

## **SDI Limited**

Version No: 6.1

Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Issue Date: 23/12/2022 Print Date: 21/11/2023 L.GHS.NZL.EN

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

#### Product Identifier

Product name	Pola Night 10%
Chemical Name	Not Applicable
Synonyms	Not Available
Chemical formula	Not Applicable
Other means of identification	Not Available

#### 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.

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

Registered company name	SDI Limited	SDI (North America) Inc.	SDI HOLDINGS PTY LTD DO
Address	3-15 Brunsdon Street Bayswater VIC 3153 Australia	1279 Hamilton Parkway Itasca IL 60143 United States	Rua Dr. Reinaldo Schmithausen 3141 – Cordeiros Itajaí – SC – CEP 88310-004 Brazil
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Registered company name SDI Germany GmbH			
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Website	www.sdi.com.au		
Email	germany@sdi.com.au		

#### Emergency telephone number

Association / Organisation	SDI Limited	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone numbers	131126 Poisons Information Centre	+64 800 700 112
Other emergency telephone numbers	+61 3 8727 7111	+61 3 9573 3188

Once connected and if the message is not in your preferred language then please dial 01

#### **SECTION 2 Hazards identification**

Classification of the substance or mixture	
Classification <sup>[1]</sup> Skin Corrosion/Irritation Category 1C, Serious Eye Damage/Eye Irritation Category 1	
Legend:	1. Classification by vendor; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI
Determined by using GHS/HSNO criteria	8.2C, 8.3A

#### Label elements

Hazard pictogram(s)

Signal word Danger

H314	Causes severe skin burns and eye damage.
Precautionary statement(s) Pre	evention
P260	Do not breathe mist/vapours/spray.
P264	Wash all exposed external body areas thoroughly after handling.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
Precautionary statement(s) Re	sponse
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physician/first aider.
P363	Wash contaminated clothing before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Precautionary statement(s) Sto	orage
P405	Store locked up.
Precautionary statement(s) Dis	posa

## **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name	
124-43-6	10	urea hydrogen peroxide	
Not Available		equivalent to:	
7722-84-1	4 <u>hydrogen peroxide</u>		
Legend: 1. Classification by vendor; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available			

## **SECTION 4 First aid measures**

Description of first aid measures		
Eye Contact	<ul> <li>If this product comes in contact with the eyes:</li> <li>Wash out immediately with fresh running water.</li> <li>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.</li> <li>Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>	
Skin Contact	<ul> <li>If skin contact occurs:</li> <li>Immediately remove all contaminated clothing, including footwear.</li> <li>Flush skin and hair with running water (and soap if available).</li> <li>Seek medical attention in event of irritation.</li> </ul>	
Inhalation	<ul> <li>If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>Other measures are usually unnecessary.</li> </ul>	
Ingestion	<ul> <li>If swallowed do NOT induce vomiting.</li> <li>If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>Observe the patient carefully.</li> <li>Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>Seek medical advice.</li> </ul>	

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

Treat symptomatically.

## **SECTION 5 Firefighting measures**

## Extinguishing media

- Foam.
- Proam.
  Dry chemical powder.
  BCF (where regulations permit).
  Carbon dioxide.

- Water spray or fog Large fires only.

## Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
Advice for firefighters	
	Alart Fire Prigade and tall them leastion and nature of hazard

Fire Fighting	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>Prevent, by any means available, spillage from entering drains or water courses.</li> <li>Use fire fighting procedures suitable for surrounding area.</li> <li>DO NOT approach containers suspected to be hot.</li> <li>Cool fire exposed containers with water spray from a protected location.</li> <li>If safe to do so, remove containers from path of fire.</li> <li>Equipment should be thoroughly decontaminated after use.</li> </ul>
Fire/Explosion Hazard	<ul> <li>Non combustible.</li> <li>Not considered a significant fire risk, however containers may burn.</li> <li>Decomposition may produce toxic fumes of: nitrogen oxides (NOx)</li> <li>May emit poisonous fumes.</li> </ul>

## **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	<ul> <li>Clean up all spills immediately.</li> <li>Avoid contact with skin and eyes.</li> <li>Wear impervious gloves and safety goggles.</li> <li>Trowel up/scrape up.</li> <li>Place spilled material in clean, dry, sealed container.</li> <li>Flush spill area with water.</li> </ul>
Major Spills	<ul> <li>Minor hazard.</li> <li>Clear area of personnel.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Control personal contact with the substance, by using protective equipment as required.</li> <li>Prevent spillage from entering drains or water ways.</li> <li>Contain spill with sand, earth or vermiculite.</li> <li>Collect recoverable product into labelled containers for recycling.</li> <li>Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.</li> <li>Wash area and prevent runoff into drains or waterways.</li> <li>If contamination of drains or waterways occurs, advise emergency services.</li> </ul>

