Safety Data Sheet

SUN DISHWASHER POWDER

Revision: 2021-03-18 **Version:** 01.1

SECTION 1: Identification of the substance/mixture and supplier

1.1 Product identifier
Product name: SUN DISHWASHER POWDER
Sun is a registered trade mark and is used under licence of Unilever

1.2 Recommended use and restrictions on use
Identified uses:
Dishmachine detergent
Restrictions of use:
Uses other than those identified are not recommended

1.3 Details of the supplier
DIVERSEY NEW ZEALAND LTD.
24 Bancroft Crescent, Glendene, Auckland, 0602, New Zealand
Telephone: 0800 803 615 (toll free)

Website: www.diversey.com

1.4 Emergency telephone number
Seek medical advice (show the label or safety data sheet where possible)
Call 0800 243 622 (24 hrs)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

HSNO Classification
8.3A - Corrosive to ocular tissue

GHS Equivalent Classification
Serious eye damage, Category 1

2.2 Label elements

Signal word: Danger

Hazard statements:
H318 - Causes serious eye damage.

Prevention statement(s):
P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P233 - Keep container tightly closed.
P280 - Wear eye or face protection.

Response statement(s):
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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 CENTRE, doctor or physician.

Disposal statement(s):
P501 - Dispose of unused content as chemical waste.

2.3 Other hazards
No other hazards known.

SECTION 3: Composition/information on ingredients

3.1 Substances / Mixtures

Ingredient(s)	CAS number	EC number	Weight percent
sodium carbonate	497-19-8	207-838-8	30-60
pentasodium triphosphate	7758-29-4	231-838-7	10-30
sodium percarbonate	15630-89-4	239-707-6	3-10
sodium silicate	1344-09-8	215-687-4	3-10
alkyl alcohol alkoxylate	120313-48-6	[4]	1-3

[4] Polymer.
Non-hazardous ingredients are the remainder and add up to 100%.

Workplace exposure limit(s), if available, are listed in subsection 8.1.

SECTION 4: First aid measures

4.1 Description of first aid measures
Inhalation: Remove person to fresh air and keep comfortable for breathing.
Skin contact: Wash skin with plenty of lukewarm, gently flowing water. If skin irritation occurs: Get medical advice or attention.
Eye contact: Hold eyelids apart and flush eyes with plenty of lukewarm water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE, doctor or physician.
Ingestion: Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Get medical attention or advice if you feel unwell.
Self-protection of first aider: Consider personal protective equipment as indicated in subsection 8.2.
First aid facilities: Eyewash facilities should be considered in a workplace where necessary.

4.2 Most important symptoms and effects, both acute and delayed
Inhalation: No known effects or symptoms in normal use.
Skin contact: No known effects or symptoms in normal use.
Eye contact: Causes severe or permanent damage.
Ingestion: No known effects or symptoms in normal use.

4.3 Indication of any immediate medical attention and special treatment needed
No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

Poison Information Center: Call 0800 764 766 (0800 POISON)

SECTION 5: Firefighting measures

5.1 Extinguishing media
Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture
No special hazards known.

5.3 Advice for firefighters
As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

5.4 Hazchem code
None allocated

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear eye/face protection.

6.2 Environmental precautions
Do not allow to enter drainage system, surface or ground water.

6.3 Methods and material for containment and cleaning up
Collect mechanically. Do not place spilled materials back into the original container. Collect in closed and suitable containers for disposal.

6.4 Reference to other sections
For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Measures to prevent fire and explosions:
No special precautions required.

Measures required to protect the environment:
For environmental exposure controls see subsection 8.2.

Advices on general occupational hygiene:
Follow general hygiene considerations recognised as common good workplace practices. Keep away from food, drink and animal feeding stuffs. Keep out of reach of children. Do not mix with other products unless adviced by Diversey. Wash hands thoroughly after handling. Avoid contact with eyes. Use only with adequate ventilation. See chapter 8.2, Exposure controls / Personal protection.

7.2 Conditions for safe storage, including any incompatibilities
Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging. Keep out of reach of children.
For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

7.3 Specific end use(s)
No specific advice for end use available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Workplace exposure limits

Air limit values, if available:

Biological limit values, if available:

8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet.
If available, please refer to the product information sheet for application and handling instructions.
Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

Appropriate engineering controls: No special requirements under normal use conditions.
Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

Personal protective equipment
Eye / face protection: Safety glasses or goggles (EN 166).
Hand protection: No special requirements under normal use conditions.
Body protection: No special requirements under normal use conditions.
Respiratory protection: No special requirements under normal use conditions.

