



Pola Office + 6% Hydrogen Peroxide Gel

SDI Limited

Version No: 5.1.1.1

Safety Data Sheet (Conforms to Regulations (EC) No 2015/830)

Issue Date: 18/03/2016

Print Date: 24/03/2016

Initial Date: Not Available

L.REACH.GBR.EN

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

1.1. Product Identifier

| | |
|-------------------------------|--|
| Product name | Pola Office + 6% Hydrogen Peroxide Gel |
| Synonyms | Not Available |
| Other means of identification | Not Available |

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

| | |
|--------------------------|--|
| Relevant identified uses | To remove discoloration of teeth under the supervision of a dentist. |
| Uses advised against | Not Applicable |

1.3. Details of the supplier of the safety data sheet

| Registered company name | SDI Limited | SDI Brazil Indústria E Comercio Ltda | SDI Germany GmbH |
|-------------------------|---|--|---|
| Address | 3-15 Brunsdon Street VIC Bayswater 3153 Australia | Rua Dr. Virgilio de Carvalho Pinto, 612 São Paulo CEP 05415-020 Brazil | Hansestrasse 85 Cologne D-51149 Germany |
| Telephone | +61 3 8727 7111 (Business Hours) | +55 11 3092 7100 | +49 0 2203 9255 0 |
| Fax | +61 3 8727 7222 | +55 11 3092 7101 | +49 0 2203 9255 200 |
| Website | www.sdi.com.au | www.sdi.com.au | www.sdi.com.au |
| Email | info@sdi.com.au | brasil@sdi.com.au | germany@sdi.com.au |

| | |
|-------------------------|---|
| Registered company name | SDI (North America) Inc. |
| Address | 1279 Hamilton Parkway IL Itasca 60143 United States |
| Telephone | +1 630 361 9200 (Business hours) |
| Fax | Not Available |
| Website | Not Available |
| Email | USA.Canada@sdi.com.au |

1.4. Emergency telephone number

| | | | |
|-----------------------------------|-----------------------|---------------|---------------|
| Association / Organisation | SDI Limited | Not Available | Not Available |
| Emergency telephone numbers | +61 3 8727 7111 | Not Available | Not Available |
| Other emergency telephone numbers | ray.cahill@sdi.com.au | Not Available | Not Available |

| | |
|-----------------------------------|-----------------|
| Association / Organisation | Not Available |
| Emergency telephone numbers | +61 3 8727 7111 |
| Other emergency telephone numbers | Not Available |

SECTION 2 HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Considered a dangerous mixture according to directive 1999/45/EC, Reg. (EC) No 1272/2008 (if applicable) and their amendments. Not classified as Dangerous Goods for transport purposes.


| | |
|------------------------|--|
| DSD classification | In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) and CLP Regulation (EC) No 1272/2008 regulations |
| DPD classification [1] | R36 Irritating to eyes. |
| Legend: | 1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI |

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| | |
|---|--|
| Classification according to regulation (EC) No 1272/2008 [CLP] [1] | Eye Irritation Category 2 |
| Legend: | 1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI |

2.2. Label elements

| | |
|---------------------------|---|
| CLP label elements |  |
|---------------------------|---|

| | |
|--------------------|----------------|
| SIGNAL WORD | WARNING |
|--------------------|----------------|

Hazard statement(s)

| | |
|-------------|--------------------------------|
| H319 | Causes serious eye irritation. |
|-------------|--------------------------------|

Supplementary statement(s)

Not Applicable

Precautionary statement(s) Prevention

| | |
|-------------|--|
| 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. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

2.3. Other hazards

Cumulative effects may result following exposure*.

May produce skin discomfort*.

REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances

See 'Composition on ingredients' in Section 3.2

3.2. Mixtures

| 1.CAS No 2.EC No 3.Index No 4.REACH No | %[weight] | Name | Classification according to directive 67/548/EEC [DSD] | Classification according to regulation (EC) No 1272/2008 [CLP] |
|---|--|--------------------------|--|--|
| 1.7722-84-1 2.231-765-0 3.008-003-00-9 4.01-2119485845-22-XXXX | 6 | <u>hydrogen peroxide</u> | R5, R8, R20/22, R35 [2] | Oxidizing Liquid Category 1, Acute Toxicity (Inhalation) Category 4, Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 1A; H271, H332, H302, H314 [3] |
| Legend: | 1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI 4. Classification drawn from C&L | | | |

SECTION 4 FIRST AID MEASURES

4.1. Description of first aid measures

| | |
|----------------|--|
| General | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation. <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Wash out immediately with fresh running water. ▶ 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. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary. ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. |
|----------------|--|

Continued...

