

Safety Data Sheet

Hempel's Pre-Clean



Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by UK REACH Regulation SI 2019/758 - United Kingdom (UK)

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

1.1 Product identifier

Product name : Hempel's Pre-Clean
Product identity : 6760298880, 000FB98F
Product type : waterborne Detergent.

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

Field of application : yacht, ships and shipyards.
Identified uses : Consumer applications.

1.3 Details of the supplier of the safety data sheet

Company details : Hempel UK Ltd
Berwyn House, The Pavilions
Llantarnam Park
Cwmbran
South Wales NP44 3FD
Telephone: 01633 833600
hempel@hempel.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation)
UK: **01633 833600** (08.00 - 17.00)
Ireland: **01 809 2166** (National Poisons Information Centre, Monday-Sunday; 08:00-22:00)

See Section 4 of the safety data sheet (first aid measures).

Date of issue : 11 December 2025

Date of previous issue : 27 August 2025.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

Eye Dam. 1, H318 SERIOUS EYE DAMAGE/EYE IRRITATION

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H318 - Causes serious eye damage.

Precautionary statements :

General : Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear eye or face protection.

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Hazardous ingredients : 2-propylheptanol ethoxylate
C12-14-alkyl(hydroxyethyl)dimethyl, ethoxylated chlorides
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 acyl derivs., hydroxides, inner salts

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

This mixture does not contain any substances that are assessed to be a PBT, vPvB or endocrine disruptor.

SECTION 2: Hazards identification

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

| Product/ingredient name | Identifiers | % | GB CLP Classification | Type |
|--|--|-----------|---|------------|
| 2-propylheptanol ethoxylate C12-14-alkyl(hydroxyethyl)dimethyl, ethoxylated chlorides | CAS: 160875-66-1 EC: 810-152-7 CAS: 1554325-20-0 | ≤10 ≤5 | Eye Dam. 1, H318 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 | [1] [1] |
| 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 acyl derivs., hydroxides, inner salts 2-(2-butoxyethoxy)ethanol | REACH #: 01-2119488533-30 EC: 308-107-7 CAS: 97862-59-4 | ≤5 | Eye Dam. 1, H318 Eye Dam. 1, H318 Aquatic Chronic 3, H412 | [1] |
| | REACH #: 01-2119475104-44 EC: 203-961-6 CAS: 112-34-5 Index: 603-096-00-8 | ≤3 | Eye Irrit. 2, H319 | [1] [2] |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit, see section 8.

Detergents - Regulation (EC) No 907/2006

| Product/ingredient name | CAS no. | % | Class of constituent |
|---|-------------------|--------------------------------|-----------------------|
| water | 7732-18-5 | 10% or more | |
| 2-propylheptanol ethoxylate | 160875-66-1 | 1% or over, but less than 10% | |
| C12-14-alkyl(hydroxyethyl)dimethyl, ethoxylated chlorides | 1554325-20-0 | 1% or over, but less than 10% | non-ionic surfactants |
| 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 acyl derivs., hydroxides, inner salts | 97862-59-4 | 1% or over, but less than 10% | |
| sodium imino disuccinate | 144538-83-0 | 1% or over, but less than 10% | |
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | 1% or over, but less than 10% | non-ionic surfactants |
| sodium chloride | 7647-14-5 | 0,1% or over, but less than 1% | |
| chloroacetic acid | 79-11-8 | less than 0,1% | |
| iron | Sec. (7439-89-6) | less than 0,1% | |
| nickel compounds calculated as Ni | Sec. (7440-02-0) | less than 0,1% | |
| chromium (VI) compounds (as Cr) | Sec. (7440-47-3) | less than 0,1% | |
| lead compounds (Pb) | Sec. 7439-92-1 | less than 0,1% | |
| arsenic | Sec. (7440-38-2) | less than 0,1% | |
| mercury metal | Sec. (92786-62-4) | less than 0,1% | |
| cobalt | Sec. 7440-48-4 | less than 0,1% | |
| cadmium | Sec. 7440-43-9 | less than 0,1% | |

SECTION 4: First aid measures

4.1 Description of first aid measures

General :

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 112 and give immediate treatment (first aid).