Environmental exposure controls: No special requirements under normal use conditions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

	Method / remark
Physical State: Solid	
Appearance: Powder	
Colour: White	
Odour: Product specific	
Odour threshold: Not applicable	
pH Not applicable (neat)	
Dilution pH: ≈ 11 (50%)	
Melting point/freezing point (°C): Not determined	Not relevant to classification of this product
Initial boiling point and boiling range (°C): Not determined	Not applicable to solids or gases

Flammability (liquid): Not applicable.

Flash point (°C): Not applicable. Not relevant to classification of this product
Sustained combustion: Not applicable.
(UN Manual of Tests and Criteria, section 32, L.2)

Evaporation rate: Not determined Not relevant to classification of this product
Flammability (solid, gas): Not determined
Lower and upper explosion limit/flammability limit (%): Not determined
Vapour pressure: Not determined
Relative vapour density No data available Not applicable to solids
Relative density: ≈ 1.04 (20 °C) OECD 109 (EU A.3)
Solubility in / Miscibility with Water: Soluble
Partition coefficient: n-octanol/water No information available.

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

Autoignition temperature: Not determined
Decomposition temperature: Not applicable.
Viscosity: Not determined Not applicable to solids or gases
Explosive properties: Not explosive.
Oxidising properties: Not oxidising.

9.2 Other information
Surface tension (N/m): Not determined
Corrosion to metals: Not determined Not applicable to solids or gases Weight of evidence

SECTION 10: Stability and reactivity

10.1 Reactivity
No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability
Stable under normal storage and use conditions.

10.3 Possibility of hazardous reactions
No hazardous reactions known under normal storage and use conditions.

10.4 Conditions to avoid
None known under normal storage and use conditions.

10.5 Incompatible materials
None known under normal use conditions.

10.6 Hazardous decomposition products
None known under normal storage and use conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture data:.

Relevant calculated ATE(s):
ATE - Oral (mg/kg): >5000

Substance data, where relevant and available, are listed below:.

Acute toxicity
Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
sodium carbonate	LD_{50}	2800	Rat	OECD 401 (EU B.1)	
pentasodium triphosphate	LD_{0}	> 2000	Rat	OECD 401 (EU B.1)	
sodium percarbonate	LD_{50}	1034	Rat	Method not given	
sodium silicate	LD_{50}	3400	Rat	Method not given	
alkyl alcohol alkoxylate	LD_{50}	> 2000	Rat	Weight of evidence	

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
sodium carbonate	LD_{50}	> 2000	Rabbit	Method not given	
pentasodium triphosphate	LD_{50}	> 4640	Rabbit	Method not given	
sodium percarbonate	LD_{50}	> 2000	Rabbit	OECD 402 (EU B.3)	
sodium silicate	LD_{50}	> 5000	Rat	Method not given	
alkyl alcohol alkoxylate		No data available		Weight of evidence	

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate	LC_{50}	> 2.3 (dust)		Weight of evidence	2
pentasodium triphosphate	LC_{50}	0.39 (dust)	Rat	EPA OPP 81-3	4
sodium percarbonate		No data available			
sodium silicate	LC_{50}	> 2.06 No mortality observed	Rat	Non guideline test	
alkyl alcohol alkoxylate		No data available			

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	Not irritant	Rabbit	OECD 404 (EU B.4)	
pentasodium triphosphate	Not irritant	Rabbit	OECD 404 (EU B.4)	
sodium percarbonate	Not irritant	Rabbit	Method not given	
sodium silicate	Irritant		Method not given	
alkyl alcohol alkoxylate	Irritant	Rabbit	Draize test	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	Irritant	Rabbit	OECD 405 (EU B.5)	
pentasodium triphosphate	Not corrosive or irritant	Rabbit	OECD 405 (EU B.5)	
sodium percarbonate	Severe damage	Rabbit	EPA OPP 81-4	
sodium silicate	Severe damage		Method not given	
alkyl alcohol alkoxylate	Not corrosive or irritant	Rabbit	Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	No data available			
pentasodium triphosphate	No data available			
sodium percarbonate	Irritating to respiratory tract	Mouse	Method not given	
sodium silicate	Irritating to respiratory tract		Method not given	
alkyl alcohol alkoxylate	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
sodium carbonate	Not sensitising		Method not given	
pentasodium triphosphate	Not sensitising	Mouse	OECD 429 (EU B.42)	
sodium percarbonate	Not sensitising	Guinea pig	OECD 406 (EU B.6) / Buehler test	
sodium silicate	Not sensitising		Method not given	
alkyl alcohol alkoxylate	No data available			

