

premium washroom products

appy Washing Powder

	Chemwatch Hazard Alert Code: 3
Chemwatch: 26-1317 Version No: 5.1 Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements	Issue Date: 10/03/2023 Print Date: 14/07/2023 L.GHS.AUS.EN.E

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

Product Identifier	
Product name	Manningham Corporation
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	Heavy duty nappy washing powder especially for commercial use.
Relevant luentineu uses	neavy duty happy washing powder especially for commercial use

Details of the manufacturer or supplier of the safety data sheet

Registered company name	Manningham Corporation
Address	10 Ryeland Ct, North Geelong VIC 3215
Telephone	1300 634 600
Fax	
Website	www.provada.com.au
Email	info@manham.com.au

Emergency telephone number

Association / Organisation	Manningham Corporation
Emergency telephone numbers	1300 634 600
Other emergency telephone numbers	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Chemwatch Hazard Ratings

	Min	Max	
Flammability	0		
Toxicity	2		0 = Minimum
Body Contact	3		1 = Low
Reactivity	0		2 = Moderate
Chronic	3		3 = High 4 = Extreme

Poisons Schedule	S5
Classification ^[1]	Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity (Inhalation) Category 4, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Reproductive Toxicity Category 1B, Hazardous to the Aquatic Environment Long-Term Hazard Category 4
Legend:	1. Classified by Chernwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

Label elements



Hazard statement(s)

H302	Harmful if swallowed.	
H315	Causes skin irritation.	
H318	Causes serious eye damage.	
H332	Harmful if inhaled.	
H335	May cause respiratory irritation.	
H360Df	May damage the unborn child. Suspected of damaging fertility.	
H413	May cause long lasting harmful effects to aquatic life.	

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P261	Avoid breathing dust/fumes.
P264	Wash all exposed external body areas thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.

Precautionary statement(s) Response

P305+P351+P338	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.		
P308+P313	P313 IF exposed or concerned: Get medical advice/ attention.		
P310	P310 Immediately call a POISON CENTER/doctor/physician/first aider.		
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell.		
P302+P352	IF ON SKIN: Wash with plenty of water.		
P304+P340	+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.		
P330	Rinse mouth.		
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 to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
7647-14-5	30-60	sodium chloride
497-19-8	10-30	sodium carbonate
15120-21-5	10-30	sodium perborate monohydrate
7758-29-4	10-30	sodium tripolyphosphate
25155-30-0	<10	sodium dodecylbenzenesulfonate
Not Available	<1	optical brightener
Legend:	d: 1. Classified by Chernwatch; 2. Classification drawn from HCIS; 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	 If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with 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. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	 If skin contact occurs: 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	 If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. 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. Transport to hospital, or doctor, without delay.
Ingestion	 For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. 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 casuality can comfortably drink. Transport to hospital or doctor without delay.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known	
Advice for firefighters		
Fire Fighting	 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	 Non combustible. Not considered a significant fire risk, however containers may burn. Decomposition may produce toxic fumes of: carbon monoxide (CO) carbon dioxide (CO2) sulfur oxides (SOx) 	
HAZCHEM	Not Applicable	

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. Avoid contact with skin and eyes. Wear impervious gloves and safety glasses. Use dry clean up procedures and avoid generating dust. Vacuum up (consider explosion-proof machines designed to be grounded during storage and use). Do NOT use air hoses for cleaning Place spilled material in clean, dry, sealable, labelled container.

Nappy Washing Powder

Major Spills	 Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Control personal contact with the substance, by using protective equipment and dust respirator. Prevent spillage from entering drains, sewers or water courses. Recover product wherever possible. Avoid generating dust. Sweep / shovel up. If required, wet with water to prevent dusting. Put residues in labelled plastic bags or other containers for disposal. Wash area down with large quantity of water and prevent runoff into drains. 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

Safe handling	 Limit all unnecessary personal contact. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. 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. 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.
Other information	 Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container	 DO NOT use aluminium or galvanised containers Polyethylene or polypropylene container. Check all containers are clearly labelled and free from leaks.
Storage incompatibility	 In presence of moisture, the material is corrosive to aluminium, zinc and tin producing highly flammable hydrogen gas. Avoid strong acids, acid chlorides, acid anhydrides and chloroformates. Avoid contact with copper, aluminium and their alloys.

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2		TEEL-3
sodium chloride	0.5 ppm	2 ppm		20 ppm
sodium carbonate	7.6 mg/m3	83 mg/m3		500 mg/m3
sodium perborate monohydrate	8 mg/m3	88 mg/m3		530 mg/m3
sodium tripolyphosphate	0.61 mg/m3	6.8 mg/m3		620 mg/m3
sodium dodecylbenzenesulfonate	2.1 mg/m3	23 mg/m3		87 mg/m3
Ingredient	Original IDLH		Revised IDLH	
sodium chloride	Not Available		Not Available	
sodium carbonate	Not Available		Not Available	
sodium perborate monohydrate	Not Available		Not Available	
sodium tripolyphosphate	Not Available		Not Available	
sodium dodecylbenzenesulfonate	Not Available		Not Available	

Occupational Exposure Banding		
Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
sodium chloride	E	≤ 0.01 mg/m³
sodium carbonate	E	≤ 0.01 mg/m³
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a	

range of exposure concentrations that are expected to protect worker health.