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

## SECTION 7 Handling and storage

Precautions for safe handling		
Safe handling	<ul> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Prevent concentration in hollows and sumps.</li> <li>DO NOT enter confined spaces until atmosphere has been checked.</li> <li>DO NOT allow material to contact humans, exposed food or food utensils.</li> <li>Avoid contact with incompatible materials.</li> <li>When handling, DO NOT eat, drink or smoke.</li> <li>Keep containers securely sealed when not in use.</li> <li>Avoid physical damage to containers.</li> <li>Always wash hands with soap and water after handling.</li> <li>Work clothes should be laundered separately. Launder contaminated clothing before re-use.</li> <li>Use good occupational work practice.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li> </ul>	
Other information	Store in a dry and well ventilated-area, away from heat and sunlight. <b>Do not</b> store in direct sunlight. Store between 2 and 25 deg C.	

## Conditions for safe storage, including any incompatibilities

Suitable container	DO NOT repack. Use containers supplied by manufacturer only.
Storage incompatibility	<ul> <li>Avoid storage with reducing agents.</li> <li>Avoid strong bases.</li> </ul>

## **SECTION 8 Exposure controls / personal protection**

## Occupational Exposure Limits (OEL)

Ingredient	Material name	TWA		STEL		Peak	Notes
hydrogen peroxide	Hydrogen peroxide	1 ppm / 1.4 mg/	/m3	Not Available	,	Not Available	Not Available
TEEL-1		TEEL-2			TEE	L-3	
1.2 mg/m3		13 mg/m3			79 n	ng/m3	
Not Available		Not Available			Not	Available	
Original IDI H			Povisor				
			Revised				
Not Available			Not Available				
75 ppm			Not Ava	ilable			
	hydrogen peroxide TEEL-1 1.2 mg/m3 Not Available Original IDLH Not Available	hydrogen peroxide Hydrogen peroxide TEEL-1 1.2 mg/m3 Not Available Original IDLH Not Available	hydrogen peroxide     Hydrogen peroxide     1 ppm / 1.4 mg/       TEEL-1     TEEL-2       1.2 mg/m3     13 mg/m3       Not Available     Not Available	hydrogen peroxide Hydrogen peroxide 1 ppm / 1.4 mg/m3          TEEL-1       TEEL-2         1.2 mg/m3       13 mg/m3         Not Available       Not Available         Original IDLH       Revised         Not Available       Not Available	hydrogen peroxide Hydrogen peroxide 1 ppm / 1.4 mg/m3 Not Available          TEEL-1       TEEL-2         1.2 mg/m3       13 mg/m3         Not Available       Not Available         Original IDLH       Revised IDLH         Not Available       Not Available	hydrogen peroxide Hydrogen peroxide 1 ppm / 1.4 mg/m3 Not Available          TEEL-1       TEEL-2       TEEL         1.2 mg/m3       13 mg/m3       79 m         Not Available       Not Available       Not         Original IDLH         Revised IDLH         Not Available       Not Available	hydrogen peroxide     Hydrogen peroxide     1 ppm / 1.4 mg/m3     Not Available     Not Available       TEEL-1     TEEL-2     TEEL-3       1.2 mg/m3     13 mg/m3     79 mg/m3       Not Available     Not Available     Not Available       Original IDLH     Revised IDLH       Not Available     Not Available

## Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
urea hydrogen peroxide	С	> 0.1 to $\leq$ milligrams per cubic meter of air (mg/m <sup>3</sup> )
Notes:		als into specific categories or bands based on a chemical's potency and the f this process is an occupational exposure band (OEB), which corresponds to a rker health.