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| | |
|---------------------|--|
| | <ul style="list-style-type: none"> ▶ Seek medical advice. |
| Eye Contact | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Wash out immediately with fresh running water. ▶ 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. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| Skin Contact | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation. |
| Inhalation | <ul style="list-style-type: none"> ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary. |
| Ingestion | <ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Seek medical advice. |

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

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

Hydrogen peroxide at moderate concentrations (5% or more) is a strong oxidant.

- ▶ Direct contact with the eye is likely to cause corneal damage especially if not washed immediately. Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered.
- ▶ Because of the likelihood of systemic effects attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided.
- ▶ There is remote possibility, however, that a nasogastric or orogastric tube may be required for the reduction of severe distension due to gas formation"

Fisher Scientific SDS

SECTION 5 FIREFIGHTING MEASURES

5.1. Extinguishing media

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.
- ▶ Water spray or fog - Large fires only.

5.2. Special hazards arising from the substrate or mixture

| | |
|-----------------------------|-------------|
| Fire Incompatibility | None known. |
|-----------------------------|-------------|

5.3. Advice for firefighters

| | |
|------------------------------|---|
| Fire Fighting | <ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves in the event of a fire. ▶ Prevent, by any means available, spillage from entering drains or water courses. ▶ Use fire fighting procedures suitable for surrounding area. ▶ DO NOT approach containers suspected to be hot. ▶ Cool fire exposed containers with water spray from a protected location. ▶ If safe to do so, remove containers from path of fire. ▶ Equipment should be thoroughly decontaminated after use. |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ Non combustible. ▶ Not considered a significant fire risk, however containers may burn. <p>May emit poisonous fumes. May emit corrosive fumes. Decomposes on heating and produces; carbon dioxide (CO₂) carbon monoxide (CO)</p> |

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

| | |
|---------------------|--|
| Minor Spills | <ul style="list-style-type: none"> ▶ Clean up all spills immediately. ▶ Avoid contact with skin and eyes. ▶ Wear impervious gloves and safety goggles. ▶ Trowel up/scrape up. ▶ Place spilled material in clean, dry, sealed container. ▶ Flush spill area with water. |
| Major Spills | <p>Minor hazard.</p> <ul style="list-style-type: none"> ▶ Clear area of personnel. ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Control personal contact with the substance, by using protective equipment as required. ▶ Prevent spillage from entering drains or water ways. ▶ Contain spill with sand, earth or vermiculite. ▶ Collect recoverable product into labelled containers for recycling. |

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- ▶ Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
- ▶ Wash area and prevent runoff into drains or waterways.
- ▶ If contamination of drains or waterways occurs, advise emergency services.

6.4. Reference to other sections

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

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

| | |
|--------------------------------------|--|
| Safe handling | <ul style="list-style-type: none"> ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps. ▶ DO NOT enter confined spaces until atmosphere has been checked. ▶ DO NOT allow material to contact humans, exposed food or food utensils. ▶ Avoid contact with incompatible materials. ▶ When handling, DO NOT eat, drink or smoke. ▶ Keep containers securely sealed when not in use. ▶ Avoid physical damage to containers. ▶ Always wash hands with soap and water after handling. ▶ Work clothes should be laundered separately. Launder contaminated clothing before re-use. ▶ Use good occupational work practice. ▶ Observe manufacturer's storage and handling recommendations contained within this SDS. ▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained. |
| Fire and explosion protection | See section 5 |
| Other information | Store between 2 and 25 deg C. , Do not store in direct sunlight. , Store in a cool dry place. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|---|
| Suitable container | <ul style="list-style-type: none"> ▶ DO NOT repack. Use containers supplied by manufacturer only. ▶ Check that containers are clearly labelled and free from leaks |
| Storage incompatibility | ▶ Avoid strong bases. |

7.3. Specific end use(s)

See section 1.2

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

DERIVED NO EFFECT LEVEL (DNEL)