Continued...

ngredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit	
sodium perborate monohydrate	E	≤ 0.01 mg/m³	
sodium tripolyphosphate	E	≤ 0.01 mg/m³	
sodium dodecylbenzenesulfonate	E	≤ 0.01 mg/m³	
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.		
MATERIAL DATA None assigned. Refer to individua (posure controls	l constituents.		
	be highly effective in protecting workers and will typically be i	ndependent of worker interactions to provide this high lever	or protection.
	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 essential to obtain adequate protection. Provide adequate very workplace possess varying "escape" velocities which, in turn remove the contaminant.	selected hazard "physically" away from the worker and ven a can remove or dilute an air contaminant if designed proper mical or contaminant in use. rent employee overexposure. ons. If risk of overexposure exists, wear SAA approved resp ntilation in warehouse or closed storage areas. Air contamir	rly. The design of a irator. Correct fit is nants generated in the
	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 condititi essential to obtain adequate protection. Provide adequate ve workplace possess varying "escape" velocities which, in turn	selected hazard "physically" away from the worker and ven a can remove or dilute an air contaminant if designed proper mical or contaminant in use. rent employee overexposure. ons. If risk of overexposure exists, wear SAA approved resp ntilation in warehouse or closed storage areas. Air contamir	rly. The design of a irator. Correct fit is nants generated in the
	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 essential to obtain adequate protection. Provide adequate very workplace possess varying "escape" velocities which, in turn remove the contaminant.	selected hazard "physically" away from the worker and ven a can remove or dilute an air contaminant if designed proper mical or contaminant in use. rent employee overexposure. ons. If risk of overexposure exists, wear SAA approved resp ntilation in warehouse or closed storage areas. Air contamir determine the "capture velocities" of fresh circulating air re	rly. The design of a irator. Correct fit is nants generated in the quired to effectively
	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 condititi essential to obtain adequate protection. Provide adequate ve workplace possess varying "escape" velocities which, in turn remove the contaminant. Type of Contaminant:	selected hazard "physically" away from the worker and ven a can remove or dilute an air contaminant if designed proper mical or contaminant in use. rent employee overexposure. ons. If risk of overexposure exists, wear SAA approved resp ntilation in warehouse or closed storage areas. Air contamir determine the "capture velocities" of fresh circulating air re- n still air) in still air)	rly. The design of a irator. Correct fit is nants generated in the quired to effectively Air Speed: 0.25-0.5 m/s
Appropriate engineering controls	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 essential to obtain adequate protection. Provide adequate very workplace possess varying "escape" velocities which, in turn remove the contaminant. Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank (ii aerosols, fumes from pouring operations, intermittent conta	selected hazard "physically" away from the worker and ven a can remove or dilute an air contaminant if designed proper mical or contaminant in use. rent employee overexposure. ons. If risk of overexposure exists, wear SAA approved resp ntilation in warehouse or closed storage areas. Air contamir determine the "capture velocities" of fresh circulating air re- n still air) iner filling, low speed conveyer transfers, welding, spray to zone of active generation)	rly. The design of a irator. Correct fit is nants generated in the quired to effectively Air Speed: 0.25-0.5 m/s (50-100 f/min) 0.5-1 m/s (100-200

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.

Individual protection measures, such as personal protective equipment

Eye and face protection

Safety glasses with side shields.

- Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]
- 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].

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
Body protection	See Other protection below
Other protection	 Overalls. P.V.C apron. Barrier cream. Skin cleansing cream. Eye wash unit.

Respiratory protection

Type -P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001,

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:

Nappy Washing Powder

Material	СРІ
NATURAL RUBBER	А
NITRILE	А
NATURAL+NEOPRENE	С

* 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.

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	-AUS / Class1 P2	-
up to 50	1000	-	-AUS / Class 1 P2
up to 50	5000	Airline *	-
up to 100	5000	-	-2 P2
up to 100	10000	-	-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)

 \cdot Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.

 The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).

 Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.

 Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.

Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)

Use approved positive flow mask if significant quantities of dust becomes airborne.
 Try to avoid creating dust conditions.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance White free flowing alkaline powder with faint odour of chlorine; soluble in water. Physical state Divided Solid Relative density (Water = 1) 2.2-2.6 Partition coefficient n-octanol Not Available Not Available Odour / water Odour threshold Not Available Auto-ignition temperature (°C) Not Applicable Decomposition pH (as supplied) Not Applicable Not Available temperature (°C) Melting point / freezing point >350 Viscosity (cSt) Not Applicable (°C) Initial boiling point and boiling Not Available Molecular weight (g/mol) Not Applicable range (°C) Not Available Flash point (°C) Not Applicable Taste Evaporation rate Not Applicable **Explosive properties** Not Available Flammability **Oxidising properties** Not Available Not Applicable Surface Tension (dyn/cm or Upper Explosive Limit (%) Not Applicable Not Applicable mN/m) Lower Explosive Limit (%) Not Applicable Volatile Component (%vol) Not Applicable Vapour pressure (kPa) Not Applicable Gas group Not Available Solubility in water Miscible pH as a solution (1%) 11.0-11.4 Vapour density (Air = 1) Not Applicable VOC g/L Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.

Page 7 of 12

Nappy Washing Powder

Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5
ECTION 11 Toxicological in	
Inhaled	Inhalation of dusts, generated by the material, during the course of normal handling, may be harmful. Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled. If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures. Symptoms of sodium carbonate inhalation may include coughing, sore throat, and laboured breathing. Severe or continued inhalation exposure may cause pulmonary oedema (lung damage).
Ingestion	Accidental ingestion of the material may be damaging to the health of the individual. Symptoms of borate poisoning include nausea, vomiting, diarrhoea, epigastric pain. These may be accompanied headache, weakness and a distinctive red skin rash. In severe cases there may be shock, increased heart rate and the skin may appear blue. Vomiting (which may be violent) is often persistent and vomitus and faeces may contain blood. Weakness, lethargy, headache, restlessness, tremors and intermittent convulsions may also occur. Poisoning produces central nervous system stimulation followed by depression, gastrointestinal disturbance (haemorrhagic gastro-enteritis), erythematous skin eruptions (giving rise to a boiled lobster appearance) and may also involve kidneys (producing oliguria, albuminuria, anuria) and, rarely, liver (hepatomegaly, jaundice). Toxic symptoms may be delayed for several hours.

with about half excreted in the first 12 hours and the remainder over 5-12 days. Borates are excreted primarily in the urine regardless of the route of administration.