Eye contact :

Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical attention/advice.

Inhalation :

Remove to fresh air and keep at rest in a position comfortable for breathing. Give nothing by mouth. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If unconscious, place in recovery position and get medical attention immediately.

Skin contact :

Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners. Remove contaminated clothing and shoes.

Ingestion :

If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.

SECTION 4: First aid measures

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : If gasses have been inhaled, from the decomposition of the product, symptoms may be delayed. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media : Recommended: alcohol resistant foam, CO₂, powders, water spray.
Not to be used : waterjet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products : Decomposition products may include the following materials: carbon oxides nitrogen oxides metal oxide/oxides

5.3 Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid all direct contact with the spilled material. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

SECTION 6: Accidental release measures

6.3 Methods and material for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used.

Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

Storage : Do not store below the following temperature: 5 °C

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|---------------------------|--|
| 2-(2-butoxyethoxy)ethanol | EH40/2005 WELs (United Kingdom (UK), 1/2020) TWA 8 hours: 10 ppm. TWA 8 hours: 67.5 mg/m ³ . STEL 15 minutes: 15 ppm. STEL 15 minutes: 101.2 mg/m ³ . |

Biological exposure indices

| Product/ingredient name | Exposure limit values |
|--------------------------------|-----------------------|
| No exposure limit value known. | |

Recommended monitoring procedures

Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived effect levels

Not applicable.

Predicted effect concentrations

Not applicable.

SECTION 8: Exposure controls/personal protection

8.2 Exposure controls

Appropriate engineering controls

Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapors or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Individual protection measures

General :

Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.



Hygiene measures :

Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Eye/face protection :

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection :

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances.

Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice:

Recommended: Silver Shield / Barrier / 4H gloves, nitrile rubber (>0.3 mm), neoprene rubber (>0.1 mm), butyl rubber (>0.5 mm), natural rubber (latex) (>0.4 mm), polyvinyl chloride (PVC), Viton®, nitrile rubber (>0.1 mm), butyl rubber (>0.3 mm)

Short term exposure: polyvinyl alcohol (PVA)

Body protection :

Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product.

Wear suitable protective clothing.

Chemical-resistant apron.

Respiratory protection :

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If working areas have insufficient ventilation: When the product is applied by means that will not generate an aerosol such as, brush or roller wear half or totally covering mask equipped with gas filter of type A, when grinding use particle filter of type P. (EN140) Be sure to use an approved/certified respirator or equivalent.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state :

Liquid.

Colour :

Light yellow

Odour :

Non-characteristic.

pH :

7 - 9

Melting point/freezing point :

Testing not relevant or not possible due to nature of the product.

Boiling point/boiling range :

Testing not relevant or not possible due to nature of the product.

Flash point :

Closed cup: 78°C (172.4°F)

Evaporation rate :

Testing not relevant or not possible due to nature of the product.

Flammability :

Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

SECTION 9: Physical and chemical properties

Vapour pressure :

| Ingredient name | Vapour Pressure at 20°C | | | Vapour pressure at 50°C | | |
|-----------------|-------------------------|-----|--------|-------------------------|-----|--------|
| | mm Hg | kPa | Method | mm Hg | kPa | Method |
| water | 17.5 | 2.3 | | | | |

Vapour density :

Not available.

Specific gravity :

1.03 g/cm³

Partition coefficient (LogKow) :

Testing not relevant or not possible due to nature of the product.

Auto-ignition temperature :

Not available.

Decomposition temperature :

Testing not relevant or not possible due to nature of the product.

Viscosity :

Testing not relevant or not possible due to nature of the product.

Explosive properties :

Testing not relevant or not possible due to nature of the product.

Oxidising properties :

Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight :

Weighted average: 3 %

Water % by weight :

Weighted average: 78 %

VOC content :

29.7 g/l

TOC Content :

Weighted average: 18 g/l

Solvent Gas :

Weighted average: 0.004 m³/l

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

No specific data.

