mg/m ³ *	-	-
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	-	-	-	TWA: 1 mg/m ³ STEL: 2 mg/m ³ K*	-
Chemical name	Sweden		Switzerland	United Kingdom	
pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	-		TWA: 0.2 mg/m ³ STEL: 0.4 mg/m ³ H*	-	

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
1,2-benzisothiazol-3(2H)-one 2634-33-5	-	0.966 mg/kg bw/day [4] [6]	6.81 mg/m ³ [4] [6]

Notes

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

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
1,2-benzisothiazol-3(2H)-one 2634-33-5	-	-	1.2 mg/m ³ [4] [6]

Notes

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

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
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
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	If splashes are likely to occur, wear safety glasses with side-shields.
Hand protection	Wear suitable gloves.
Skin and body protection	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. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.
Environmental exposure controls	No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear liquid
Color	clear
Odor	Characteristic.
Odor threshold	

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	= 0	None known
Initial boiling point and boiling range	= 100	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	N/A	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
pH	< 7	pH (concentrated solution): 7.00 @ 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
Water solubility	No data available	Completely soluble

	in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapor pressure	No data available	None known
Relative density	No data available	None known
Bulk density	~ 1.0 kg/l	
Liquid Density	No data available	
Relative vapor density	No data available	None known
Particle characteristics		
Particle Size		
Particle Size Distribution		

9.2. Other information

9.2.1. Information with regard to physical hazard classes
Not applicable

9.2.2. Other safety characteristics

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 None known based on information supplied.

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. May cause irritation of

respiratory tract.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 28,571.40 mg/kg
 ATEmix (dermal) 99,999.00 mg/kg
 ATEmix (inhalation-gas) 99,999.00 ppm
 ATEmix (inhalation-vapor) 99,999.00 mg/l
 ATEmix (inhalation-dust/mist) 99,999.00 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Isotridecanol, ethoxylated	= 1000 mg/kg (Rat)	-	-
pyridine-2-thiol 1-oxide, sodium salt	-	= 1800 mg/kg (Rabbit)	-

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

Skin corrosion/irritation May cause skin irritation.

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

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

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

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity No information available.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
pyridine-2-thiol 1-oxide, sodium salt	-	-	-	EC50: =0.022mg/L (48h, water flea)

12.2. Persistence and degradability

Persistence and degradability

12.3. Bioaccumulative potential

Bioaccumulation

Component Information

Chemical name	Partition coefficient
pyridine-2-thiol 1-oxide, sodium salt	-2.38

12.4. Mobility in soil

Mobility in soil Soluble in water.

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 above the threshold of declaration.

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

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	

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

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

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:

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
pyridine-2-thiol 1-oxide, sodium salt - 3811-73-2	75.	-

Persistent Organic Pollutants

Not applicable

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

Not applicable

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

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
pyridine-2-thiol 1-oxide, sodium salt - 3811-73-2	Product-type 2: Disinfectants and algicides 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

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

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
- AIIC** - Australian Inventory of Industrial Chemicals
- NZIoC** - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report

No information available

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
- H318 - Causes serious eye damage
- H319 - Causes serious eye irritation
- H330 - Fatal if inhaled
- H400 - Very toxic to aquatic life
- H411 - Toxic to aquatic life with long lasting effects
- H412 - Harmful to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
 Ceiling Maximum limit value Sk* Skin designation
 + Sensitizers

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
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)
- 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)
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)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By Technical Department

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

Disclaimer

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End of Safety Data Sheet