The borates (tetra-, di-, meta, or ortho- salts, in contrast to perborates) once solubilised in the acid of gastric juices, cannot be distinguished from each other on chemical or toxicological grounds. In humans acute gastroenteric (or percutaneous absorption of as little as 1 gm of sodium borate can result in severe gastrointestinal irritation, kidney damage. In adults the mean lethal dose of sodium borate or boric acid probably exceeds 30 gms (Gosselin) and death occurs due to vascular collapse in the early stages or to central nervous system depression in later stages. Children are thought to be more susceptible to the effects of borate intoxication.

The material produces mild skin irritation; evidence exists, or practical experience predicts, that the material either

produces mild inflammation of the skin in a substantial number of individuals following direct contact, and/or

produces significant, but mild, 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. Open cuts, abraded or irritated skin should not be exposed to this material

Solution of material in moisture on the skin, or perspiration, may markedly increase skin corrosion and accelerate tissue destruction 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. Contact with concentrated solutions of sodium carbonate may cause tissue damage "soda ulcers"

 Eye
 It has either been demonstrated or it is expected that when the material is applied to the eye(s) of animals, it produces severe ocular lesions which are present twenty-four hours or more after instillation.

 510sodacarb
 Alkaline salts may be intensely irritating to the eyes and precautions should be taken to ensure direct eye contact is avoided.

Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. There is sufficient evidence to provide a strong presumption that human exposure to the material may result in developmental toxicity, generally on the basis of:

- clear results in appropriate animal studies where effects have been observed in the absence of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not secondary non-specific consequences of the other toxic effects. Exposure to the material may cause concerns for human fertility, generally on the basis that results in animal studies provide sufficient evidence

Chronic to cause a strong suspicion of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects, but which are not a secondary non-specific consequence of other toxic effects.

Long term exposure to high dust concentrations may cause changes in lung function (i.e. pneumoconiosis) caused by particles less than 0.5 micron penetrating and remaining in the lung. A prime symptom is breathlessness. Lung shadows show on X-ray. Chronic severe inhalation exposure to sodium carbonate may result in perforation of the nasal septum and serious pulmonary oedema (lung damage).

Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.

Nappy Washing Powder	ΤΟΧΙΟΙΤΥ	IRRITATION
	Not Available	Not Available
	ΤΟΧΙCITY	IRRITATION
sodium chloride	Dermal (rabbit) LD50: >10000 mg/kg ^[1]	Eye (rabbit): 10 mg - moderate
	Inhalation(Rat) LC50: >10.5 mg/l4h ^[1]	Eye (rabbit):100 mg/24h - moderate
	Oral (Rat) LD50: 3000 mg/kg ^[2]	Skin (rabbit): 500 mg/24h - mild