Not Available

PREDICTED NO EFFECT LEVEL (PNEC)

Not Available

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|-------------------------------------|-------------------|-------------------|-------------------------------|-------------------------------|---------------|---------------|
| UK Workplace Exposure Limits (WELs) | hydrogen peroxide | Hydrogen peroxide | 1.4 mg/m ³ / 1 ppm | 2.8 mg/m ³ / 2 ppm | Not Available | Not Available |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|-------------------|-------------------------|---------------|---------------|---------------|
| hydrogen peroxide | Hydrogen peroxide | Not Available | Not Available | Not Available |
| hydrogen peroxide | Hydrogen peroxide - 30% | 33 ppm | 170 ppm | 330 ppm |

| Ingredient | Original IDLH | Revised IDLH |
|-------------------|---------------|---------------|
| hydrogen peroxide | 75 ppm | 75 [Unch] ppm |

MATERIAL DATA

8.2. Exposure controls

| | |
|--|---|
| 8.2.1. Appropriate engineering controls | <p>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.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> |
|--|---|

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Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. An approved self contained breathing apparatus (SCBA) may be required in some situations. Provide adequate ventilation in warehouse or closed storage area. 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 the theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

8.2.2. Personal protection



Eye and face protection

- ▶ Safety glasses with side shields.
- ▶ Chemical goggles.
- ▶ 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

- ▶ Wear chemical protective gloves, e.g. PVC.
- ▶ Wear safety footwear or safety gumboots, e.g. Rubber
- ▶ Rubber Gloves

Body protection

See Other protection below

Other protection

- ▶ Overalls.
- ▶ P.V.C. apron.
- ▶ Barrier cream.
- ▶ Skin cleansing cream.
- ▶ Eye wash unit.

Thermal hazards

Not Available

Respiratory protection

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

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 10 x ES | B-AUS | - | B-PAPR-AUS / Class 1 |
| up to 50 x ES | - | B-AUS / Class 1 | - |
| up to 100 x ES | - | B-2 | B-PAPR-2 ^ |

^ - Full-face

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)

8.2.3. Environmental exposure controls

See section 12

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Continued...

Pola Office + 6% Hydrogen Peroxide Gel

| | | | |
|---|---|--|----------------|
| Appearance | Clear blue gel with no odour, mixes with water. | | |
| Physical state | Gel | Relative density (Water = 1) | Not Available |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | Not Available | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | Not Applicable | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | Not Available | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | Not Available | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Available | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | Not Available | 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 |
| Vapour density (Air = 1) | Not Available | VOC g/L | Not Available |

9.2. Other information

Not Available

SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---|
| 10.1.Reactivity | See section 7.2 |
| 10.2.Chemical stability | Product is considered stable and hazardous polymerisation will not occur. |
| 10.3. Possibility of hazardous reactions | See section 7.2 |
| 10.4. Conditions to avoid | See section 7.2 |
| 10.5. Incompatible materials | See section 7.2 |
| 10.6. Hazardous decomposition products | See section 5.3 |

SECTION 11 TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

| | | |
|---|---|-------------------|
| Inhaled | The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. | |
| Ingestion | The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern. | |
| Skin Contact | <p>Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p> | |
| Eye | Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur. | |
| Chronic | Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. | |
| Pola Office + 6% Hydrogen Peroxide Gel | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| hydrogen peroxide | TOXICITY | IRRITATION |
| | dermal (rat) LD50: 3000-5480 mg/kg ^[1] | Nil reported |
| | Inhalation (rat) LC50: 2 mg/L/4H ^[2] | |

Continued...

Pola Office + 6% Hydrogen Peroxide Gel

Oral (rat) LD50: 75 mg/kg^[1]**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

HYDROGEN PEROXIDE

No significant acute toxicological data identified in literature search.

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.

For hydrogen peroxide:

Hazard increases with peroxide concentration, high concentrations contain an additive stabiliser.

Pharmacokinetics

Hydrogen peroxide is a normal product of metabolism. It is readily decomposed by catalase in normal cells. In experimental animals exposed to hydrogen peroxide, target organs affected include the lungs, intestine, thymus, liver, and kidney, suggesting its distribution to those sites.

Hydrogen peroxide has been detected in breath.

