SAFETY DATA SHEET
GERMFREE 61

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577, as amended.

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

1.1. Product identifier

Product name GERMFREE 61

Internal identification C998

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

Identified uses Disinfectant.

Uses advised against Use only for intended applications.

1.3. Details of the supplier of the safety data sheet

Supplier

ARROW SOLUTIONS
RAWDON ROAD,
MOIRA,
SWADLINCOTE,
DERBYSHIRE,
DE12 6DA,
ENGLAND
TEL: +44 (0)1283 221044
sales@arrowchem.com

1.4. Emergency telephone number

Emergency telephone +44 (0) 777 8505 330 (24 hrs).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

2.2. Label elements

Hazard statements NC Not Classified

Supplemental label information BPR001 Use biocides safely. Always read the label and product information before use.

Detergent labelling < 5% disinfectants, < 5% non-ionic surfactants, < 5% phosphates

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

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SECTION 3: Composition/information on ingredients

3.2. Mixtures

TETRA POTASSIUM PYROPHOSPHATE **<1%**

CAS number: 7320-34-5 EC number: 230-785-7

Classification
Eye Irrit. 2 - H319

Quaternary ammonium compounds, benzyl-C12-16 (even numbered)-alkyldimethyl, chlorides **<1%**

CAS number: 68424-85-1 EC number: 939-350-2

M factor (Acute) = 10 M factor (Chronic) = 1

Classification
Acute Tox. 4 - H302
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information If medical advice is needed, have product container or label at hand. Show this Safety Data Sheet to the medical personnel.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Ingestion Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention.

Skin contact Rinse immediately with plenty of water.

Eye contact Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if any discomfort continues.

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

Inhalation Coughing, chest tightness, feeling of chest pressure.

Ingestion Gastrointestinal symptoms, including upset stomach.

Skin contact Product has a defatting effect on skin.

Eye contact May cause discomfort.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

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Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Ammonia or amines. Carbon monoxide (CO). Carbon dioxide (CO2). Nitrous gases (NOx). Phosphorus.

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure procedures and training for emergency decontamination and disposal are in place. No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Evacuate area. Do not touch or walk into spilled material. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Avoid contact with skin, eyes and clothing. Take care as floors and other surfaces may become slippery. Avoid contact with contaminated tools and objects. Do not handle broken packages without protective equipment. Wash thoroughly after dealing with a spillage.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Clean contaminated objects and areas thoroughly, observing environmental regulations. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Observe any occupational exposure limits for the product or ingredients. Use biocides safely. Always read the label and product information before use. To avoid risks to human health and the environment, comply with the instructions for use. Avoid breathing spray. Wear protective gloves. Do not reuse empty containers. Avoid release to the environment. Do not empty into drains. Do not eat, drink or smoke when using this product. Do not handle broken packages without protective equipment. Avoid contact with contaminated tools and objects. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store at temperatures between 4°C and 40°C.

Storage class Chemical storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

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TETRA POTASSIUM PYROPHOSPHATE (CAS: 7320-34-5)

DNEL

Industry - Inhalation; Long term systemic effects: 44.08 mg/m³
General population - Inhalation; Long term systemic effects: 10.87 mg/m³
General population - Oral; Long term systemic effects: 71 mg/kg/day

PNEC

- Fresh water; 0.05 mg/l
- marine water; 0.005 mg/l
Intermittent release; 0.5 mg/l
STP; 50 mg/l

Quaternary ammonium compounds, benzyl-C12-16 (even numbered)-alkyldimethyl, chlorides (CAS: 68424-85-1)

DNEL

Industry - Dermal; Long term systemic effects: 5.7 mg/kg/day
Industry - Inhalation; Long term systemic effects: 3.96 mg/m³
Consumer - Oral; Long term systemic effects: 3.4 mg/kg/day
Consumer - Dermal; Long term systemic effects: 3.4 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 1.64 mg/m³

PNEC

- Fresh water; .0009 mg/l
- marine water; .00096 mg/l
- Intermittent release; .00016 mg/l
- Sediment (Freshwater); 12.27 mg/kg
- Sediment (Marinewater); 13.09 mg/kg
- Soil; 7.0 mg/kg
- STP; 0.4 mg/l

8.2. Exposure controls

Protective equipment

Appropriate engineering controls

Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment that provides appropriate eye and face protection should be worn. The following protection should be worn: Tight-fitting safety glasses.