sodium carbonate	dermal (rat) LD50: >2000 mg/kg ^[2]	Eye (rabbit): 100 mg/24h moderate	
	Oral (Rat) LD50: 2800 mg/kg ^[2]	Eye (rabbit): 100 mg/30s mild	
		Eye (rabbit): 50 mg SEVERE	
		Eye: adverse effect observed (irritating) ^[1]	
		Skin (rabbit): 500 mg/24h mild	
		Skin: no adverse effect observed (not irritating) ^[1]	
sodium perborate	ΤΟΧΙΟΙΤΥ	IRRITATION	
monohydrate	Oral (Mouse) LD50; 2000 mg/kg ^[2]	Eye(rabbit): 50 mg - moderate	
	ΤΟΧΙΟΙΤΥ	IRRITATION	
	Dermal (rabbit) LD50: >3160 mg/kg ^[2]	Not Available	
sodium tripolyphosphate	Inhalation(Rat) LC50: >0.39 mg/l4h ^[1]		
	Oral (Rat) LD50: >2000 mg/kg ^[1]		
	ΤΟΧΙCΙΤΥ	IRRITATION	
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye (rabbit): 0.25 mg/24hr-SEVERE	
	Inhalation(Rat) LC50: 0.31 mg/L4h ^[1]	Eye (rabbit): 1% - SEVERE	
sodium	Oral (Rat) LD50: 438 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]	
dodecylbenzenesulfonate		Skin (rabbit): 20 mg/24 hr-SEVERE	
		Skin: adverse effect observed (corrosive) ^[1]	
		Skin: no adverse effect observed (not irritating) ^[1]	
		okini no davoloo oneol observed (net initaling)	
SODIUM CARBONATE	the respiratory tract is also possible. No valid animal data are available on repeated dose toxicity studies by oral, dermal, inhalation or by other routes for sodium carbonate. A repeated dose inhalation study, which was not reported in sufficient detail, revealed local effects on the lungs which could be expected based on the alkaline nature of the compound. Under normal handling and use conditions neither the concentration of sodium in the blood nor the pH of the blood will be increased and therefore sodium carbonate is not expected to be systemically available in the body. It can be stated that the substance will neither reach the foetus nor reach male and female reproductive organs, which shows that there is no risk for developmental		
	toxicity and no risk for toxicity to reproduction. This was confirmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> mutagenicity test with bacteria was negative and based on the structure of sodium carbonate no genotoxic effects are expected * data is for the tetrahydrate		
	mutagenicity test with bacteria was negative and based on t	firmed by a developmental study with rabbits, rats and mice. An in vitro	
	mutagenicity test with bacteria was negative and based on t	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected.	
	mutagenicity test with bacteria was negative and based on t - * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected.	
SODIUM PERBORATE	mutagenicity test with bacteria was negative and based on t - * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aeroc harmful by inhalation".	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected.	
SODIUM PERBORATE MONOHYDRATE	mutagenicity test with bacteria was negative and based on t - * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aeroc harmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aero	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. prms) dynamic diameter of below 50 um- Index No: 005-018-00-2 - are classified as "not	
	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. prms) dynamic diameter of below 50 um- Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as	
	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by ingestion" 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. orms) dynamic diameter of below 50 um - Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No 005-017-00-7 - classified as "harmful	
	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by ingestion" 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. prms) dynamic diameter of below 50 um- Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as	
	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful scontaining >=0.1 % (w/w) of particles with an aerocharmful by ingestion" Materials containing <0.1 % (w/w) of particles with an aerocharmful scontaining >= 0.1 % (w/w) of particles with an aerocharmful by ingestion" 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. orms) dynamic diameter of below 50 um - Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No 005-017-00-7 - classified as "harmful	
	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by ingestion" Materials containing <0.1 % (w/w) of particles with an aerocharmful by ingestion" Linear alkylbenzene sulfonates (LAS) are classified as Irritar damage to eyes) according to CESIO (CESIO 2000). LAS a 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. orms) dynamic diameter of below 50 um - Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No 005-017-00-7 - classified as "harmful odynamic diameter of below 50 um - Index No 005-017-00-7 - classified as "harmful	
	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerocharmful by ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerocharmful by ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerocharmful by ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerocharmful by ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerocharmful by ingestion and "toxic by inhalation". Linear alkylbenzene sulfonates (LAS) are classified as Irritanted to the substanted by interval by indexisting substanted by ind	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. brms) dynamic diameter of below 50 um- Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No 005-017-00-7 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-00-7 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-61-4 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-61-61-61 t (Xi) with the risk phrases R38 (Irritating to skin) and R41 (Risk of serious re not included in Annex 1 of list of dangerous substances of Council Directive	
	 mutagenicity test with bacteria was negative and based on t -* data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion" Linear alkylbenzene sulfonates (LAS) are classified as Irritar damage to eyes) according to CESIO 2000). LAS a 67/548/EEC. Linear alkylbenzene sulfonic acids (LABS) are strong acids branched materials exhibit comparable toxicity to linear specified. 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. prms) dynamic diameter of below 50 um - Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No 005-017-00-7 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as classified as corrosive (R34) classified as corrosive (R34)	
	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerocharmful by ingestion" Linear alkylbenzene sulfonates (LAS) are classified as Irritar damage to eyes) according to CESIO (CESIO 2000). LAS a 67/548/EEC. Linear alkylbenzene sulfonic acids (LABS) are strong acids to Branched materials exhibit comparable toxicity to linear spec Acute toxicity: The available data indicate minimal to mode 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. prms) dynamic diameter of below 50 um - Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No 005-017-00-7 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful hodynamic diameter of below 50 um - Index No 005-017-01-4 - classified as classified as corrosive (R34) classified as corrosive (R34)	
	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerochy ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion" Linear alkylbenzene sulfonates (LAS) are classified as Irritar damage to eyes) according to CESIO (CESIO 2000). LAS a 67/548/EEC. Linear alkylbenzene sulfonic acids (LABS) are strong acids beranched materials exhibit comparable toxicity to linear spectrum and the acute inhalation data also indicate a lack of significant toxicit. LAS are readily absorbed by the gastrointestinal tract after comparable toxices and the acute inhalation and the acute inhalation data also indicate a lack of significant toxicit. 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. brms) dynamic diameter of below 50 um- Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No: 005-017-00-7 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-00-7 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful ht (Xi) with the risk phrases R38 (Irritating to skin) and R41 (Risk of serious re not included in Annex 1 of list of dangerous substances of Council Directive (pKa<2) are classified as corrosive (R34) cies. prate toxicity, with LD50 values ranging from 500 to 2000 mg/kg body weight (bw). ty.Available dermal exposure data also shows a lack of significant toxicity. pral administration in animals. LAS are not readily absorbed through the skin . The	