## MATERIAL DATA

## Exposure controls

Eveneting controls are used to protection or place a barrier between the worker and the bacard. Well-designed engineering controls can be injuly effective interactions to provide this high level of protection. The basis types of engineering controls are: Process controls which involve changing the ways job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which heeps a selected hazard. "physicall," ways from the worker and ventilation that strategically "data's and "monocytaic due on align of a userelation in system must match the particular process and chemical or contaminant if designed poperty. The design of a ventilation system must match the particular process and chemical or contaminant if designed poperty. The design of a ventilation system must match the particular process and chemical or contaminant if designed poperty. The design of a ventilation system must match the particular process and chemical or contaminant if designed poperty. The design of a ventilation system must match the particular process and chemical or contaminant if designed poperty. The design of a ventilation is marehouse or obset darage areas. All contaminants generated in the workplexe posses varying 'tescape' velocities which, in turn, determine the 'capture velocities' of the difference of radia aritical poperties of a second in the contaminant. Type of Contaminants: across the contaminants generated at two velocities possess varying 'tescape' velocities which, in turn, determine the 'capture velocities' of the difference of radia aritical poperties of radia aritical popertis of radia aritical pop	Exposure controls			
measures, such as personal protective equipment       Image: Contract lenses with side shields.         Eye and face protection <ul> <li>Safety glasses with side shields.</li> <li>Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]</li> <li>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].</li></ul>	Appropriate engineering	be highly effective in protecting workers and will typically be i The basic types of engineering controls are: Process controls which involve changing the way a job activit Enclosure and/or isolation of emission source which keeps a "adds" and "removes" air in the work environment. Ventilation ventilation system must match the particular process and che Employers may need to use multiple types of controls to prev General exhaust is adequate under normal operating condition overexposure exists, wear approved respirator. Correct fit is of or closed storage areas. Air contaminants generated in the w velocities" of fresh circulating air required to effectively removed Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank (in aerosols, fumes from pouring operations, intermittent conta drift, plating acid fumes, pickling (released at low velocity ir direct spray, spray painting in shallow booths, drum filling, of generation into zone of rapid air motion) grinding, abrasive blasting, tumbling, high speed wheel genvery high rapid air motion). Within each range the appropriate value depends on: Lower end of the range 1: Room air currents minimal or favourable to capture 2: Contaminants of low toxicity or of nuisance value only. 3: Intermittent, low production. 4: Large hood or large air mass in motion Simple theory shows that air velocity falls rapidly with distance with the square of distance from the extraction point (in simpla accordingly, after reference to distance from the contaminatir 1-2 m/s (200-400 f/min) for extraction of solvents generated in producing performance deficits within the extraction apparatu	ndependent of worker interactions to provide this high level y or process is done to reduce the risk. selected hazard "physically" away from the worker and ven o can remove or dilute an air contaminant if designed proper senical or contaminant in use. rent employee overexposure. ons. Local exhaust ventilation may be required in specific cir assential to obtain adequate protection. Provide adequate v orkplace possess varying "escape" velocities which, in turn, re the contaminant. In still air). in still air). iner filling, low speed conveyer transfers, welding, spray to zone of active generation) conveyer loading, crusher dusts, gas discharge (active herated dusts (released at high initial velocity into zone of Upper end of the range 1: Disturbing room air currents 2: Contaminants of high toxicity 3: High production, heavy use 4: Small hood-local control only e away from the opening of a simple extraction pipe. Veloci e cases). Therefore the air speed at the extraction point sho g source. The air velocity at the extraction point. Other me	tilation that strategically ty. The design of a cumstances. If risk of entilation in warehouse , determine the "capture Air Speed: 0.25-0.5 m/s (50-100 f/min) 0.5-1 m/s (100-200 f/min.) 1-2.5 m/s (200-500 f/min.) 2.5-10 m/s (500-2000 f/min.)
<ul> <li>Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]</li> <li>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].</li> </ul>	measures, such as personal			
Skin protection See Hand protection below	Eye and face protection	<ul> <li>Chemical goggles. [AS/NZS 1337.1, EN166 or national e</li> <li>Contact lenses may pose a special hazard; soft contact l the wearing of lenses or restrictions on use, should be cr and adsorption for the class of chemicals in use and an their removal and suitable equipment should be readily a remove contact lens as soon as practicable. Lens should</li> </ul>	enses may absorb and concentrate irritants. A written policy eated for each workplace or task. This should include a revi account of injury experience. Medical and first-aid personnel vailable. In the event of chemical exposure, begin eye irriga be removed at the first signs of eye redness or irritation - le	iew of lens absorption I should be trained in tition immediately and ens should be removed in
	Skin protection	See Hand protection below		

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#### Pola Night 10%

Hands/feet protection	<ul> <li>Wear chemical protective gloves, e.g. PVC.</li> <li>Wear safety footwear or safety gumboots, e.g. Rubber</li> <li>Rubber Gloves</li> </ul>
Body protection	See Other protection below
Other protection	<ul> <li>Overalls.</li> <li>P.V.C apron.</li> <li>Barrier cream.</li> <li>Skin cleansing cream.</li> <li>Eye wash unit.</li> </ul>

