# MICROSHIELD PVP Handwash

**Schulke India Private Limited**

Chemwatch Hazard Alert Code: **2**

Chemwatch: **6039-23**
Version No: **7.1.1.1**
Safety Data Sheet

Issue Date: **05/09/2018**
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L.GHS.IND.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### Product Identifier

| | |
|---|---|
| **Product name** | MICROSHIELD PVP Handwash |
| **Synonyms** | Product Codes: 61377; 61389; Povidone-Iodine Surgical Handwash |
| **Other means of identification** | 70000711 & 70000712 |

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

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|---|---|
| **Relevant identified uses** | Broad spectrum antimicrobial surgical handwash for external use only. Application over large skin areas should be avoided. Use in pregnancy and lactation should be limited. |

### Details of the supplier of the safety data sheet

| | |
|---|---|
| **Registered company name** | **Schulke India Private Limited** |
| **Address** | A-24/9 Mohan Cooperative Industrial Estate, Mathura Road New Delhi 110 044 India |
| **Telephone** | +91 11 4978 6666 |
| **Fax** | +91 11 4259 5051 |
| **Website** | www.schuelke.co.in |
| **Email** | customercare.india@schuelke.com |

### Emergency telephone number

| | |
|---|---|
| **Association / Organisation** | **+91 11 3079 6000** |
| **Emergency telephone numbers** | Not Available |
| **Other emergency telephone numbers** | Not Available |

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

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|---|---|
| **Classification** | Acute Toxicity (Oral) Category 5, Acute Toxicity (Inhalation) Category 5, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Acute Aquatic Hazard Category 3 |

### Label elements

| | |
|---|---|
| **Hazard pictogram(s)** |  |
| SIGNAL WORD | **WARNING** |

### Hazard statement(s)

| | |
|---|---|
| **H303** | May be harmful if swallowed. |
| **H333** | May be harmful if inhaled. |
| **H315** | Causes skin irritation. |
| **H319** | Causes serious eye irritation. |
| **H335** | May cause respiratory irritation. |
| **H402** | Harmful to aquatic life. |

### Precautionary statement(s) Prevention

| | |
|---|---|
| **P271** | Use only outdoors or in a well-ventilated area. |
| **P261** | Avoid breathing mist/vapours/spray. |
| **P273** | Avoid release to the environment. |
| **P280** | Wear protective gloves/protective clothing/eye protection/face protection. |

### Precautionary statement(s) Response

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

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| | |
|---|---|
| **P304+P312** | IF INHALED: Call a POISON CENTER/doctor/physician/first aider/if you feel unwell. |
| **P337+P313** | If eye irritation persists: Get medical advice/attention. |
| **P302+P352** | IF ON SKIN: Wash with plenty of water and soap. |
| **P304+P340** | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| **P332+P313** | If skin irritation occurs: Get medical advice/attention. |
| **P362+P364** | Take off contaminated clothing and wash it before reuse. |

### Precautionary statement(s) Storage

| | |
|---|---|
| **P405** | Store locked up. |
| **P403+P233** | Store in a well-ventilated place. Keep container tightly closed. |

### Precautionary statement(s) Disposal

| | |
|---|---|
| **P501** | Dispose of contents/container in accordance with local regulations. |

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### Substances

See section below for composition of Mixtures

### Mixtures

| CAS No | %[weight] | Name |
|---|---|---|
| 25655-41-8 | 7.5 | povidone-iodine |
| 9051-57-4 | 0-10 | ammonium nonoxynol sulfate |
| 56-81-5 | 0-10 | glycerol |
| 151-21-3 | 0-10 | sodium lauryl sulfate |
| 7558-79-4 | 0-10 | sodium phosphate, dibasic |
| | 0-10 | lauryl pyrrolidone |
| 9004-62-0 | 0-10 | hydroxyethylcellulose |
| | 0-10 | citric acid monohydrate for pH adjustment |
| | 0-10 | fragrance |
| 7681-11-0 | 0-10 | potassium iodide |
| 7732-18-5 | >20 | water |

## SECTION 4 FIRST AID MEASURES

### Description of first aid measures

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|---|---|
| **Eye Contact** | If this product comes in contact with the eyes:<br>▸ Wash out immediately with fresh running water.<br>▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.<br>▸ Seek medical attention without delay; if pain persists or recurs seek medical attention.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| **Skin Contact** | No adverse effects anticipated from normal use.<br>If skin or hair contact occurs:<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation. |
| **Inhalation** | ▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Lay patient down. Keep warm and rested.<br>▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.<br>▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.<br>▸ Transport to hospital, or doctor. |
| **Ingestion** | ▸ For advice, contact a Poisons Information Centre or a doctor.<br>▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious<br>▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice. |

### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Anaphylaxis is possible for sensitive individuals. Esophageal stricture may persist after recovery from immediate symptoms. Starch (15 g flour in 500ml water) may be used to absorb iodine.

## SECTION 5 FIREFIGHTING MEASURES

### Extinguishing media

▸ There is no restriction on the type of extinguisher which may be used.