- ▶ Absorption: Hydrogen peroxide is decomposed in the bowel before absorption. When applied to tissue, solutions of hydrogen peroxide have poor penetrability.
- ▶ Distribution: Hydrogen peroxide is produced metabolically in intact cells and tissues. It is formed by reduction of oxygen either directly in a two-electron transfer reaction, often catalysed by flavoproteins, or by an initial one-electron step to O₂ followed by dismutation to hydrogen peroxide.
- ▶ Hydrogen peroxide has been detected in serum and in intact liver. based on the results of toxicity studies, the lungs, intestine, thymus, liver, and kidney may be distribution sites. In rabbits and cats that died after intravenous administration of hydrogen peroxide, the lungs were pale and emphysematous. Following intraperitoneal injection of hydrogen peroxide in mice, pyknotic nuclei were induced in the intestine and thymus (IARC 1985). Degeneration of hepatic and renal tubular epithelial tissue was observed following oral administration of hydrogen peroxide to mice.
- ▶ Metabolism: Glutathione peroxidase, responsible for decomposing hydrogen peroxide, is present in normal human tissues (IARC 1985). When hydrogen peroxide comes in contact with catalase, an enzyme found in blood and most tissues, it rapidly decomposes into oxygen and water.
- ▶ Excretion: Hydrogen peroxide has been detected in human breath at levels ranging from 1.0+/-0.5 g/L to 0.34+/-0.17 g/L.

Carcinogenicity

Gastric and duodenal lesions including adenomas, carcinomas, and adenocarcinomas have been observed in mice treated orally with hydrogen peroxide.

Marked strain differences in the incidence of tumors have been observed. Papilloma development has been observed in mice treated by dermal application.

Genotoxicity

Hydrogen peroxide induced DNA damage, sister chromatid exchanges and chromosomal aberrations in mammalian cells *in vitro*. Hydrogen peroxide induced DNA damage in bacteria (*E. coli*), and was mutagenic to bacteria (*Salmonella typhimurium*) and the fungi, *Neurospora crassa* and *Aspergillus chevallieri*, but not to *Streptomyces griseoflavus*. It was not mutagenic to *Drosophila melanogaster* or to mammalian cells *in vitro*.

Developmental Toxicity

Malformations have been observed in chicken embryos treated with hydrogen peroxide, but experiments with mice and rats have been negative.

Female rats that received 0.45% hydrogen peroxide (equivalent to approximately 630 mg/kg/day)⁷ as the sole drinking fluid for five weeks produced normal litters when mated with untreated males.

Doses of 1.4 to 11 mol/egg hydrogen peroxide (purity 30%) dissolved in water were injected into the airspace of groups of 20-30 white leghorn chicken eggs on day 3 of incubation.

Embryos were examined on day 14. The incidence of embryonic deaths and malformations was dose-related and detected at doses of 2.8 mol/egg and above.

The combined ED₅₀ was 2.7 mol/egg.

Reproductive Toxicity

A 1% solution of hydrogen peroxide (equivalent to 1900 mg/kg/day) given as the sole drinking fluid to three-month-old male mice for 7-28 days did not cause infertility.

The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

| | | | |
|-----------------------------------|---|--------------------------|---|
| 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 required to make classification available
 ⊘ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION**12.1. Toxicity**

| Ingredient | Endpoint | Test Duration (hr) | Species | Value | Source |
|-------------------|----------|--------------------|-------------------------------|-----------|--------|
| hydrogen peroxide | LC50 | 96 | Fish | 0.020mg/L | 3 |
| hydrogen peroxide | EC50 | 3 | Algae or other aquatic plants | 0.27mg/L | 4 |
| hydrogen peroxide | EC50 | 48 | Crustacea | 2.32mg/L | 4 |
| hydrogen peroxide | EC50 | 72 | Algae or other aquatic plants | 0.71mg/L | 4 |
| hydrogen peroxide | NOEC | 192 | Fish | 0.028mg/L | 4 |

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - 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

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DO NOT discharge into sewer or waterways.