#### **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)

#### **SECTION 9 Physical and chemical properties**

#### Information on basic physical and chemical properties

Appearance	Clear gel with spearmint odour; mixes with water.		
Physical state	Gel	Relative density (Water = 1)	1.1
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	5.9-6.9	Decomposition temperature (°C)	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 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	Miscible	pH as a solution (1%)	Not Available
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	The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation, of the material, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.
Ingestion	The material has <b>NOT</b> 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	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. Open cuts, abraded or irritated skin should not be exposed to this material				
Eye	is expected to produce significant ocular lesions which are animals. Repeated or prolonged eye contact may cause in	Limited evidence exists, or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals and/or is expected to 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	Long-term exposure to the product is not thought to produ models); nevertheless exposure by all routes should be m	ce chronic effects adverse to health (as classified by EC Directives using animal inimised as a matter of course.			
	ΤΟΧΙCΙΤΥ	IRRITATION			
Pola Night 10%	Not Available	Not Available			
	τοχιςιτγ	IRRITATION			
urea hydrogen peroxide	Dermal (rabbit) LD50: 700 mg/kg <sup>[1]</sup>	Eye: adverse effect observed (irreversible damage) <sup>[1]</sup>			
	Oral (Mouse) LD50; 11500 mg/kg <sup>[1]</sup>	Skin: adverse effect observed (irritating) <sup>[1]</sup>			
	тохісіту	IRRITATION			
	Dermal (rabbit) LD50: >2000 mg/kg <sup>[1]</sup>	Not Available			
hydrogen peroxide	Inhalation(Mouse) LC50; 2800 mg/L4h <sup>[2]</sup>				
	Oral (Rat) LD50: >225 mg/kg <sup>[2]</sup>				
Legend:	<ol> <li>Value obtained from Europe ECHA Registered Substar specified data extracted from RTECS - Register of Toxic I</li> </ol>	nces - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise Effect of chemical Substances			
	-				
UREA HYDROGEN PEROXIDE	No chronic human exposure data is available				
	For hydrogen peroxide: Hazard increases with peroxide concentration, high conce	entrations 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+/-.5 g/L to 0.34+/-0.17 g/L. Carcinogenicity

#### HYDROGEN PEROXIDE

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 Aspergillis 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.

No significant acute toxicological data identified in literature search.

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent UREA HYDROGEN PEROXIDE asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible & HYDROGEN PEROXIDE airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. 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. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×
			t available or does not fill the criteria for classification to make classification

## **SECTION 12 Ecological information**

#### Toxicity

Pola Night 10%	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48h	Crustacea	2mg/l	2
urea hydrogen peroxide	LC50	96h	Fish	37.4mg/l	2
	EC0(ECx)	24h	Crustacea	0.9mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.69mg/l	4
	EC50	48h	Crustacea	2mg/l	2
hydrogen peroxide	EC50	96h	Algae or other aquatic plants	2.27mg/l	4
	NOEC(ECx)	72h	Algae or other aquatic plants	0.1mg/l	1
	LC50	96h	Fish	16.4mg/l	2
Legend:			HA Registered Substances - Ecotoxicological Information Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioc		

#### DO NOT discharge into sewer or waterways.

#### Persistence and degradability

Ingredient	Persistence: Water/Soil Persistence: Air			
hydrogen peroxide	LOW LOW			
Bioaccumulative potential				
Ingredient	Bioaccumulation			
hydrogen peroxide	LOW (LogKOW = -1.571)			
Mobility in soil				
Ingredient	Mobility			
hydrogen peroxide	LOW (KOC = 14.3)			

## **SECTION 13 Disposal considerations**

#### Waste treatment methods

Product / Packaging disposal	Consult State Land Waste Management Authority for disposal. Bury residue in an authorised landfill.

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

## **Disposal Requirements**

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous. Only dispose to the environment if a tolerable exposure limit has been set for the substance.

Only deposit the hazardous substance into or onto a landfill or sewage facility or incinerator, where the hazardous substance can be handled and treated appropriately.