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### Special hazards arising from the substrate or mixture

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| **Fire Incompatibility** | None known |

### Advice for firefighters

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|---|---|
| **Fire Fighting** | ▸ Alert Fire Brigade and tell them location and nature of hazard.<br>▸ Wear breathing apparatus plus protective gloves in the event of a fire.<br>▸ Prevent, by any means available, spillage from entering drains or water courses.<br>▸ Use fire fighting procedures suitable for surrounding area.<br>▸ **DO NOT** approach containers suspected to be hot.<br>▸ Cool fire exposed containers with water spray from a protected location.<br>▸ If safe to do so, remove containers from path of fire.<br>▸ Equipment should be thoroughly decontaminated after use. |
| **Fire/Explosion Hazard** | ▸ Non combustible.<br>▸ Not considered to be a significant fire risk.<br>▸ Expansion or decomposition on heating may lead to violent rupture of containers.<br>▸ Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).<br>▸ May emit acrid smoke.<br>Other decomposition products include:<br>iodine |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

| | |
|---|---|
| **Minor Spills** | ▸ Clean up all spills immediately.<br>▸ Avoid breathing vapours and contact with skin and eyes.<br>▸ Control personal contact with the substance, by using protective equipment.<br>▸ Contain and absorb spill with sand, earth, inert material or vermiculite.<br>▸ Wipe up.<br>▸ Place in a suitable, labelled container for waste disposal. |
| **Major Spills** | Minor hazard.<br>▸ Clear area of personnel.<br>▸ Alert Fire Brigade and tell them location and nature of hazard.<br>▸ Control personal contact with the substance, by using protective equipment as required.<br>▸ Prevent spillage from entering drains or water ways.<br>▸ Contain spill with sand, earth or vermiculite.<br>▸ Collect recoverable product into labelled containers for recycling.<br>▸ Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.<br>▸ Wash area and prevent runoff into drains or waterways.<br>▸ If contamination of drains or waterways occurs, advise emergency services. |

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

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|---|---|
| **Safe handling** | Avoid mixing with<br>detergents<br>Avoid contact with other chemicals.<br>▸ Limit all unnecessary personal contact.<br>▸ Wear protective clothing when risk of exposure occurs.<br>▸ Use in a well-ventilated area.<br>▸ Avoid contact with incompatible materials.<br>▸ When handling, **DO NOT** eat, drink or smoke.<br>▸ Keep containers securely sealed when not in use.<br>▸ Avoid physical damage to containers.<br>▸ Always wash hands with soap and water after handling.<br>▸ Work clothes should be laundered separately.<br>▸ Use good occupational work practice.<br>▸ Observe manufacturer's storage and handling recommendations contained within this SDS.<br>▸ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained. |
| **Other information** | ▸ Store in original containers.<br>▸ Keep containers securely sealed.<br>▸ Store in a cool, dry, well-ventilated area.<br>▸ Store away from incompatible materials and foodstuff containers.<br>▸ Protect containers against physical damage and check regularly for leaks.<br>▸ Observe manufacturer's storage and handling recommendations contained within this SDS.<br>Keep cool. Store below 25 deg.C |

### Conditions for safe storage, including any incompatibilities

| | |
|---|---|
| **Suitable container** | ▸ Polyethylene or polypropylene container.<br>▸ Check all containers are clearly labelled and free from leaks. |
| **Storage incompatibility** | Avoid contact with reducing agents, alkaloid salts, chloral hydrate, and\|metallic salts. |

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## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

**OCCUPATIONAL EXPOSURE LIMITS (OEL)**

**INGREDIENT DATA**

Not Available

**EMERGENCY LIMITS**

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---|---|---|---|---|
| povidone-iodine | Poly(1-(2-oxo-1-pyrrolidinyl)ethylene)iodine complex; (Iodine solutions) | 3.8 mg/m3 | 42 mg/m3 | 250 mg/m3 |
| glycerol | Glycerine (mist); (Glycerol; Glycerin) | 45 mg/m3 | 860 mg/m3 | 2,500 mg/m3 |
| sodium lauryl sulfate | Sodium lauryl sulfate | 3.9 mg/m3 | 43 mg/m3 | 260 mg/m3 |
| potassium iodide | Potassium iodide | 1.3 mg/m3 | 15 mg/m3 | 87 mg/m3 |

| Ingredient | Original IDLH | Revised IDLH |
|---|---|---|
| povidone-iodine | Not Available | Not Available |
| ammonium nonoxynol sulfate | Not Available | Not Available |
| glycerol | Not Available | Not Available |
| sodium lauryl sulfate | Not Available | Not Available |
| sodium phosphate, dibasic | Not Available | Not Available |
| hydroxyethylcellulose | Not Available | Not Available |
| potassium iodide | Not Available | Not Available |
| water | Not Available | Not Available |

**MATERIAL DATA**

None assigned. Refer to individual constituents.

### Exposure controls

**Appropriate engineering controls**

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
The basic types of engineering controls are:
Process controls which involve changing the way a job activity or process is done to reduce the risk.
Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.
Employers may need to use multiple types of controls to prevent employee overexposure.