	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion and "toxic by inhalation". Linear alkylbenzene sulfonates (LAS) are classified as Irritan damage to eyes) according to CESIO (CESIO 2000). LAS a 67/548/EEC. Linear alkylbenzene sulfonic acids (LABS) are strong acids of Branched materials exhibit comparable toxicity to linear specence and the alasto indicate a lack of significant toxicit LAS are readily absorbed by the gastrointestinal tract after or bulk is metabolised in the liver to sulfophenylic carboxyl acid. 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. prms) dynamic diameter of below 50 um- Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No: 005-017-00-7 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bedynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "h	
MONOHYDRATE	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion" and "toxic by inhalation". Linear alkylbenzene sulfonates (LAS) are classified as Irritar damage to eyes) according to CESIO (CESIO 2000). LAS a 67/548/EEC. Linear alkylbenzene sulfonic acids (LABS) are strong acids of Branched materials exhibit comparable toxicity to linear spece Acute toxicity: The available data indicate minimal to mode Acute inhalation data also indicate a lack of significant toxici LAS are readily absorbed by the gastrointestinal tract after could bulk is metabolised in the liver to sulfophenylic carboxyl acid urinary metabolites in rats are sulfophenyl butanoic acid and been established in any organ after repeated oral ingestion. 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. prms) dynamic diameter of below 50 um - Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No: 005-017-01-X -are classified as "harmful odynamic diameter of below 50 um - Index No: 005-017-01-4 - classified as "harmful not included in Annex 1 of list of dangerous substances of Council Directive (pKa<2) are classified as corrosive (R34) cies. arate toxicity, with LD50 values ranging from 500 to 2000 mg/kg body weight (bw). ty.Available dermal exposure data also shows a lack of significant toxicity. by The metabolites are excreted primarily via the urine and faeces. The main is sulfophenyl pentanoic acid. Accumulation of LAS or its main metabolites has not	
	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion and "toxic by inhalation". Linear alkylbenzene sulfonates (LAS) are classified as Irritar damage to eyes) according to CESIO (CESIO 2000). LAS a 67/548/EEC. Linear alkylbenzene sulfonic acids (LABS) are strong acids to Branched materials exhibit comparable toxicity to linear specificant toxicit LAS are readily absorbed by the gastrointestinal tract after could his metabolised in the liver to sulfophenylic carboxyl acid urinary metabolites in rats are sulfophenyl butanoic acid and been established in any organ after repeated oral ingestion. No serious injuries or fatalities in man have been reported for 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. prms) dynamic diameter of below 50 um- Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as "harmful odynamic diameter of below 50 um - Index No: 005-017-00-7 - classified as "harmful odynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful not (Xi) with the risk phrases R38 (Irritating to skin) and R41 (Risk of serious re not included in Annex 1 of list of dangerous substances of Council Directive (pKa<2) are classified as corrosive (R34) cies. erate toxicity, with LD50 values ranging from 500 to 2000 mg/kg body weight (bw). ty.Available dermal exposure data also shows a lack of significant toxicity. oral administration in animals. LAS are not readily absorbed through the skin . The test below in a sulfophenyl pentanoic acid. Accumulation of LAS or its main metabolites has not pollowing accidental ingestion of LAS-containing detergent. The main clinical signs	
SODIUM	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerochy ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion" Linear alkylbenzene sulfonates (LAS) are classified as Irritar damage to eyes) according to CESIO (CESIO 2000). LAS a 67/548/EEC. Linear alkylbenzene sulfonic acids (LABS) are strong acids beranched materials exhibit comparable toxicity to linear specence inhalation data also indicate a lack of significant toxicit. LAS are readily absorbed by the gastrointestinal tract after or bulk is metabolites in rats are sulfophenylic carboxyl acid urinary metabolites in rats are sulfophenyl carboxyl acid urinary metabolites in rats are sulfophenyl carboxyl acid urinary metabolites in any organ after repeated oral ingestion. No serious injuries or fatalities in man have been reported for observed after oral administration to rats of doses near or gr weakness etc. Death usually occurred within 24 hours of additionation and the management of additionation acids of additionation and the additionation acids of additionation and the management of additionation and the additionation acid and been reported of a factor or additionation acids of additionation acids	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. prms) dynamic diameter of below 50 um- Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as "harmful odynamic diameter of below 50 um - Index No: 005-017-00-7 - classified as "harmful odynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful odynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful odynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful nt (Xi) with the risk phrases R38 (Irritating to skin) and R41 (Risk of serious re not included in Annex 1 of list of dangerous substances of Council Directive (pKa-2) are classified as corrosive (R34) cies. erate toxicity, with LD50 values ranging from 500 to 2000 mg/kg body weight (bw). ty.Available dermal exposure data also shows a lack of significant toxicity. roral administration in animals. LAS are not readily absorbed through the skin . The test. The metabolites are excreted primarily via the urine and faeces. The main disulfophenyl pentanoic acid. Accumulation of LAS or its main metabolites has not pollowing accidental ingestion of LAS-containing detergent. The main clinical signs reater than the LD50 values consisted of reduced voluntary activity, diarrhoea, ministration. Rats appear to be more sensitive to LAS than mice.	
SODIUM	 mutagenicity test with bacteria was negative and based on t -* data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion and "toxic by inhalation". Linear alkylbenzene sulfonates (LAS) are classified as Irritar damage to eyes) according to CESIO (CESIO 2000). LAS a 67/548/EEC. Linear alkylbenzene sulfonic acids (LABS) are strong acids of Branched materials exhibit comparable toxicity to linear spectence of the sulfact and indicate minimal to mode Acute inhalation data also indicate a lack of significant toxici LAS are readily absorbed by the gastrointestinal tract after cobulk is metabolised in the liver to sulfophenylic carboxyl acic urinary metabolites in rats are sulfophenyl butanoic acid and been established in any organ after repeated oral ingestion. No serious injuries or fatalities in man have been reported for observed after oral administration to rats of doses near or graveakness etc. Death usually occurred within 24 hours of add LAS and branched alkylbenzene sulfonates may cause irritation to rats of doses near or graveakness etc. 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. prms) dynamic diameter of below 50 um - Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No: 005-017-00-7 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-00-7 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful htt (Xi) with the risk phrases R38 (Irritating to skin) and R41 (Risk of serious re not included in Annex 1 of list of dangerous substances of Council Directive (pKa<2) are classified as corrosive (R34) cies. arate toxicity, with LD50 values ranging from 500 to 2000 mg/kg body weight (bw). ty.Available dermal exposure data also shows a lack of significant toxicity. ty.Available dermal exposure data also shows a lack of significant toxicity. ty.Available dermal exposure data also shows a lack of significant toxicity. the sulfophenyl pentanoic acid. Accumulation of LAS or its main metabolites has not blowing accidental ingestion of LAS-containing detergent. The main clinical signs reater than the LD50 values consisted of reduced voluntary activity, diarrhoea, ministration. Rats appear to be more sensitive to LAS tan mice. tion of the eyes, skin and mucous membranes. LAS are relatively more irritating to	