## **SECTION 14 Transport information**

Labels Required	
Marine Pollutant	NO
HAZCHEM	Not Applicable

#### 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

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

Not Applicable

#### 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
urea hydrogen peroxide	Not Available
hydrogen peroxide	Not Available

#### 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
urea hydrogen peroxide	Not Available
hydrogen peroxide	Not Available

#### **SECTION 15 Regulatory information**

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

This substance is to be managed using the conditions specified in an applicable Group Standard

HSR Number	Group Standard		
HSR002526	Cleaning Products Corrosive Group Standard 2020		
HSR002542	Construction Products Corrosive Group Standard 2020		
HSR002491	Additives Process Chemicals and Raw Materials Corrosive Group Standard 2020		
HSR002609	Metal Industry Products Corrosive Group Standard 2020		
HSR002618	N.O.S. Corrosive Group Standard 2020		
HSR002636	Photographic Chemicals Corrosive Group Standard 2020		
HSR002647	Reagent Kits Group Standard 2020		
HSR002648	Refining Catalysts Group Standard 2020		
HSR002658	Surface Coatings and Colourants Corrosive Group Standard 2020		
HSR002681	Water Treatment Chemicals Corrosive Group Standard 2020		
HSR100425	Pharmaceutical Active Ingredients Group Standard 2020		
HSR002598	Leather and Textile Products Corrosive Group Standard 2020		
HSR002547	Corrosion Inhibitors Corrosive Group Standard 2020		
HSR002552	Cosmetic Products Group Standard 2020		
HSR002555	Dental Products Corrosive Group Standard 2020		
HSR002562	Embalming Products Corrosive Group Standard 2020		
HSR002569	Fertilisers Corrosive Group Standard 2020		
HSR002575	Food Additives and Fragrance Materials Corrosive Group Standard 2020		
HSR002582	Fuel Additives Corrosive Group Standard 2020		
HSR002596	Laboratory Chemicals and Reagent Kits Group Standard 2020		
HSR100757	Veterinary Medicines Limited Pack Size Finished Dose Group Standard 2020		
HSR100758	Veterinary Medicines Non dispersive Closed System Application Group Standard 2020		
HSR100592	Agricultural Compounds Special Circumstances Group Standard 2020		
HSR100756	Active Ingredients for Use in the Manufacture of Agricultural Compounds Group Standard 2020		

Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

#### urea hydrogen peroxide is found on the following regulatory lists

New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

#### hydrogen peroxide is found on the following regulatory lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

#### Additional Regulatory Information

Not Applicable

#### Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Quantities
Not Applicable	Not Applicable

#### Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Not Appliable Not Appliable	Class of substance	Quantities
Not Applicable Not Applicable	Not Applicable	Not Applicable

Refer Group Standards for further information

#### Maximum quantities of certain hazardous substances permitted on passenger service vehicles

Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Gas (aggregate water capacity in mL)	Liquid (L)	Solid (kg)	Maximum quantity per package for each classification
8.2C	120	1	3	

#### **Tracking Requirements**

Not Applicable

#### **National Inventory Status**

National Inventory	Status		
Australia - AIIC / Australia Non-Industrial Use	Yes		
Canada - DSL	lo (urea hydrogen peroxide)		
Canada - NDSL	No (hydrogen peroxide)		
China - IECSC	Yes		
Europe - EINEC / ELINCS / NLP	Yes		
Japan - ENCS	No (urea hydrogen peroxide)		
Korea - KECI	Yes		
New Zealand - NZIoC	Yes		
Philippines - PICCS	Yes		
USA - TSCA	Yes		
Taiwan - TCSI	Yes		
Mexico - INSQ	No (urea hydrogen peroxide)		
Vietnam - NCI	Yes		
Russia - FBEPH	Yes		
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.		

#### **SECTION 16 Other information**

Revision Date	23/12/2022
Initial Date	22/01/2016

#### SDS Version Summary

Version	Date of Update	Sections Updated
5.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
6.1	23/12/2022	Classification review due to GHS Revision change.

#### Other information

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 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 L
- TEEL: Temporary Emergency Exposure Limit.
- ► IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
   OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level

end of SDS

- ▶ 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
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- AIIC: Australian Inventory of Industrial Chemicals
- Þ DSL: Domestic Substances List
- ٠ NDSL: Non-Domestic Substances List
- ۶
- IECSC: Inventory of Existing Chemical Substance in China EINECS: European INventory of Existing Commercial chemical Substances ۲
- ELINCS: European List of Notified Chemical Substances ۲ ۶
- NLP: No-Longer Polymers ENCS: Existing and New Chemical Substances Inventory ۲
- KECI: Korea Existing Chemicals Inventory ٠ ۲
- NZIOC: New Zealand Inventory of Chemicals PICCS: Philippine Inventory of Chemicals and Chemical Substances ۲
- TSCA: Toxic Substances Control Act ٠
- ۲ TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
   FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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.

#### Other information:

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