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

| Type of Contaminant: | Air Speed: |
|---|---|
| solvent, vapours, degreasing etc., evaporating from tank (in still air) | 0.25-0.5 m/s (50-100 f/min) |
| aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s (100-200 f/min.) |
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1-2.5 m/s (200-500 f/min) |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion). | 2.5-10 m/s (500-2000 f/min.) |

Within each range the appropriate value depends on:

| Lower end of the range | Upper end of the range |
|---|---|
| 1: Room air currents minimal or favourable to capture | 1: Disturbing room air currents |
| 2: Contaminants of low toxicity or of nuisance value only | 2: Contaminants of high toxicity |
| 3: Intermittent, low production. | 3: High production, heavy use |
| 4: Large hood or large air mass in motion | 4: Small hood - local control only |

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.
|Avoid production of aerosols.

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| | |
|---|---|
| **Personal protection** |  |
| **Eye and face protection** | No special equipment for minor exposure i.e. when handling small quantities.<br>OTHERWISE:<br>▸ Safety glasses with side shields.<br>▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent] |
| **Skin protection** | See Hand protection below |
| **Hands/feet protection** | No special equipment needed when handling small quantities.<br>**OTHERWISE**: Wear chemical protective gloves, e.g. PVC.<br>|Stains may be removed with dilute sodium thiosulfate solution. |
| **Body protection** | See Other protection below |
| **Other protection** | ▸ Overalls.<br>▸ Eyewash unit. |

### Recommended material(s)

**GLOVE SELECTION INDEX**

Glove selection is based on a modified presentation of the:
**"Forsberg Clothing Performance Index".**
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:
MICROSHIELD PVP Handwash

| Material | CPI |
|---|---|
| BUTYL | C |
| NATURAL RUBBER | C |
| NATURAL+NEOPRENE | C |
| NEOPRENE | C |
| NITRILE | C |
| PVA | C |
| VITON | C |

* CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
**NOTE**: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

### Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

| Required minimum protection factor | Maximum gas/vapour concentration present in air p.p.m. (by volume) | Half-face Respirator | Full-Face Respirator |
|---|---|---|---|
| up to 10 | 1000 | A-AUS / Class1 P2 | - |
| up to 50 | 1000 | - | A-AUS / Class 1 P2 |
| up to 50 | 5000 | Airline * | - |
| up to 100 | 5000 | - | A-2 P2 |
| up to 100 | 10000 | - | A-3 P2 |
| 100+ | | | Airline** |

* - Continuous Flow ** - Continuous-flow or positive pressure demand
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

| | |
|---|---|
| **Appearance** | Dark brown viscous liquid with faint iodine odour; mixes with water. |

| | | | |
|---|---|---|---|
| **Physical state** | Liquid | **Relative density (Water = 1)** | 1.05 |
| **Odour** | Not Available | **Partition coefficient n-octanol / water** | Not Available |
| **Odour threshold** | Not Available | **Auto-ignition temperature (°C)** | Not Applicable |
| **pH (as supplied)** | 5.0 | **Decomposition temperature** | Not available. |
| **Melting point / freezing point (°C)** | Not available. | **Viscosity (cSt)** | Not Available |
| **Initial boiling point and boiling range (°C)** | Not Available | **Molecular weight (g/mol)** | Not Applicable |
| **Flash point (°C)** | Not Applicable | **Taste** | Not Available |
| **Evaporation rate** | Not Available | **Explosive properties** | Not Available |
| **Flammability** | Not Applicable | **Oxidising properties** | Not Available |
| **Upper Explosive Limit (%)** | Not Applicable | **Surface Tension (dyn/cm or mN/m)** | Not Available |
| **Lower Explosive Limit (%)** | Not Applicable | **Volatile Component (%vol)** | Not available. |
| **Vapour pressure (kPa)** | Not available. | **Gas group** | Not Available |
| **Solubility in water (g/L)** | Miscible | **pH as a solution (1%)** | Not available. |

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| | | | |
|---|---|---|---|
| **Vapour density (Air = 1)** | Not available. | **VOC g/L** | Not Available |

## SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---|
| **Reactivity** | See section 7 |
| **Chemical stability** | Product is considered stable and hazardous polymerisation will not occur. |
| **Possibility of hazardous reactions** | See section 7 |
| **Conditions to avoid** | See section 7 |
| **Incompatible materials** | See section 7 |
| **Hazardous decomposition products** | See section 5 |

## SECTION 11 TOXICOLOGICAL INFORMATION

### Information on toxicological effects

| | |
|---|---|
| **Inhaled** | Not normally a hazard due to non-volatile nature of product<br>Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. |
| **Ingestion** | Considered an unlikely route of entry in commercial/industrial environments<br>The liquid is discomforting<br>Ingestion may result in nausea, abdominal irritation, pain and vomiting |
| **Skin Contact** | Not considered to cause discomfort through normal use.<br>The liquid may be<br>slightly<br>discomforting<br>to the skin<br>if exposure is prolonged<br>and is capable of causing<br>transient staining of the skin<br>and<br>skin reactions<br>which may lead to dermatitis<br>from repeated exposures over long periods<br>\|One patient in 413 patients with contact dermatoses was found to be\|allergic to povidone-iodine. |
| **Eye** | The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. |
| **Chronic** | There exists limited evidence that shows that skin contact with the material is capable either of inducing a sensitisation reaction in a significant number of individuals, and/or of producing positive response in experimental animals.<br>\|Chronic use may increase blood iodine levels leading to altered thyroid\|function. |