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Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, wear gloves that are proven to be impervious to the chemical and resist degradation. The selected gloves should have a breakthrough time of at least 4 hours. The breakthrough time for any glove material may be different for different glove manufacturers. When used with mixtures, the protection time of gloves cannot be accurately estimated. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Protective gloves should have a minimum thickness of 0.15 mm. Glove thickness is not necessarily a good measure of glove resistance as the permeation rate will depend on the exact glove composition. The choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Repeated exposure to chemicals will degrade the ability of the glove to provide resistance to chemicals. Specific work environments and material handling practices may vary, therefore safety procedures should be developed for each intended application. Gloves made from the following material may provide suitable chemical protection: Nitrile rubber. Rubber (natural, latex). Neoprene.
Hygiene measures	Wash hands thoroughly after handling.
Environmental exposure controls	Store in a demarcated bunded area to prevent release to drains and/or watercourses.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless
Odour	Detergent.
pH	pH (diluted solution): ~ 8.8
Melting point	Not determined.
Initial boiling point and range	100°C @ 760 mm Hg
Flash point	Not applicable.
Evaporation rate	Not determined.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Other flammability	Not applicable.
Vapour pressure	Not determined.
Relative density	~ 1.00 @ 25°C
Solubility(ies)	Completely soluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not applicable.
Viscosity	Not determined.

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Explosive properties	There are no chemical groups present in the product that are associated with explosive properties.
Oxidising properties	There are no chemical groups present in the product that are associated with oxidising properties.
Comments	Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.

9.2. Other information

Other information	Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion products may include the following substances: Ammonia or amines. Carbon monoxide (CO). Carbon dioxide (CO2). Nitrous gases (NOx). Phosphorus.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.

Skin corrosion/irritation

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

Serious eye damage/irritation

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

Respiratory sensitisation

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

Skin sensitisation

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Skin sensitisation	Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro	Does not contain any substances known to be mutagenic.

Carcinogenicity

Carcinogenicity	Does not contain any substances known to be carcinogenic.

Reproductive toxicity

Reproductive toxicity - fertility	Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation	Coughing, chest tightness, feeling of chest pressure.
Ingestion	Gastrointestinal symptoms, including upset stomach.
Skin contact	Product has a defatting effect on skin.
Eye contact	May cause discomfort.
Acute and chronic health hazards	No specific health hazards known.
Route of exposure	Dermal
Target organs	Skin

Toxicological information on ingredients.

TETRA POTASSIUM PYROPHOSPHATE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2,001.0
Species	Rat

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	7,940.0
Species	Rabbit

Quaternary ammonium compounds, benzyl-C12-16 (even numbered)-alkyldimethyl, chlorides

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	397.5
Species	Rat
ATE oral (mg/kg)	397.5

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Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	3,412.0
Species	Rabbit

SECTION 12: Ecological information

Ecotoxicity Not regarded as dangerous for the environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish Not determined.

Chronic aquatic toxicity

Chronic toxicity - fish early life stage Not determined.

Ecological information on ingredients.

TETRA POTASSIUM PYROPHOSPHATE

Acute aquatic toxicity

Acute toxicity - fish	LC50, 96 hours: > 100 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{80}, 72 hours: 101 mg/l, Algae
Acute toxicity - microorganisms	EC_{50}, 3 hours: 1000 mg/l, Activated sludge

Quaternary ammonium compounds, benzyl-C12-16 (even numbered)-alkyldimethyl, chlorides

Acute aquatic toxicity

$LE(C)_{50}$	0.01 < L(E)C50 ≤ 0.1
M factor (Acute)	10
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 0.03 mg/l mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 96 hours: ~ 0.06 mg/l, Selenastrum capricornutum

Chronic aquatic toxicity

M factor (Chronic)	1

12.2. Persistence and degradability

Persistence and degradability The product is expected to be biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not determined.

12.4. Mobility in soil

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Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

Special Provisions note

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

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National regulations The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).
The Detergents Regulations 2010 (SI 2010 No. 740) (as amended). The Detergents (Amendment) (EU Exit) Regulations 2019 (SI 2019 No. 612) (as amended). The Detergents (Safeguarding) (Amendment) (EU Exit) Regulations 2019 (SI 2019 No. 671) (as amended). The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 (SI 2020 No. 1577) (as amended).

Guidance Workplace Exposure Limits EH40.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet
ATE: Acute Toxicity Estimate.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstracts Service.
DNEL: Derived No Effect Level.
EC_{50}: 50% of maximal Effective Concentration.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
LC50: Lethal Concentration to 50 % of a test population.
LD50: Lethal Dose to 50% of a test population (Median Lethal Dose).
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.
REACH: The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577.
UN: United Nations.
vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations and acronyms
Acute Tox. = Acute toxicity
Aquatic Acute = Hazardous to the aquatic environment (acute)
Aquatic Chronic = Hazardous to the aquatic environment (chronic)
Eye Dam. = Serious eye damage
Eye Irrit. = Eye irritation
Skin Corr. = Skin corrosion

Classification procedures according to SI 2019 No. 720 Not classified for environmental hazards., Not classified for health hazards., Not classified for physical hazards.: Based on available data the classification criteria are not met.

Revision comments NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date 18/03/2022

Revision 3.1

Supersedes date 05/03/2020

SDS number 24784

Hazard statements in full
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

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