SAFETY DATA SHEET

Dettol Liquid Concentrate - Citrus

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

1.1 Product identifier

DETTOL Refill Antibacterial Multi Purpose Cleaner Citrus
SDS number: D8404737
Code: FF3275108

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

Surface cleaners (liquid, powder, gel neat, spray neat) for consumer use

1.3. Details of the Supplier of the Safety Data Sheet

The United Kingdom:
RB UK Commercial Ltd
Wellcroft House
Wellcroft Road
Slough, Berkshire SL1 4AQ
Tel: 0333 2005 345 9 am - 5 pm weekdays
Email: ConsumerCare_UK@reckitt.com

1.4 Emergency telephone number

England, Scotland & Wales (GB): Call NHS 111/NHS 24 by dialling 111
Northern Ireland: www.gpoutofhours.hscni.net/

Additional useful information

Reason of Revision : new product launch
Revision date and number : 06/11/2023 v1
Supersedes : n/a

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Skin Irrit. 2, H315
Eye Dam. 1, H318
Aquatic Acute 1, H400
Aquatic Chronic 2, H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

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

2.2 Label elements

Hazard pictograms :

Signal word : Danger

SECTION 2: Hazards identification

Hazard statements : Causes skin irritation.
Causes serious eye damage.
Very toxic to aquatic life with long lasting effects.

Precautionary statements

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

Prevention : Avoid release to the environment. Wash hands thoroughly after handling.

Response : IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/ attention. 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.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : Lauramine oxide

Supplemental label elements : Contains LIMONENE. May produce an allergic reaction.

Ingredient Declaration:
Per 100 g of product contains 2.46 g Benzalkonium Chloride
Contains > 15% but < 30% Non-Ionic Surfactant
Polycarboxylates
Disinfectant
Perfume

Contains Geraniol, Limonene and Linalool.

Special packaging requirements

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

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Amines, C12-14-alkyldimethyl, N-oxides	REACH #: 01-2119490061-47 CAS: 308062-28-4	≥10 - ≤25	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	ATE [Oral] = 1064 mg/kg M [Acute] = 1	[1]
PHENOXYISOPROPANOL	EC: 212-222-7 CAS: 770-35-4	≥10 - ≤25	Eye Irrit. 2, H319	-	[1]

SECTION 3: Composition/information on ingredients

ETHANOLAMINE	REACH #: 01-2119486455-28 EC: 205-483-3 CAS: 141-43-5 Index: 603-030-00-8	≤2.5	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412	ATE [Oral] = 1720 mg/kg ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l STOT SE 3, H335: C ≥ 5%	[1] [2]
BENZALKONIUM CHLORIDE	EC: 270-325-2 CAS: 68424-85-1	≤2.46	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 344 mg/kg M [Acute] = 10 M [Chronic] = 1	[1]
LIMONENE	REACH #: 01-2120766421-57 EC: 205-341-0 CAS: 138-86-3 Index: 601-029-00-7	<1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 **See Section 16 for the full text of the H statements declared above.**	M [Acute] = 1 M [Chronic] = 1	[1]

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, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

SECTION 4: First aid measures

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

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 : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : This material is very toxic to aquatic life. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds

5.3 Advice for firefighters

Special protective actions for fire-fighters : 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.

SECTION 5: Firefighting measures

Special protective equipment for fire-fighters : 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

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled 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

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

SECTION 7: Handling and storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E1	100	200

7.3 Specific end use(s)

Recommendations : Surface cleaners (liquid, powder, gel neat, spray neat) for consumer use

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
ETHANOLAMINE	**EU OEL (Europe, 10/2019). Absorbed through skin. Notes: list of indicative occupational exposure limit values** TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours. STEL: 7.6 mg/m³ 15 minutes. STEL: 3 ppm 15 minutes.

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.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Amines, C12-14-alkyldimethyl, N-oxides	DNEL	Long term Dermal	11 mg/kg	Workers	Systemic
	DNEL	Long term Inhalation	15.5 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	0.27 %	Workers	Local
	DNEL	Long term Dermal	5.5 mg/kg	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	3.8 mg/m³	General population [Consumers]	Systemic
	DNEL	Long term Oral	0.44 mg/kg	General population [Consumers]	Systemic