| | TOXICITY | IRRITATION |
|---|---|---|
| **MICROSHIELD PVP Handwash** | Not Available | Not Available |
| **povidone-iodine** | Oral (rat) LD50: 5990 mg/kg[2] | Skin (rabbit): 500 mg mild |
| **ammonium nonoxynol sulfate** | Oral (rat) LD50: 8000 mg/kg[2] | Not Available |
| **glycerol** | Oral (rat) LD50: 12600 mg/kg[2] | Not Available |
| **sodium lauryl sulfate** | Oral (rat) LD50: 1288 mg/kg[2] | Eye (rabbit):100 mg/24 hr-moderate<br>Skin (human): 25 mg/24 hr - mild |
| **sodium phosphate, dibasic** | dermal (rat) LD50: >2000 mg/kg[1]<br>Oral (rat) LD50: >500 mg/kg[1] | Eye (rabbit): 500 mg/24h - mild<br>Skin (rabbit): 500 mg/24h - mild |
| **hydroxyethylcellulose** | Not Available | Not Available |
| **potassium iodide** | Not Available | Not Available |
| **water** | Not Available | Not Available |

**Continued...**

| | |
|---|---|
| ***Legend:*** | *1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances* |

| | |
|---|---|
| **GLYCEROL** | For glycerol:<br>**Acute toxicity:** Glycerol is of a low order of acute oral and dermal toxicity with LD50 values in excess of 4000 mg/kg bw. At very high dose levels, the signs of toxicity include tremor and hyperaemia of the gastro-intestinal -tract. Skin and eye irritation studies indicate that glycerol has low potential to irritate the skin and the eye. The available human and animal data, together with the very widespread potential for exposure and the absence of case reports of sensitisation, indicate that glycerol is not a skin sensitiser.<br>**Repeat dose toxicity:** Repeated oral exposure to glycerol does not induce adverse effects other than local irritation of the gastro-intestinal tract. The overall NOEL after prolonged treatment with glycerol is 10,000 mg/kg bw/day (20% in diet). At this dose level no systemic or local effects were observed. For inhalation exposure to aerosols, the NOAEC for local irritant effects to the upper respiratory tract is 165 mg/m3 and 662 mg/m3 for systemic effects.<br>**Genotoxicity:** Glycerol is free from structural alerts, which raise concern for mutagenicity. Glycerol does not induce gene mutations in bacterial strains, chromosomal effects in mammalian cells or primary DNA damage *in vitro*. Results of a limited gene mutation test in mammalian cells were of uncertain biological relevance. *In vivo*, glycerol produced no statistically significant effect in a chromosome aberrations and dominant lethal study. However, the limited details provided and the absence of a positive control, prevent any reliable conclusions to be drawn from the *in vivo* data. Overall, glycerol is not considered to possess genotoxic potential.<br>**Carcinogenicity:** The experimental data from a limited 2 year dietary study in the rat does not provide any basis for concerns in relation to carcinogenicity. Data from non-guideline studies designed to investigate tumour promotion activity in male mice suggest that oral administration of glycerol up to 20 weeks had a weak promotion effect on the incidence of tumour formation.<br>**Reproductive and developmental toxicity:** No effects on fertility and reproductive performance were observed in a two generation study with glycerol administered by gavage (NOAEL 2000 mg/kg bw/day). No maternal toxicity or teratogenic effects were seen in the rat, mouse or rabbit at the highest dose levels tested in a guideline comparable teratogenicity study (NOEL 1180 mg/kg bw/day). |
| **SODIUM LAURYL SULFATE** | for alkyl sulfates; alkane sulfonates and alpha-olefin sulfonates<br><br>Most chemicals of this category are not defined substances, but mixtures of homologues with different alkyl chain lengths. Alpha-olefin sulfonates are mixtures of alkene sulfonate and hydroxyl alkane sulfonates with the sulfonate group in the terminal position and the double bond, or hydroxyl group, located at a position in the vicinity of the sulfonate group.<br>Common physical and/or biological pathways result in structurally similar breakdown products, and are, together with the surfactant properties, responsible for similar environmental behavior and essentially identical hazard profiles with regard to human health.<br>**Acute toxicity**: These substances are well absorbed after ingestion; penetration through the skin is however poor. After absorption, these chemicals are distributed mainly to the liver.<br><br>Acute oral LD50 values of alkyl sulfates in rats and/or mice were (in mg/kg):<br>C10-; 290-580<br>C10-16-, and C12-; 1000-2000<br>C12-14, C12-15, C12-16, C12-18 and C16-18-; >2000<br>C14-18, C16-18-; >5000<br>The clinical signs observed were non-specific (piloerection, lethargy, decreased motor activity and respiratory rate, diarrhoea). At necropsy the major findings were irritation of the gastrointestinal tract and anemia of inner organs.