12.2. Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|-------------------|-------------------------|------------------|
| hydrogen peroxide | LOW | LOW |

12.3. Bioaccumulative potential

| Ingredient | Bioaccumulation |
|-------------------|-----------------------|
| hydrogen peroxide | LOW (LogKOW = -1.571) |

12.4. Mobility in soil

| Ingredient | Mobility |
|-------------------|------------------|
| hydrogen peroxide | LOW (KOC = 14.3) |

12.5. Results of PBT and vPvB assessment

| | P | B | T |
|-------------------------|---------------|---------------|---------------|
| Relevant available data | Not Available | Not Available | Not Available |
| PBT Criteria fulfilled? | Not Available | Not Available | Not Available |

12.6. Other adverse effects

No data available

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

| | |
|-------------------------------------|--|
| Product / Packaging disposal | Consult State Land Waste Management Authority for disposal. Bury residue in an authorised landfill. |
| Waste treatment options | Not Available |
| Sewage disposal options | Not Available |

SECTION 14 TRANSPORT INFORMATION

Labels Required

| | |
|-------------------------|----------------|
| Marine Pollutant | NO |
| HAZCHEM | Not Applicable |

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

| | | | | | | | | | | | |
|---|---|--------------------------------|----------------|---------------------|----------------|--------------|----------------|--------------------|----------------|------------------|----------------|
| 14.1. UN number | Not Applicable | | | | | | | | | | |
| 14.2. Packing group | Not Applicable | | | | | | | | | | |
| 14.3. UN proper shipping name | Not Applicable | | | | | | | | | | |
| 14.4. Environmental hazard | Not Applicable | | | | | | | | | | |
| 14.5. Transport hazard class(es) | <table border="0"> <tr> <td>Class</td> <td>Not Applicable</td> </tr> <tr> <td>Subrisk</td> <td>Not Applicable</td> </tr> </table> | Class | Not Applicable | Subrisk | Not Applicable | | | | | | |
| Class | Not Applicable | | | | | | | | | | |
| Subrisk | Not Applicable | | | | | | | | | | |
| 14.6. Special precautions for user | <table border="0"> <tr> <td>Hazard identification (Kemler)</td> <td>Not Applicable</td> </tr> <tr> <td>Classification code</td> <td>Not Applicable</td> </tr> <tr> <td>Hazard Label</td> <td>Not Applicable</td> </tr> <tr> <td>Special provisions</td> <td>Not Applicable</td> </tr> <tr> <td>Limited quantity</td> <td>Not Applicable</td> </tr> </table> | Hazard identification (Kemler) | Not Applicable | Classification code | Not Applicable | Hazard Label | Not Applicable | Special provisions | Not Applicable | Limited quantity | Not Applicable |
| Hazard identification (Kemler) | Not Applicable | | | | | | | | | | |
| Classification code | Not Applicable | | | | | | | | | | |
| Hazard Label | Not Applicable | | | | | | | | | | |
| Special provisions | Not Applicable | | | | | | | | | | |
| Limited quantity | Not Applicable | | | | | | | | | | |

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

| | | | | | | | |
|---|--|-----------------|----------------|---------------------|----------------|----------|----------------|
| 14.1. UN number | Not Applicable | | | | | | |
| 14.2. Packing group | Not Applicable | | | | | | |
| 14.3. UN proper shipping name | Not Applicable | | | | | | |
| 14.4. Environmental hazard | Not Applicable | | | | | | |
| 14.5. Transport hazard class(es) | <table border="0"> <tr> <td>ICAO/IATA Class</td> <td>Not Applicable</td> </tr> <tr> <td>ICAO / IATA Subrisk</td> <td>Not Applicable</td> </tr> <tr> <td>ERG Code</td> <td>Not Applicable</td> </tr> </table> | ICAO/IATA Class | Not Applicable | ICAO / IATA Subrisk | Not Applicable | ERG Code | Not Applicable |
| ICAO/IATA Class | Not Applicable | | | | | | |
| ICAO / IATA Subrisk | Not Applicable | | | | | | |
| ERG Code | Not Applicable | | | | | | |

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| | | |
|------------------------------------|---|----------------|
| 14.6. Special precautions for user | Special provisions | Not Applicable |
| | Cargo Only Packing Instructions | Not Applicable |
| | Cargo Only Maximum Qty / Pack | Not Applicable |
| | Passenger and Cargo Packing Instructions | Not Applicable |
| | Passenger and Cargo Maximum Qty / Pack | Not Applicable |
| | Passenger and Cargo Limited Quantity Packing Instructions | Not Applicable |
| | Passenger and Cargo Limited Maximum Qty / Pack | Not Applicable |