SECTION 8: Exposure controls/personal protection

	DNEL	Long term Oral	0.44 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	1.53 mg/m³	General population	Systemic
	DNEL	Long term Dermal	5.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	6.2 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	11 mg/kg bw/day	Workers	Systemic
PHENOXYISOPROPANOL	DNEL	Long term Oral	3.65 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	21 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	25.7 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	42 mg/kg bw/day	Workers	Systemic
ETHANOLAMINE	DNEL	Long term Inhalation	0.18 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	0.28 mg/m³	General population	Local
	DNEL	Long term Inhalation	0.51 mg/m³	Workers	Local
	DNEL	Long term Inhalation	1 mg/m³	Workers	Systemic
	DNEL	Long term Oral	1.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	1.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	3 mg/kg bw/day	Workers	Systemic
BENZALKONIUM CHLORIDE	DNEL	Long term Inhalation	1.64 mg/m³	General population [Consumers]	Systemic
	DNEL	Long term Oral	3.4 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Dermal	3.4 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	1.64 mg/m³	General population	Systemic
	DNEL	Long term Oral	3.4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	3.4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	3.96 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	5.7 mg/kg bw/day	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
Amines, C12-14-alkyldimethyl, N-oxides	Fresh water	0.0335 mg/l	-
	Marine water	0.00335 mg/l	-
	Fresh water sediment	5.24 mg/kg	-
	Marine water sediment	0.524 mg/kg	-
	Soil	1.02 mg/kg	-
	Sewage Treatment Plant	24 mg/kg	-
BENZALKONIUM CHLORIDE	Fresh water	0.001 mg/l	-

SECTION 8: Exposure controls/personal protection

ALCOHOL	Marine water	0.001 mg/l	-
	Sewage Treatment Plant	0.4 mg/l	-
	Fresh water sediment	12.27 mg/kg dwt	-
	Marine water sediment	13.09 mg/kg dwt	-
	Fresh water	0.96 mg/l	Assessment Factors
	Marine water	0.79 mg/l	Assessment Factors
	Sewage Treatment Plant	580 mg/l	Assessment Factors
	Fresh water sediment	3.6 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	2.9 mg/kg dwt	Equilibrium Partitioning

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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.

Skin protection

Hand protection : EN 16523-1:2015
Tested for protection against chemical permeation.
Low chemical resistant or waterproof gloves.
(EN 16523-1:2015 supersedes EN 374-3:2003)
EN 374-2:2003
Tested for protection against liquid penetration and micro-organisms.
EN 388:2003
Tested for protection against mechanical risks (abrasion, blade cut resistance, tear resistance and puncture resistance).
ISO 374-1:2016/Type A
Protective glove with permeation resistance of at least 30 minutes each for at least 6 test chemicals.
ISO 374-1:2016/Type B
Protective glove with permeation resistance of at least 30 minutes each for at least 3 test chemicals.
ISO 374-1:2016/Type C
Protective glove with permeation resistance of at least 10 minutes for at least 1 test chemical.
Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

SECTION 8: Exposure controls/personal protection

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Color : Yellow.

Odor : Characteristic.

Melting point/freezing point : Not relevant/applicable due to nature of the product.

Initial boiling point and boiling range : Not relevant/applicable due to nature of the product.

Flammability (solid, gas) : Not relevant/applicable due to nature of the product.

Upper/lower flammability or explosive limits : Not relevant/applicable due to nature of the product.

Flash point : Not relevant/applicable due to nature of the product.

Auto-ignition temperature : Not relevant/applicable due to nature of the product.

Decomposition temperature : Not relevant/applicable due to nature of the product.

pH : 9.5 to 11

Viscosity : Not relevant/applicable due to nature of the product.

Solubility(ies) :

Media	Result
cold water	Easily soluble
hot water	Easily soluble

Miscible with water : Yes.

Partition coefficient: n-octanol/water : Not relevant/applicable due to nature of the product.

Vapor pressure : Not relevant/applicable due to nature of the product.

Vapor density : Not relevant/applicable due to nature of the product.

Particle characteristics

Median particle size : Not relevant/applicable due to nature of the product.

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.

SECTION 10: Stability and reactivity

10.5 Incompatible materials : No specific data.

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

SECTION 11: Toxicological information

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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Amines, C12-14-alkyldimethyl, N-oxides	LD50 Oral	Rat	1064 mg/kg	-
PHENOXYISOPROPANOL	LD50 Oral	Rat	2830 mg/kg	-
ETHANOLAMINE	LD50 Oral	Rat	1720 mg/kg	-
BENZALKONIUM CHLORIDE	LD50 Dermal	Rabbit	2848 mg/kg	-
	LD50 Dermal	Rabbit	3413 mg/kg	-
	LD50 Oral	Rat	344 mg/kg	-
	LD50 Oral	Rat	398 mg/kg	-
LIMONENE	LD50 Oral	Rat	5300 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Dettol Liquid Concentrate - Citrus_FF3275108 (D8404737)_EU	3315.9	43694.5	N/A	436.9	N/A
Amines, C12-14-alkyldimethyl, N-oxides	1064	N/A	N/A	N/A	N/A
PHENOXYISOPROPANOL	2830	N/A	N/A	N/A	N/A
ETHANOLAMINE	1720	1100	N/A	11	N/A
BENZALKONIUM CHLORIDE	344	2848	N/A	N/A	N/A
LIMONENE	5300	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ETHANOLAMINE	Eyes - Severe irritant	Rabbit	-	250 ug	-
	Skin - Moderate irritant	Rabbit	-	505 mg	-
BENZALKONIUM CHLORIDE	Skin - Severe irritant	Rabbit	-	25 mg	-

Conclusion/Summary

Skin : Calculation method Causes skin irritation.