<br>Based on limited data, the acute oral LD50 values of alkane sulfonates and alpha-olefin sulfonates of comparable chain lengths are assumed to be in the same range.<br>The counter ion does not appear to influence the toxicity in a substantial way.<br><br>Acute dermal LD50 values of alkyl sulfates in rabbits (mg/ kg):<br>C12-; 200<br>C12-13 and C10-16-;>500<br><br>Apart from moderate to severe skin irritation, clinical signs included tremor, tonic-clonic convulsions, respiratory failure, and body weight loss in the study with the C12- alkyl sulfate and decreased body weights after administration of the C10-16- alkyl sulfates. No data are available for alkane sulfonates but due to a comparable metabolism and effect concentrations in long-term studies effect concentrations are expected to be in the same range as found for alkyl sulfates.<br><br>There are no data available for acute inhalation toxicity of alkyl sulfates, alkane sulfonates or alpha-olefin sulfonates.<br><br>In skin irritation tests using rabbits (aqueous solutions, OECD TG 404):<br>C8-14 and C8-16 (30%), C12-14 (90%), C14-18 (60%)- corrosive<br>Under occlusive conditions:<br>C12, and C12-14 (25%), C12-15-, C13-15 and C15-16 (5-7%) - moderate to strong irritants<br><br>Comparative studies investigating skin effects like transepidermal water loss, epidermal electrical conductance, skin swelling, extraction of amino acids and proteins or development of erythema in human volunteers consistently showed a maximum of effects with C12-alkyl sulfate, sodium; this salt is routinely used as a positive internal control giving borderline irritant reactions in skin irritation studies performed on humans. As the most irritant alkyl sulfate it can be concluded that in humans 20% is the threshold concentration for irritative effects of alkyl sulfates in general. No data were available with regard to the skin irritation potential of alkane sulfonates. Based on the similar chemical structure they are assumed to exhibit similar skin irritation properties as alkyl sulfates or alpha-olefin sulfonates of comparable chain lengths.<br><br>In eye irritation tests, using rabbits, C12-containing alkyl sulfates (>10% concentration) were severely irritating and produced irreversible corneal effects. With increasing alkyl chain length, the irritating potential decreases, and C16-18 alkyl sulfate sodium, at a concentration of 25%, was only a mild irritant. Concentrated C14-16- alpha-olefin sulfonates were severely irritating, but caused irreversible effects only if applied as undiluted powder. At concentrations below 10% mild to moderate, reversible effects, were found. No data were available for alkane sulfonates<br><br>Alkyl sulfates and C14-18 alpha-olefin sulfonates were not skin sensitisers in animal studies. No reliable data were available for alkane sulfonates. Based on the similar chemical structure, no sensitisation is expected.<br>However anecdotal evidence suggests that sodium lauryl sulfate causes pulmonary sensitisation resulting in hyperactive airway dysfunction and pulmonary allergy accompanied by fatigue, malaise and aching. Significant symptoms of exposure can persist for more than two years and can be activated by a variety of non-specific environmental stimuli such as a exhaust, perfumes and passive smoking.<br>Absorbed sulfonates are quickly distributed through living systems and are readily excreted. Toxic effects may result from the effects of binding to proteins and the ability of sulfonates to translocate potassium and nitrate (NO3-) ions from cellular to interstitial fluids. Airborne sulfonates may be responsible for respiratory allergies and, in some instances, minor dermal allergies. Repeated skin contact with some sulfonated surfactants has produced sensitisation dermatitis in predisposed individuals<br><br>**Repeat dose toxicity:** After repeated oral application of alkyl sulfates with chain lengths between C12 and C18, the liver was the only target organ for systemic toxicity. Adverse effects on this organ included an increase in liver weight, enlargement of liver cells, and elevated levels of liver enzymes. The LOAEL for liver toxicity (parenchymal hypertrophy and an increase in comparative liver weight) was 230 mg/kg/day (in a 13 week study with C16-18 alkyl sulfate, sodium). The lowest NOAEL in rats was 55 mg/kg/day (in a 13 week study with C12-alkyl sulfate, sodium).<br>C14- and C14-16-alpha-olefin sulfonates produced NOAELs of 100 mg/kg/day (in 6 month- and 2 year studies). A reduction in body weight gain was the |