10.5 Incompatible materials

Reactive or incompatible with the following materials: oxidising materials.

Slightly reactive or incompatible with the following materials: reducing materials.

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

Decomposition products may include the following materials: carbon oxides nitrogen oxides metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

Direct contact with the eyes can cause irreversible damage, including blindness.

Acute toxicity

SECTION 11: Toxicological information

| Product/ingredient name | Result | Dose / Exposure | Effects |
|---------------------------|---|------------------------------|--|
| 2-(2-butoxyethoxy)ethanol | Rat - Oral - LD50 Rabbit - Dermal - LD50 | 4500 mg/kg 2700 mg/kg | Behavioral - Tetany Lung, Thorax, or Respiration - Dyspnea Liver - Other changes |
| | | | |

Acute toxicity estimates

| Product/ingredient name | Oral mg/kg | Dermal mg/kg | Inhalation (gases) ppm | Inhalation (vapours) mg/l | Inhalation (dusts and mists) mg/l |
|--|------------------------|--------------|------------------------|---------------------------|-----------------------------------|
| Hempel's Pre-Clean C12-14-alkyl(hydroxyethyl)dimethyl, ethoxylated chlorides 2-(2-butoxyethoxy)ethanol | 12531.3 500 4500 | 2700 | | | |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Exposure |
|---------------------------|---------------------------------|---------|---|
| 2-(2-butoxyethoxy)ethanol | Rabbit - Eyes - Severe irritant | | Amount/concentration applied: 20 milligrams |

Sensitiser

No known data available in our database.

Mutagenic effects

No known data available in our database.

Carcinogenicity

No known data available in our database.

Reproductive toxicity

No known data available in our database.

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|--|----------|-------------------|---------------|
| No known data available in our database. | | | |

Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|--|----------|-------------------|---------------|
| No known data available in our database. | | | |

Aspiration hazard

| Product/ingredient name | Result |
|--|--------|
| No known data available in our database. | |

Information on likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

No known significant effects or critical hazards.

11.2 Information on other hazards

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses.

| Product/ingredient name | Result | Species | Exposure |
|---------------------------|------------------------------|---------------|---|
| 2-(2-butoxyethoxy)ethanol | Acute - EC50 Acute - LC50 | Algae Fish | 100 mg/l [96 hours] 1300 mg/l [96 hours] |
| | | | |

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---|--------------------|-----|-----------|
| 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 acyl derivs., hydroxides, inner salts | 1.79 | - | Low |
| 2-(2-butoxyethoxy)ethanol | 1 | - | Low |

12.4 Mobility in soil

Soil/water partition coefficient

| Product/ingredient name | logK _{oc} | K _{oc} |
|---------------------------|--------------------|-----------------|
| 2-(2-butoxyethoxy)ethanol | 1.6 | 36.5981 |

Results of PMT and vPvM assessment

| Product/ingredient name | PMT | P | M | T | vPvM | vP | vM |
|---|-----|----|-----|----|------|----|----|
| propylheptanol ethoxylate | No | No | N/A | No | No | No | No |
| C12-14-alkyl(hydroxyethyl)dimethyl, ethoxylated chlorides | No | No | N/A | No | No | No | No |
| 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 acyl derivs., hydroxides, inner salts | No | No | N/A | No | No | No | No |
| 2-(2-butoxyethoxy)ethanol | No | No | Yes | No | No | No | No |

Mobility :

The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Conclusion/Summary : The product does not meet the criteria to be considered as a PBT or vPvB.

12.6 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The generation of waste should be avoided or minimised wherever possible. Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.

European waste catalogue no. (EWC) is given below.

European waste catalogue (EWC) : 08 01 11*

Packaging

The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 16: Other information

Notice to reader

► Indicates information that has changed from previously issued version.

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical performance or suitability for particular applications.

It is always the duty of the user/employer to ascertain that the work is planned and carried out in accordance with the national regulations.