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

| | | |
|------------------------------------|--------------------|----------------|
| 14.1. UN number | Not Applicable | |
| 14.2. Packing group | Not Applicable | |
| 14.3. UN proper shipping name | Not Applicable | |
| 14.4. Environmental hazard | Not Applicable | |
| 14.5. Transport hazard class(es) | IMDG Class | Not Applicable |
| | IMDG Subrisk | Not Applicable |
| 14.6. Special precautions for user | EMS Number | Not Applicable |
| | Special provisions | Not Applicable |
| | Limited Quantities | Not Applicable |

Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

| | | |
|------------------------------------|---------------------|----------------|
| 14.1. UN number | Not Applicable | |
| 14.2. Packing group | Not Applicable | |
| 14.3. UN proper shipping name | Not Applicable | |
| 14.4. Environmental hazard | Not Applicable | |
| 14.5. Transport hazard class(es) | Not Applicable | Not Applicable |
| | | |
| 14.6. Special precautions for user | Classification code | Not Applicable |
| | Special provisions | Not Applicable |
| | Limited quantity | Not Applicable |
| | Equipment required | Not Applicable |
| | Fire cones number | Not Applicable |

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

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

HYDROGEN PEROXIDE(7722-84-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

UK Workplace Exposure Limits (WELs)

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Commission Regulation (EU) 2015/830, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

ECHA SUMMARY

| Ingredient | CAS number | Index No | ECHA Dossier |
|-------------------------------|-----------------------------------|--------------|--------------------------------|
| hydrogen peroxide | 7722-84-1 | 008-003-00-9 | 01-2119485845-22-XXXX |
| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | | Pictograms Signal Word Code(s) |
| | | | Hazard Statement Code(s) |

Continued...

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| | | | |
|---|--|---|--|
| 1 | Ox. Liq. 1, Acute Tox. 4, Skin Corr. 1A | GHS07, GHS05, GHS03, Dgr | H271, H302, H314, H332 |
| 2 | Ox. Liq. 1, Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1, STOT SE 3, Aquatic Chronic 3, Ox. Liq. 2, Acute Tox. 3, Flam. Liq. 2, Skin Corr. 1B, Acute Tox. 2, Met. Corr. 1, Aquatic Chronic 2, Not Classified, Skin Irrit. 2, Eye Irrit. 2 | GHS05, GHS03, Dgr, GHS02, GHS06, GHS09, Wng | H271, H314, H335, H318, H225, H301, H330, H290 |

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

| National Inventory | Status |
|-------------------------------|--|
| Australia - AICS | Y |
| Canada - DSL | Y |
| Canada - NDSL | N (hydrogen peroxide) |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | Y |
| Japan - ENCS | Y |
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |
| USA - TSCA | Y |
| Legend: | Y = All ingredients are on the inventory 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

Full text Risk and Hazard codes

| | |
|---------------|---|
| H225 | Highly flammable liquid and vapour. |
| H271 | May cause fire or explosion; strong oxidiser. |
| H290 | May be corrosive to metals. |
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| H330 | Fatal if inhaled. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| R20/22 | Harmful by inhalation and if swallowed. |
| R35 | Causes severe burns. |
| R5 | Heating may cause an explosion. |
| R8 | Contact with combustible material may cause fire. |

Other information

DSD / DPD label elements



Relevant risk statements are found in section 2.1

| | |
|--------------------------------|----|
| Indication(s) of danger | Xi |
|--------------------------------|----|

SAFETY ADVICE

| | |
|------------|--|
| S02 | Keep out of reach of children. |
| S23 | Do not breathe gas/fumes/vapour/spray. |
| S26 | In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre. |
| S35 | This material and its container must be disposed of in a safe way. |
| S39 | Wear eye/face protection. |
| S40 | To clean the floor and all objects contaminated by this material, use water. |
| S46 | If swallowed, seek medical advice immediately and show this container or label. |
| S56 | Dispose of this material and its container at hazardous or special waste collection point. |
| S64 | If swallowed, rinse mouth with water (only if the person is conscious). |

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by SDI Limited 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

Continued...

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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.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection

EN 340 Protective clothing

EN 374 Protective gloves against chemicals and micro-organisms

EN 13832 Footwear protecting against chemicals

EN 133 Respiratory protective devices

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

The information contained in the Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.

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