**Continued...**

| | |
|---|---|
| | only adverse effect identified in these studies.<br>No data were available with regard to the repeated dose toxicity of alkane sulfonates. Based on the similarity of metabolic pathways between alkane sulfonates, alkyl sulfates and alkyl-olefin sulfonates, the repeated dose toxicity of alkane sulfonates is expected to be similar with NOAEL and LOAEL values in the same range as for alkyl sulfates and alpha-olefin sulfonates, i.e. 100 and 200-250 mg/kg/day, respectively, with the liver as potential target organ.<br><br>**Genotoxicity:** Alkyl sulfates of different chain lengths and with different counter ions were not mutagenic in standard bacterial and mammalian cell systems both in the absence and in the presence of metabolic activation. There was also no indication for a genotoxic potential of alkyl sulfates in various in vivo studies on mice (micronucleus assay, chromosome aberration test, and dominant lethal assay).<br>alpha-Olefin sulfonates were not mutagenic in the Ames test, and did not induce chromosome aberrations in vitro. No genotoxicity data were available for alkane sulfonates. Based on the overall negative results in the genotoxicity assays with alkyl sulfates and alpha-olefin sulfonates, the absence of structural elements indicating mutagenicity, and the overall database on different types of sulfonates, which were all tested negative in mutagenicity assays, a genotoxic potential of alkane sulfonates is not expected.<br><br>**Carcinogenicity:** Alkyl sulfates were not carcinogenic in feeding studies with male and female Wistar rats fed diets with C12-15 alkyl sulfate sodium for two years (corresponding to doses of up to 1125 mg/kg/day).<br>alpha-Olefin sulfonates were not carcinogenic in mice and rats after dermal application, and in rats after oral exposure.<br>No carcinogenicity studies were available for the alkane sulfonates.<br><br>**Reproductive toxicity**: No indication for adverse effects on reproductive organs was found in various oral studies with different alkyl sulfates. The NOAEL for male fertility was 1000 mg/kg/day for sodium dodecyl sulfate. In a study using alpha-olefin sulfonates in male and female rats, no adverse effects were identified up to 5000 ppm.<br><br>**Developmental toxicity:** In studies with various alkyl sulfates (C12 up to C16-18- alkyl) in rats, rabbits and mice, effects on litter parameters were restricted to doses that caused significant maternal toxicity (anorexia, weight loss, and death).<br>The principal effects were higher foetal loss and increased incidences of total litter losses. The incidences of malformations and visceral and skeletal anomalies were unaffected apart from a higher incidence of delayed ossification or skeletal variation in mice at > 500 mg/kg bw/day indicative of a delayed development. The lowest reliable NOAEL for maternal toxicity was about 200 mg/kg/day in rats, while the lowest NOAELs in offspring were 250 mg/kg/day in rats and 300 mg/kg/day for mice and rabbits.<br>For alpha-olefin sulfonates (C14-16-alpha-olefin sulfonate, sodium) the NOAEL was 600 mg/kg/day both for maternal and developmental toxicity.<br>No data were available for the reproductive and developmental toxicity of alkane sulfonates. Based on the available data, the similar toxicokinetic properties and a comparable metabolism of the alkyl sulfates and alkane sulfonates, alkane sulfonates are not considered to be developmental toxicants.<br>Although the database for category members with C<12 is limited, the available data are indicating no risk as the substances have comparable toxicokinetic properties and metabolic pathways. In addition, longer-term studies gave no indication for adverse effects on reproductive organs with different alkyl sulfates<br><br>Alkyl sulfates (AS) anionic surfactants are generally classified according to Comité Européen des Agents de Surface et leurs Intermédiaires Organiques (CESIO) as Irritant (Xi) with the risk phrases R38 (Irritating to skin) and R41 (Risk of serious damage to eyes). An exception has been made for C12 AS which is classified as Harmful (Xn) with the risk phrases R22 (Harmful if swallowed) and R38 and R41 (CESIO 2000). AS are not included in Annex 1 of list of dangerous substances of Council Directive 67/548/EEC.<br>AS are readily absorbed from the gastrointestinal tract after oral administration. Penetration of AS through intact skin appears to be minimal. AS are extensively metabolized in various species resulting in the formation of several metabolites. The primary metabolite is butyric acid-4-sulfate. The major site of metabolism is the liver. AS and their metabolites are primarily eliminated via the urine and only minor amounts are eliminated via the faeces. In rats about 70-90% of the dose was eliminated via the urine within 48 hours after oral, intravenous or intraperitoneal administration of 1 mg of AS per rat. The acute toxicity of AS in animals is considered to be low after skin contact or oral intake.<br>For a homologous series of AS (C8 to C16), maximum swelling of stratum corneum (the outermost layer of epidermis) of the skin was produced by the C12 homologue. This is in accordance with the fact that the length of the hydrophobic alkyl chain influences the skin irritation potential. Other studies have shown that especially AS of chain lengths C11, C12 and C13 remove most amino acids and soluble proteins from the skin during washing.<br>Concentrated samples of AS are skin irritants in rabbits and guinea pigs. AS are non-irritant to laboratory animals at a 0.1% concentration. C12 AS is used in research laboratories as a standard substance to irritate skin and has been shown to induce an irritant eczema. AS were found, by many authors, to be the most irritating of the anionic surfactants, although others have judged the alkyl sulfates only as irritant as laurate (fatty acid soap).<br>A structure/effect relationship with regard to the length of the alkyl chain can also be observed on mucous membranes. The maximum eye irritation occurs at chain lengths of C10 to C14 . In acute ocular tests, 10% C12 AS caused corneal damage to the rabbit eyes if not irrigated. Another study showed that a 1.0% aqueous C12 AS solution only had a slight effect on rabbit eyes, whereas 5% C12 AS caused temporary conjunctivitis, and 25% C12 AS resulted in corneal damage.<br>In a 13-week feeding study, rats were fed dietary levels of 0, 40, 200, 1,000 or 5,000 ppm of C12 AS. The only test material related effect observed was an increase in absolute organ weights in the rats fed with the highest concentration which was 5,000 ppm. The organ weights were not further specified and no other abnormalities were found.<br>In a mutagenicity study, rats were fed 1.13 and 0.56% C12 AS in the diet for 90 days. This treatment did not cause chromosomal aberrations in the bone marrow cells.<br>Mutagenicity studies with *Salmonella typhimurium* strains (Ames test) indicate no mutagenic effects of C12 AS ). The available long-term studies in experimental animals (rats and mice) are inadequate to evaluate the carcinogenic potential of AS. However, in studies in which animals were administered AS in the diet at levels of<br>up to 4% AS, there was no indication of increased risk of cancer after oral ingestion.<br>No specific teratogenic effects were observed in rabbits, rats or mice when pregnant animals were dosed with 0.2, 2.0, 300 and 600 mg C12 AS/kg body weight/day by gavage during the most important period of organogenesis (day 6 to 15 of pregnancy for mice and rats and day 6 to 18 of pregnancy for rabbits). Reduced litter size, high incidence of skeletal abnormalities and foetal loss were observed in mice at 600 mg C12 AS/kg/day, a dose level which also caused severe toxic effects in the parent animals in all three species . An aqueous solution of 2% AS was applied (0.1 ml) once daily to the dorsal skin (2 x 3 cm) of pregnant mice from day 1 to day 17 of gestation. A solution of 20% AS was tested likewise from day 1 to day 10 of gestation. The mice were killed on days 11 and 18, respectively. A significant decrease in the number of implantations was observed when mice were treated with 20% AS compared to a control group which was dosed with water. No evidence of teratogenic effects was noted.<br>When aqueous solutions of 2% and 20% AS (0.1 ml) were applied once per day to the dorsal skin (2 x 3 cm) of pregnant ICR/Jc1 mice from day 12 to day 17 of gestation no effects on pregnancy outcome were detected. Treatment with 20% AS resulted in growth retardation of suckling mice, but this effect disappeared after weaning. A 10% AS solution (0.1 ml) was applied twice daily to the dorsal skin (2 x 3 cm) of pregnant ICR/Jc1 mice during the preimplantation period (days 0-3 of gestation). A significant number of embryos collected on day 3 as severely deformed or remained at the morula stage. The number of embryos in the oviducts was significantly greater for the mice dosed with AS as compared to the control mice. No pathological changes were detected in the major organs of the dams<br>**NOTE:** Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.<br>Eye (None) None: None None rabbit None 250 ugSkin (rabbit):25 mg/24 hr-moderate Skin (None) None: None rabbit None 50 mg/24Eye (rabbit) 10: mg- |
| **SODIUM PHOSPHATE, DIBASIC** | The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. |
| **POTASSIUM IODIDE** | The following information refers to contact allergens as a group and may not be specific to this product.<br>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an |