Eyes : Calculation method Causes serious eye damage.

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

Sensitization

Product/ingredient name	Route of exposure	Species	Result
BENZALKONIUM CHLORIDE	skin	Guinea pig	Not sensitizing

Conclusion/Summary

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

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

SECTION 11: Toxicological information

Mutagenicity

Product/ingredient name	Test	Experiment	Result
BENZALKONIUM CHLORIDE	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	OECD 473 *In vitro* Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 476 *In vitro* Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ETHANOLAMINE	Category 3	-	Respiratory tract irritation
BENZALKONIUM CHLORIDE	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

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

SECTION 11: Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Amines, C12-14-alkyldimethyl, N-oxides	Acute EC50 3.1 mg/l	Daphnia	48 hours
	Acute IC50 0.143 mg/l	Algae	48 hours
	Acute LC50 2.67 mg/l	Fish	48 hours
	Acute NOEC 0.067 mg/l	Algae	-
ETHANOLAMINE	Acute LC50 >100000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 170 mg/l Fresh water	Fish - Carassius auratus	96 hours
BENZALKONIUM CHLORIDE	Acute EC50 0.016 mg/l	Daphnia	48 hours
	Acute LC50 64 ppb Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic EC10 0.009 mg/l	Algae	72 hours
LIMONENE	Acute EC50 28.2 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute EC50 20.2 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Conclusion/Summary : Calculation method Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Conclusion/Summary : The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Amines, C12-14-alkyldimethyl, N-oxides	-	-	Readily
BENZALKONIUM CHLORIDE	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Amines, C12-14-alkyldimethyl, N-oxides	0.95	-	low
PHENOXYISOPROPANOL	1.41	-	low
ETHANOLAMINE	-1.31	-	low
LIMONENE	4.57	-	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

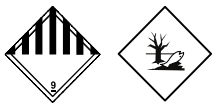
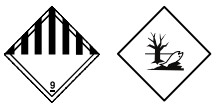
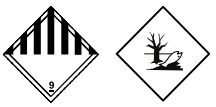
Packaging

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

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

For long distance transport of bulk material or shrunk pallet take into consideration sections 7 and 10.

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN3082	UN3082	UN3082	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Amines, C12-14-alkyldimethyl, N-oxides, BENZALKONIUM CHLORIDE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Amines, C12-14-alkyldimethyl, N-oxides, BENZALKONIUM CHLORIDE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Amines, C12-14-alkyldimethyl, N-oxides, Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides)	Environmentally hazardous substance, liquid, n.o.s. (Amines, C12-14-alkyldimethyl, N-oxides, Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides)
14.3 Transport hazard class(es)	9 	9 	9 	9 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes.

Additional information

ADR/RID : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
Hazard identification number 90
Limited quantity 5 L
Special provisions 274, 335, 601, 375
Tunnel code (-)

ADN : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
Special provisions 274, 335, 375, 601

IMDG : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
Emergency schedules F-A, S-F
Special provisions 274, 335, 969

IATA : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.
Quantity limitation Passenger and Cargo Aircraft: 450 L. Packaging instructions: 964. Cargo Aircraft Only: 450 L. Packaging instructions: 964. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y964.
Special provisions A97, A158, A197, A215

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 14: Transport information

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : None.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
E1

15.2 Chemical Safety Assessment : No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

SECTION 16: Other information

Classification	Justification
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements

H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H312	Harmful 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.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
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.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1	AQUATIC HAZARD (LONG-TERM) - Category 1
Aquatic Chronic 2	AQUATIC HAZARD (LONG-TERM) - Category 2
Aquatic Chronic 3	AQUATIC HAZARD (LONG-TERM) - Category 3
Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

This document complements the technical usage instructions but does not replace them. The information contained herein is based on our best current knowledge of the product concerned, and is given in good faith. The attention of recipients is drawn to (amongst other things) the element of risk consequent to use of the product other than that for which it was intended.

In no way does this document remove the need of the recipient of the product to fully understand and apply statutory requirements. It is the recipient's sole responsibility to take due precautions relative to the use made of the product. All information contained herein is only to assist the recipient in fulfilling their statutory duty connected with the use of hazardous materials.

This Document may be entitled Product Safety Data Sheet as required by REACH (Registration, Evaluation, Authorisation and restriction of Chemicals) Annex II OR Product Data Information Sheet where a product is not required to be supported by a full REACH compliant SDS (e.g. not classified as hazardous or out of scope, such as cosmetics).
Changes from the previous version are given in Section 1.

This list of information must not be considered as exhaustive, and does not exonerate the recipient from taking other precautions described in documents other than those mentioned, concerning the storage and use of the product, for which they remain the sole person responsible.