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	No data available			
pentasodium triphosphate	No data available			
sodium percarbonate	No data available			
sodium silicate	No data available			

alkyl alcohol alkoxylate	No data available			

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
sodium carbonate	No data available		No data available	
pentasodium triphosphate	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13)	No evidence of genotoxicity, negative test results	OECD 475 (EU B.11)
sodium percarbonate	No data available		No data available	
sodium silicate	No evidence for mutagenicity, negative test results		No data available	
alkyl alcohol alkoxylate	No data available		No data available	

Carcinogenicity

Ingredient(s)	Effect
sodium carbonate	No evidence for carcinogenicity, weight-of-evidence
pentasodium triphosphate	No evidence for carcinogenicity, negative test results
sodium percarbonate	No data available
sodium silicate	No evidence for carcinogenicity, negative test results
alkyl alcohol alkoxylate	No data available

Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
sodium carbonate			No data available				
pentasodium triphosphate	NOAEL	Developmental toxicity	141	Rat	Not known		No evidence for reproductive toxicity
sodium percarbonate			No data available				
sodium silicate			No data available				No evidence for reproductive toxicity
alkyl alcohol alkoxylate			No data available				

Repeated dose toxicity

Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium carbonate		No data available				
pentasodium triphosphate		No data available				
sodium percarbonate		No data available				
sodium silicate	NOAEL	> 159	Rat	Method not given	180	No effects observed
alkyl alcohol alkoxylate		No data available				

Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium carbonate		No data available				
pentasodium triphosphate		No data available				
sodium percarbonate		No data available				
sodium silicate		No data available				
alkyl alcohol alkoxylate		No data available				

Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium carbonate		No data available				
pentasodium triphosphate		No data available				
sodium percarbonate		No data available				
sodium silicate		No data				

		available				
alkyl alcohol alkoxylate		No data available				

Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
sodium carbonate			No data available					
pentasodium triphosphate	Oral	NOAEL	225	Rat	Equivalent of OECD 412 (EU B.8)	24 month(s)		
sodium percarbonate			No data available					
sodium silicate			No data available					
alkyl alcohol alkoxylate			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
sodium carbonate	No data available
pentasodium triphosphate	No data available
sodium percarbonate	No data available
sodium silicate	No data available
alkyl alcohol alkoxylate	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
sodium carbonate	No data available
pentasodium triphosphate	No data available
sodium percarbonate	No data available
sodium silicate	Not applicable
alkyl alcohol alkoxylate	No data available

Aspiration hazard
Substances with an aspiration hazard (H304), if any, are listed in section 3.

Potential adverse health effects and symptoms
Effects and symptoms related to the product, if any, are listed in subsection 4.2.

SECTION 12: Ecological information

12.1 Toxicity

No data is available on the mixture.

Substance data, where relevant and available, are listed below:

Aquatic short-term toxicity
Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate	LC_{50}	300	*Lepomis macrochirus*	Method not given	96
pentasodium triphosphate	LC_{50}	1850	*Brachydanio rerio*	Method not given	24
sodium percarbonate	LC_{50}	70.7	*Pimephales promelas*	Method not given	96
sodium silicate	LC_{50}	1108	*Brachydanio rerio*	Method not given	96
alkyl alcohol alkoxylate	LC_{50}	1 - 10	*Leuciscus idus*	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate	EC_{50}	200-227	*Ceriodaphnia dubia*	Method not given	96
pentasodium triphosphate	EC_{50}	> 100	*Daphnia magna Straus*	40 CFR 797.1930	48
sodium percarbonate	EC_{50}	4.9	*Daphnia pulex*	Method not given	48
sodium silicate	EC_{50}	1700	*Daphnia*	Method not given	48

			magna Straus		
alkyl alcohol alkoxylate	EC_{50}	1	*Not specified*	Method not given	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate		No data available			
pentasodium triphosphate	EC_{50}	160	*Desmodesmus subspicatus*	ISO/TC147/SC5/WG5 N84	96
sodium percarbonate		No data available			
sodium silicate	EC_{50}	207	*Desmodesmus subspicatus*	Method not given	72
alkyl alcohol alkoxylate	EC_{50}	0.1 - 1	*Not specified*	Method not given	72

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
sodium carbonate		No data available			
pentasodium triphosphate		No data available			
sodium percarbonate		No data available			
sodium silicate		No data available			
alkyl alcohol alkoxylate		No data available			

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
sodium carbonate		No data available			
pentasodium triphosphate		No data available			
sodium percarbonate	EC_{50}	466	*Activated sludge*	OECD 209	0.5 hour(s)
sodium silicate		No data available			
alkyl alcohol alkoxylate		1000	*Activated sludge*	DIN EN ISO 8192-OECD 209-88/302/EEC	