**Continued...**

| | |
|---|---|
| | allergic test reaction in more than 1% of the persons tested.<br>Allergic reactions which develop in the respiratory passages as bronchial asthma or rhinoconjunctivitis, are mostly the result of reactions of the allergen with specific antibodies of the IgE class and belong in their reaction rates to the manifestation of the immediate type. In addition to the allergen-specific potential for causing respiratory sensitisation, the amount of the allergen, the exposure period and the genetically determined disposition of the exposed person are likely to be decisive. Factors which increase the sensitivity of the mucosa may play a role in predisposing a person to allergy. They may be genetically determined or acquired, for example, during infections or exposure to irritant substances. Immunologically the low molecular weight substances become complete allergens in the organism either by binding to peptides or proteins (haptens) or after metabolism (prohaptens).<br>Particular attention is drawn to so-called atopic diathesis which is characterised by an increased susceptibility to allergic rhinitis, allergic bronchial asthma and atopic eczema (neurodermatitis) which is associated with increased IgE synthesis.<br>Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure. |
| **POVIDONE-IODINE & SODIUM PHOSPHATE, DIBASIC** | The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. |
| **AMMONIUM NONOXYNOL SULFATE & GLYCEROL & SODIUM LAURYL SULFATE & SODIUM PHOSPHATE, DIBASIC** | Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production. |
| **HYDROXYETHYLCELLULOSE & WATER** | No significant acute toxicological data identified in literature search. |

| | | | |
|---|---|---|---|
| **Acute Toxicity** | ✔ | **Carcinogenicity** | ⊘ |
| **Skin Irritation/Corrosion** | ✔ | **Reproductivity** | ⊘ |
| **Serious Eye Damage/Irritation** | ✔ | **STOT - Single Exposure** | ✔ |
| **Respiratory or Skin sensitisation** | ⊘ | **STOT - Repeated Exposure** | ⊘ |
| **Mutagenicity** | ⊘ | **Aspiration Hazard** | ⊘ |

***Legend:*** ✘ *– Data available but does not fill the criteria for classification*
✔ *– Data available to make classification*
⊘ *– Data Not Available to make classification*

## SECTION 12 ECOLOGICAL INFORMATION

### Toxicity

**MICROSHIELD PVP Handwash**

| ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|---|---|---|---|---|
| Not Available | Not Available | Not Available | Not Available | Not Available |

**povidone-iodine**

| ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|---|---|---|---|---|
| NOEC | 0.08 | Fish | 3000.0mg/L | 4 |

**ammonium nonoxynol sulfate**

| ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|---|---|---|---|---|
| Not Available | Not Available | Not Available | Not Available | Not Available |