SODIUM	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion and "toxic by inhalation". Linear alkylbenzene sulfonates (LAS) are classified as Irritar damage to eyes) according to CESIO (CESIO 2000). LAS a 67/548/EEC. Linear alkylbenzene sulfonic acids (LABS) are strong acids of Branched materials exhibit comparable toxicity to linear spece Acute toxicity: The available data indicate minimal to mode Acute inhalation data also indicate a lack of significant toxici LAS are readily absorbed by the gastrointestinal tract after or bulk is metabolised in the liver to sulfophenylic carboxyl acid urinary metabolites in rats are sulfophenyl butanoic acid and been established in any organ after repeated oral ingestion. No serious injuries or fatalities in man have been reported for observed after oral administration to rats of doses near or graveakness etc. Death usually occurred within 24 hours of addit LAS and branched alkylbenzene sulfonates may cause irritatin the skin than the corresponding branched alkylbenzene sulfonates may cause irritating the skin than the corresponding branched alkylbenzene sulfonates may cause irritating the skin than the corresponding branched alkylbenzene sulfonates may cause irri	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. prms) dynamic diameter of below 50 um - Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No: 005-017-00-7 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful ht (Xi) with the risk phrases R38 (Irritating to skin) and R41 (Risk of serious re not included in Annex 1 of list of dangerous substances of Council Directive (pKa<2) are classified as corrosive (R34) cies. erate toxicity, with LD50 values ranging from 500 to 2000 mg/kg body weight (bw). ty.Available dermal exposure data also shows a lack of significant toxicity. val administration in animals. LAS are not readily absorbed through the skin . The ts. The metabolites are excreted primarily via the urine and faeces. The main d sulfophenyl pentanoic acid. Accumulation of LAS or its main metabolites has not pllowing accidental ingestion of LAS-containing detergent. The main clinical signs reater than the LD50 values consisted of reduced voluntary activity, diarrhoea, ministration. Rats appear to be more sensitive to LAS than mice.	
SODIUM	 mutagenicity test with bacteria was negative and based on t * data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerochy ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion and "toxic by inhalation". Linear alkylbenzene sulfonates (LAS) are classified as Irritard damage to eyes) according to CESIO (CESIO 2000). LAS a 67/548/EEC. Linear alkylbenzene sulfonic acids (LABS) are strong acids of Branched materials exhibit comparable toxicity to linear spectra Acute toxicity: The available data indicate minimal to mode Acute inhalation data also indicate a lack of significant toxici LAS are readily absorbed by the gastrointestinal tract after or bulk is metabolised in the liver to sulfophenylic carboxyl acid urinary metabolites in rats are sulfophenyl butanoic acid and been established in any organ after repeated oral ingestion. No serious injuries or fatalities in man have been reported for observed after oral administration to rats of doses near or gr weakness etc. Death usually occurred within 24 hours of ad LAS and branched alkylbenzene sulfonates may cause irrita the skin than the corresponding branched alkylbenzene sulfor sin at comowith solution of up to 1% LAS for 24 hours resulting in only r 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. prms) dynamic diameter of below 50 um - Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as "harmful bynamic diameter of below 50 um - Index No: 005-017-00-7 - classified as "harmful ynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful dynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful nt (Xi) with the risk phrases R38 (Irritating to skin) and R41 (Risk of serious re not included in Annex 1 of list of dangerous substances of Council Directive (pKa<2) are classified as corrosive (R34) cies. arate toxicity, with LD50 values ranging from 500 to 2000 mg/kg body weight (bw). ty.Available dermal exposure data also shows a lack of significant toxicity. oral administration in animals. LAS are not readily absorbed through the skin . The is. The metabolites are excreted primarily via the urine and faeces. The main d sulfophenyl pentanoic acid. Accumulation of LAS or its main metabolites has not pllowing accidental ingestion of LAS-containing detergent. The main clinical signs reater than the LD50 values consisted of reduced voluntary activity, diarrhoea, ministration. Rats appear to be more sensitive to LAS than mice. tion of the eyes, skin and mucous membranes. LAS are relatively more irritating te onates. The potential of LAS to irritate the skin depends on the concentration	
SODIUM	 mutagenicity test with bacteria was negative and based on t -* data is for the tetrahydrate NOTE: for sodium perborate monohydrate (an unhydrated for Materials containing < 0,1 % (w/w) of particles with an aerocharmful by inhalation". Materials containing >=0,1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing <0.1 % (w/w) of particles with an aerocharmful by inhalation. for sodium perborate tri- and tetra-hydrates Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion" Materials containing >= 0.1 % (w/w) of particles with an aerochy ingestion and "toxic by inhalation". Linear alkylbenzene sulfonates (LAS) are classified as Irritar damage to eyes) according to CESIO (CESIO 2000). LAS a 67/548/EEC. Linear alkylbenzene sulfonic acids (LABS) are strong acids of Branched materials exhibit comparable toxicity to linear spectence of the toxicity: The available data indicate minimal to mode Acute inhalation data also indicate a lack of significant toxici LAS are readily absorbed by the gastrointestinal tract after cobulk is metabolised in the liver to sulfophenylic carboxyl acid urinary metabolites in rats are sulfophenyl butanoic acid and been established in any organ after repeated oral ingestion. No serious injuries or fatalities in man have been reported for observed after oral administration to rats of doses near or graveakness etc. Death usually occurred within 24 hours of add LAS and branched alkylbenzene sulfonates may cause irritating to skin at comit with solution of up to 1% LAS for 24 hours resulting in only reconcentration of < 0.1% LAS produced mild to no irritation. Skin sensitization was not seen in 2,294 volunteers exposed 	firmed by a developmental study with rabbits, rats and mice. An <i>in vitro</i> he structure of sodium carbonate no genotoxic effects are expected. prms) dynamic diameter of below 50 um- Index No: 005-018-00-2 - are classified as "not dynamic diameter of below 50 um - Index No: 005-018-01-X -are classified as ynamic diameter of below 50 um - Index No: 005-017-00-7 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-00-7 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful bdynamic diameter of below 50 um - Index No 005-017-01-4 - classified as "harmful ht (Xi) with the risk phrases R38 (Irritating to skin) and R41 (Risk of serious re not included in Annex 1 of list of dangerous substances of Council Directive (pKa<2) are classified as corrosive (R34) cies. brate toxicity, with LD50 values ranging from 500 to 2000 mg/kg body weight (bw). ty.Available dermal exposure data also shows a lack of significant toxicity. yral administration in animals. LAS are not readily absorbed through the skin . The ts. The metabolites are excreted primarily via the urine and faeces. The main d sulfophenyl pentanoic acid. Accumulation of LAS or its main metabolites has not plowing accidental ingestion of LAS-containing detergent. The main clinical signs reater than the LD50 values consisted of reduced voluntary activity, diarrhoea, ministration. Rats appear to be more sensitive to LAS than mice. tion of the eyes, skin and mucous membranes. LAS are relatively more irritation to contates. The potential of LAS to irritate the skin depends on the concentration centrations above 20% according to EU-criteria. Human skin can tolerate contact mild irritation. Application of > 5% LAS to the eyes of rabbits produced irritation.	