Aquatic long-term toxicity

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
sodium carbonate		No data available				
pentasodium triphosphate	LOEC	5	*Not specified*	OECD 212	96 hour(s)	
sodium percarbonate	NOEC	7.4	*Pimephales promelas*	Method not given	96 hour(s)	
sodium silicate	NOEC	348	*Brachydanio rerio*	Method not given	96 hour(s)	
alkyl alcohol alkoxylate		No data available				

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
sodium carbonate		No data available				
pentasodium triphosphate		No data available				
sodium percarbonate	NOEC	2	*Daphnia pulex*	Method not given	48 hour(s)	
sodium silicate		No data available				
alkyl alcohol alkoxylate	NOEC	>0.1- <1	*Daphnia magna*	Method not given	21 day(s)	

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Terrestrial toxicity

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Terrestrial toxicity - plants, if available:

Terrestrial toxicity - birds, if available:

Terrestrial toxicity - beneficial insects, if available:

Terrestrial toxicity - soil bacteria, if available:

12.2 Persistence and degradability

Abiotic degradation

Abiotic degradation - photodegradation in air, if available:

Ingredient(s)	Half-life time	Method	Evaluation	Remark
sodium percarbonate	NA	Method not given		

Abiotic degradation - hydrolysis, if available:

Ingredient(s)	Half-life time in fresh water	Method	Evaluation	Remark
sodium carbonate	No data available		Rapidly hydrolysible	
sodium percarbonate	< 1 day(s)	Method not given	Hydrolysible	

Abiotic degradation - other processes, if available:

Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT_{50}	Method	Evaluation
sodium carbonate					Not applicable (inorganic substance)
pentasodium triphosphate					Not applicable (inorganic substance)
sodium percarbonate					Not applicable (inorganic substance)
sodium silicate					Not applicable (inorganic substance)
alkyl alcohol alkoxylate		CO_2 production	> 60% in 28 day(s)	OECD 301B	Readily biodegradable

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
sodium carbonate	No data available		No bioaccumulation expected	
pentasodium triphosphate	No data available			
sodium percarbonate	No data available			
sodium silicate	No data available		Low potential for bioaccumulation	
alkyl alcohol alkoxylate	-		No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
sodium carbonate	No data available			No bioaccumulation expected	
pentasodium triphosphate	No data available				
sodium percarbonate	No data available				
sodium silicate	No data available				
alkyl alcohol alkoxylate	-			No bioaccumulation expected	

12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log Koc	Desorption coefficient Log Koc(des)	Method	Soil/sediment type	Evaluation
sodium carbonate	No data available				Potential for mobility in soil, soluble in water
pentasodium triphosphate	No data available				
sodium percarbonate	No data available				High potential for mobility in soil

sodium silicate	No data available				
alkyl alcohol alkoxylate	No data available				Potential for adsorption to soil

12.5 Other adverse effects
No other adverse effects known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Waste from residues / unused products: The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

Empty packaging
Recommendation: Dispose of observing national or local regulations.

SECTION 14: Transport information

ADG, IMO/IMDG, ICAO/IATA
14.1 UN number: Non-dangerous goods
14.2 UN proper shipping name: Non-dangerous goods
14.3 Transport hazard class(es): Non-dangerous goods
14.4 Packing group: Non-dangerous goods
14.5 Environmental hazards: Non-dangerous goods
Environmentally hazardous: No
Marine pollutant: No
14.6 Special precautions for user: Non-dangerous goods
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: The product is not transported in bulk tankers.
Non-dangerous goods

Other relevant information:
Hazchem code: None allocated

This product has been classified, labelled and package in accordance with the requirements of the NZ Land Transport Rule: Dangerous Goods, ADG, and the provisions of the IMDG Code.
Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

SECTION 15: Regulatory information

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

HSNO Approval Number HSR002530.
Group standard Cleaning Products (Subsidiary Hazard) Group Standard 2017
Inventory Listing(s) New Zealand: NZIoC (New Zealand Inventory of Chemicals)
All components are listed on the NZIoC inventory, or are exempt

SECTION 16: Other information

The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract

SDS code: MS32000661 **Version:** 01.1 **Revision:** 2021-03-18

Abbreviations and acronyms:
• ATE - Acute Toxicity Estimate
• AUH - Non GHS hazard statement
• DNEL - Derived No Effect Limit
• EC No. - European Community Number
• EC50 - effective concentration, 50%
• LC50 - Lethal Concentration, 50% / Median Lethal Concentration
• LD50 - Lethal Dose, 50% / Median Lethal dose
• NOAEL - No observed adverse effect level
• NOEL - No observed effect level
• OECD - Organization for Economic Cooperation and Development

• PNEC - Predicted No Effect Concentration
• STOT-RE - Specific target organ toxicity (repeated exposure)
• STOT-SE - Specific target organ toxicity (single exposure)

End of Safety Data Sheet