**glycerol**

| ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|---|---|---|---|---|
| LC50 | 96 | Fish | >11mg/L | 2 |

**sodium lauryl sulfate**

| ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|---|---|---|---|---|
| LC50 | 96 | Fish | 0.59mg/L | 4 |
| EC50 | 48 | Crustacea | 0.67mg/L | 4 |
| EC50 | 96 | Algae or other aquatic plants | 1.2mg/L | 4 |
| BCF | 1 | Fish | 0.85mg/L | 4 |
| EC15 | 24 | Crustacea | 0.17mg/L | 4 |
| NOEC | 0.08 | Fish | 0.0000013mg/L | 4 |

**sodium phosphate, dibasic**

| ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|---|---|---|---|---|
| Not Available | Not Available | Not Available | Not Available | Not Available |

**hydroxyethylcellulose**

| ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|---|---|---|---|---|
| Not Available | Not Available | Not Available | Not Available | Not Available |

**Continued...**

| | | | | | |
|---|---|---|---|---|---|
| **potassium iodide** | **ENDPOINT** | **TEST DURATION (HR)** | **SPECIES** | **VALUE** | **SOURCE** |
| | LC50 | 96 | Fish | 896mg/L | 2 |
| **water** | **ENDPOINT** | **TEST DURATION (HR)** | **SPECIES** | **VALUE** | **SOURCE** |
| | Not Available | Not Available | Not Available | Not Available | Not Available |

| | |
|---|---|
| ***Legend:*** | *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data* |

### Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---|---|---|
| glycerol | LOW | LOW |
| sodium lauryl sulfate | HIGH | HIGH |
| hydroxyethylcellulose | LOW | LOW |
| potassium iodide | HIGH | HIGH |
| water | LOW | LOW |

### Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|---|
| glycerol | LOW (LogKOW = -1.76) |
| sodium lauryl sulfate | LOW (BCF = 7.15) |
| hydroxyethylcellulose | LOW (LogKOW = -8.995) |
| potassium iodide | LOW (LogKOW = 0.0436) |
| water | LOW (LogKOW = -1.38) |

### Mobility in soil

| Ingredient | Mobility |
|---|---|
| glycerol | HIGH (KOC = 1) |
| sodium lauryl sulfate | LOW (KOC = 10220) |
| hydroxyethylcellulose | LOW (KOC = 10) |
| potassium iodide | LOW (KOC = 14.3) |
| water | LOW (KOC = 14.3) |

## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste treatment methods

| | |
|---|---|
| **Product / Packaging disposal** | ▸ Recycle wherever possible or consult manufacturer for recycling options.<br>▸ Consult State Land Waste Management Authority for disposal.<br>▸ Bury residue in an authorised landfill.<br>▸ Recycle containers if possible, or dispose of in an authorised landfill.<br>\|Iodine is reduced to iodide by addition of thiosulfate. The remaining\|solution is then suitable for disposal to the sewer. Seek approval from\|local authorities. |

## SECTION 14 TRANSPORT INFORMATION

### Labels Required

| | |
|---|---|
| **Marine Pollutant** | NO |

**Land transport (UN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

**Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

**Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

**Transport in bulk according to Annex II of MARPOL and the IBC code**

Not Applicable

## SECTION 15 REGULATORY INFORMATION

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

**POVIDONE-IODINE(25655-41-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Not Applicable

**AMMONIUM NONOXYNOL SULFATE(9051-57-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

**Continued...**

Not Applicable

**GLYCEROL(56-81-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Not Applicable

**SODIUM LAURYL SULFATE(151-21-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Not Applicable

**SODIUM PHOSPHATE, DIBASIC(7558-79-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Not Applicable

**HYDROXYETHYLCELLULOSE(9004-62-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Not Applicable

**POTASSIUM IODIDE(7681-11-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Not Applicable

**WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Not Applicable

### National Inventory Status

| National Inventory | Status |
|---|---|
| Australia - AICS | Y |
| Canada - DSL | Y |
| Canada - NDSL | N (potassium iodide; povidone-iodine; glycerol; water; hydroxyethylcellulose; ammonium nonoxynol sulfate; sodium phosphate, dibasic) |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | N (povidone-iodine; hydroxyethylcellulose; ammonium nonoxynol sulfate) |
| Japan - ENCS | N (ammonium nonoxynol sulfate) |
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |
| USA - TSCA | Y |
| ***Legend:*** | *Y = All ingredients are on the inventory*<br>*N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)* |

## SECTION 16 OTHER INFORMATION

| | |
|---|---|
| **Revision Date** | 05/09/2018 |
| **Initial Date** | 29/10/2001 |

### Other information

### Ingredients with multiple cas numbers

| Name | CAS No |
|---|---|
| ammonium nonoxynol sulfate | 9051-57-4, 37226-45-2 |
| glycerol | 56-81-5, 29796-42-7, 30049-52-6, 37228-54-9, 75398-78-6, 78630-16-7, 8013-25-0, 8043-29-6, 1400594-62-8 |
| sodium lauryl sulfate | 151-21-3, 1335-72-4, 3088-31-1, 9004-82-4 |
| sodium phosphate, dibasic | 7558-79-4, 10028-24-7 |

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

### Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit。
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index



**Continued...**

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