produced no adverse effects on growth, health or feed efficiency. Genotoxicity: The mutagenic potential of LAS was tested using Salmonella typhimurium strains, using Ames test. In these studies, LAS was

Skin Irritation/Corrosion Serious Eye Damage/Irritation Respiratory or Skin sensitisation Mutagenicity	× × ×	STOT - Single Exposure STOT - Repeated Exposure Aspiration Hazard	✓ × ×	
Skin Irritation/Corrosion Serious Eye Damage/Irritation	✓			
Skin Irritation/Corrosion		STOT - Sinale Exposure	¥	
-		Reproductivity	*	
Acute IOXICITV	× •	Carcinogenicity Reproductivity	~	
Acute Toxicity	spongy layer (spongiosis) and intracellular oedema		×	
SODIUM CHLORIDE & SODIUM CARBONATE	The material may cause skin irritation after prolonge dermatitis is often characterised by skin redness (er	rythema) and swelling epidermis. Hist	, , ,	
SODIUM CHLORIDE & SODIUM PERBORATE MONOHYDRATE	The material may produce moderate eye irritation le conjunctivitis.	eading to inflammation. Repeated or p	rolonged exposure to irritants may produce	
SODIUM CHLORIDE & SODIUM CARBONATE & SODIUM PERBORATE MONOHYDRATE & SODIUM TRIPOLYPHOSPHATE & SODIUM SODIUM DODECYLBENZENESULFONATE	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 asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible 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.			
	naphthalenesulfonic acids . In a US EPA final rule for naphthalene ring may provide a handle by which the	or SANS, it was stated that "the 1- or 2 ese compounds can be readily conjug	2-sulfonic acid sodium salt moieties on the ated and eliminated."	
	was reported as 240 mg/kg bw/day for rats and 727 Elimination:	' mg/kg bw/day for mice.	sulfonate cluster (SANS), a group of sodium salts of	
	conducted under GLP. Up to 240 mg (rats) and 727	mg (mice) sodium xylenesulfonate/kg ed incidences of mononuclear cell leu	body weight in 50% ethanol were dosed 5 days per kenia, neoplasms, or nonneoplatic lesions of the skin	
	Disulfonic acids have not been the subject of conce Carcinogenicity:		dies involve 2-year rat and mouse dermal exposures	
	hydrotropes – sodium cumene sulfonate (CAS 2834 Guideline mouse micronucleus studies with full doc assays.	48-53-0) and calcium xylene sulfonate		
	Exposures up to 10,000 micrograms/plate were dor p-toluenesulphonic acid; that is, not mutagenic and	ne with and without metabolic activation not cytotoxic.		
	Aberration Test for one of the aromatic sulphonic ac without metabolic activation. The Ames test expose micrograms per liter of the test substance. These st	d up to 5000 micrograms/plate and th tudies conclude the substance is neith	e chromosome aberration test exposed up to 1902 er mutagenic norcytotoxic.	
	kilogram body weight per day. The conclusion of the Genetic toxicity: There is a fully documented, GLP Guideline (OECD	9 471) Ames Test and a fully documen	ted, GLP Guideline (OECD 473) Chromosome	
	as read-across for this endpoint. The 90-day oral rat and oral mouse studies and the 2-year chronic dermal rat and mouse studies with the closely related compound sodium xylene sulfonate (CAS No. 1300-72-7) included examination of sex organs of both sexes. No treatment related effects on reproductive organs were reported at doses roughly equivalent to those in the developmental toxicity study. he NOAEL for both maternal and foetal toxicity was the highest dose tested - 3000 mg/kg bw /day which is equivalent to 936 mg active ingredient per			
	that looked at reproductive organs and developmen	t of offspring. Hydrotropes are the sal	ies for the chemically related hydrotrope substances t form of the sulphonic acids and therefore are used	
	500 mg/kg bw/day.		erse effects to male and female rats exposed orally % active ingredient). Therefore the NOAEL was set at	
	by topical challenge. Repeat dose toxicity:			
		th toluene-4-sulphonic acid (CAS No.	tested animals showed positive responses in a, well 104-15-4). The test substance can be considered a combined intradernal and topical induction followed	
	 4-sulphonic acid (as handled in manufacturing plant skin. Sensitisation: 	ts; i.e., a 65% aqueous solution with <	: 5% free sulphuric acid) is an irritant to the eye and	
	repeated dose oral study. Health records from industrial manufacturing expos	ure, including manufacturing plant bo	ok of injuries and a physician report, show toluene-	
	2001. Torben Madsen et al: Miljoministeriet (Danish For aromatic sulfonic acids Aromatic sulfonic acids are very corrosive as was d		studies, in the acute oral studies, and in the single	
		ces in Household Detergents and Cos	b LAS exposure have been observed. metic Detergent Products, Environment Project, 615,	
			as been seen, although dosages causing maternal	

X − Data either not available or does not fill the criteria for classification
→ − Data available to make classification

SECTION 12 Ecological information

Toxicity

Nappy Washing Powder

Endpoint Test Duration (hr)

Species

Value Source

	Not Available	Not Available		Not Available		Not Available	Not Availabl
	Endpoint	Test Duration (hr)	S	pecies	Value		Sourc
	EC50	72h	A	Algae or other aquatic plants 20.76-36.2		6.17mg/L	4
	EC50	48h	Crustacea 0.00439-0.005		-0.00565mg/l	4	
sodium chloride	EC50	96h	A	Algae or other aquatic plants 1110.36mg/L		4	
	LC50	96h	Fi	Fish 1000mg/l		4	
	NOEC(ECx)	6h	Fi	sh	0.001mç	g/l	4
	Endpoint	Test Duration (hr)		Species	Val	ue	Sourc
	EC50	72h		Algae or other aquatic plants	>80	00mg/l	2
	EC50	48h		Crustacea	156	6.6-298.9mg/l	4
sodium carbonate	EC50	96h		Algae or other aquatic plants	242	2mg/l	4
	NOEC(ECx)	48h		Fish	0.0	106mg/l	4
	LC50	96h		Fish	300)mg/l	4
sodium perborate	Endpoint	Test Duration (hr)		Species	Va	alue	Sourc
	EC50	48h		Crustacea 4.57-10.68mg/l		4	
	EC50(ECx)	48h		Crustacea 4.57-10.68mg/l		4	
	EC50	72h		Algae or other aquatic plants 3.3mg/l		2	
	EC50	48h		Crustacea 11mg/l		1	
monohydrate	EC50	96h	Algae or other aquatic plants 18mg/l		1		
	LC50	96h	Fish 51mg/l		2		
	NOEC(ECx)	48h	Crustacea 8mg/I		1		
	EC50	48h		Crustacea 4.57-10.68mg/l		4	
	EC50(ECx)	48h		Crustacea 4.57-10.68mg/l		4	
	Endpoint	Test Duration (hr)		Species	Valu	le	Sourc
	EC50	48h		Crustacea	>70	.7<101.3mg/l	2
sodium tripolyphosphate	EC50	96h		Algae or other aquatic plants	69.2	2mg/l	2
	EC50(ECx)	Not Reportedh		Algae or other aquatic plants 25-60mg/l		4	
	Endpoint	Test Duration (hr)		Species	Valu	le	Sourc
	EC50	72h		Algae or other aquatic plants	21m	ng/l	2
sodium	EC50	48h		Crustacea 0.065-0.085mg/L		4	
dodecylbenzenesulfonate	EC50	96h		Algae or other aquatic plants	0.9r	ng/L	5
	EC50(ECx)	48h		Crustacea	0.06	65-0.085mg/L	4
	LC50	96h		Fish	0.59	9mg/L	4
Legend:	Ecotox databas		•	ed Substances - Ecotoxicological Info ard Assessment Data 6. NITE (Japan			

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
sodium chloride	LOW	LOW
sodium carbonate	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
sodium chloride	LOW (LogKOW = 0.5392)
sodium carbonate	LOW (LogKOW = -0.4605)

Mobility in soil

Ingredient	Mobility
sodium chloride	LOW (KOC = 14.3)
sodium carbonate	HIGH (KOC = 1)

Product / Packaging disposal	 Recycle wherever possible or consult manufacturer for recycling options. Consult State Land Waste Management Authority for disposal. Treat and neutralise with dilute acid at an effluent treatment plant. Recycle containers, otherwise dispose of in an authorised landfill.
SECTION 14 Transport info	mation

S

Labels Required		
Marine Pollutant	NO	
HAZCHEM	Not Applicable	

Land transport (ADG): 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

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

Product name	Group
sodium chloride	Not Available
sodium carbonate	Not Available
sodium perborate monohydrate	Not Available
sodium tripolyphosphate	Not Available
sodium dodecylbenzenesulfonate	Not Available

Transport in bulk in accordance with the IGC Code

Product name	Ship Type
sodium chloride	Not Available
sodium carbonate	Not Available
sodium perborate monohydrate	Not Available
sodium tripolyphosphate	Not Available
sodium dodecylbenzenesulfonate	Not Available

SECTION 15 Regulatory information

sodium chloride is found on the following regulatory lists	
Australian Inventory of Industrial Chemicals (AIIC)	
sodium carbonate is found on the following regulatory lists	
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) -	Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6
Schedule 10 / Appendix C Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5	Australian Inventory of Industrial Chemicals (AIIC)
sodium perborate monohydrate is found on the following regulatory lists	
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals	Australian Inventory of Industrial Chemicals (AIIC)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4	Chemical Footprint Project - Chemicals of High Concern List
sodium tripolyphosphate is found on the following regulatory lists	
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 3	Australian Inventory of Industrial Chemicals (AIIC)
sodium dodecylbenzenesulfonate is found on the following regulatory lists	
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals	Australian Inventory of Industrial Chemicals (AIIC)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5	

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes

National Inventory	Status	
Canada - NDSL	No (sodium chloride; sodium carbonate; sodium perborate monohydrate; sodium tripolyphosphate; sodium dodecylbenzenesulfonate)	
China - IECSC	Yes	
Europe - EINEC / ELINCS / NLP	Yes	
Japan - ENCS	/es	
Korea - KECI	/es	
New Zealand - NZIoC	Yes	
Philippines - PICCS	Yes	
USA - TSCA	Yes	
Taiwan - TCSI	Yes	
Mexico - INSQ	No (sodium perborate monohydrate)	
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	10/03/2023
Initial Date	01/11/2009

SDS Version Summary

Version	Date of Update	Sections Updated
4.1	23/12/2022	Classification review due to GHS Revision change.
5.1	10/03/2023	Classification change due to full database hazard calculation/update.

Other information

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 ES: Exposure Standard 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 AIIC: Australian Inventory of Industrial Chemicals DSL: Domestic Substances List NDSL: Non-Domestic Substances List IECSC: Inventory of Existing Chemical Substance in China EINECS: European INventory of Existing Commercial chemical Substances ELINCS: European List of Notified Chemical Substances NLP: No-Longer Polymers ENCS: Existing and New Chemical Substances Inventory KECI: Korea Existing Chemicals Inventory NZIoC: New Zealand Inventory of Chemicals PICCS: Philippine Inventory of Chemicals and Chemical Substances TSCA: Toxic Substances Control Act 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 This document is copyright.

Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.