

Suma Revoflow Safe Pur-Eco P10

Revision: 2012-04-12

Version 04

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

1.1 Product identifier

Trade name: Suma Revoflow Safe Pur-Eco P10

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

Identified uses:

For professional use only

AISE-P202 - Dishwash product. Automatic process

Uses advised against Uses other than those identified are not recommended

1.3 Details of the supplier of the safety data sheet

Diversey Ltd

Contact details

Weston Favell Centre, Northampton NN3 8PD, United Kingdom

Tel: 01604 405311, Fax: 01604 406809

Regulatory Email: MSDSinfoUK@diversey.com

1.4 Emergency telephone number

For medical or environmental emergency only:

call 0800 052 0185

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified and labelled in accordance with Directive 1999/45/EC and corresponding national legislation.

Indication of danger

Xi - Irritant

Risk phrases:

R36/37/38 - Irritating to eyes, respiratory system and skin.

2.2 Label elements



Xi - Irritant

Risk phrases:

R36/37/38 - Irritating to eyes, respiratory system and skin.

Safety phrases:

S22 - Do not breathe dust.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37 - Wear suitable gloves.

2.3 Other hazards

No other hazards known. The product does not meet the criteria for PBT or vPvB in accordance with Regulation (EC) No 1907/2006, Annex XIII.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Ingredient(s)	EC number	CAS number	REACH number	Classification	Classification (EC) 1272/2008	Notes	Weight percent
---------------	-----------	------------	--------------	----------------	----------------------------------	-------	-------------------

Suma Revoflow Safe Pur-Eco P10

sodium carbonate	207-838-8	497-19-8	01-2119485498-19	Xi; R36	Eye Irrit. 2 (H319)		20-30
disodium trisilicate	215-687-4	1344-09-8	01-2119448725-31	Xi; R36/37/38	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)		10-20
disodium metasilicate	229-912-9	6834-92-0	No data available	C; R34-37	Skin Corr. 1B (H314) Met. Corr. 1 (H290) STOT SE 3 (H335)		3-10

* Polymer.

For the full text of the R, H and EUH phrases mentioned in this Section, see Section 16.

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

[1] Exempted: ionic mixture. See Regulation (EC) No 1907/2006, Annex V, paragraph 3 and 4. This salt is potentially present, based on calculation, and included for classification and labelling purposes only. Each starting material of the ionic mixture is registered, as required.

[2] Exempted: included in Annex IV of Regulation (EC) No 1907/2006.

[3] Exempted: Annex V of Regulation (EC) No 1907/2006.

[4] Exempted: polymer. See Article 2(9) of Regulation (EC) No 1907/2006.

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation	Remove from source of exposure. Get medical attention.
Skin contact	Not required under normal use. Immediately wash off with plenty of water. If irritation develops get medical attention.
Eye contact	Wash off immediately with plenty of water. Get medical attention.
Ingestion	Remove material from mouth. Immediately drink 1-2 glasses of water or milk. Get medical attention.
Self-protection of first aider:	Consider personal protective equipment as indicated in subsection 8.2.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation	Causes irritation.
Skin contact	Causes irritation.
Eye contact	Causes irritation.
Ingestion	Causes irritation.
Sensitisation	No known effects.

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.

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Do not breathe dust or vapour. Wear suitable gloves.

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. Ensure adequate ventilation.

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

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Do not mix with other products unless advised by Diversey. Avoid dust formation. For advice on general occupational hygiene see subsection 8.2. For environmental exposure controls see subsection 8.2. For incompatible materials see subsection 10.5.

Suma Revoflow Safe Pur-Eco P10

Prevention of fire and explosion

No special precautions required.

7.2 Conditions for safe storage, including any incompatibilities**Requirements for storage rooms / facilities:**

In accordance with local and national regulations.

Combined storage in storage rooms / facilities:

In accordance with local and national regulations. For incompatible materials see subsection 10.5.

Basic storage conditions

Store in original container. Keep container tightly closed. For conditions to avoid see subsection 10.4.

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:

Recommended monitoring procedures, if available:

Additional exposure limits under the conditions of use, if available:

DNEL/DMEL and PNEC values**Human exposure**

DNEL oral exposure - Consumer (mg/kg bw)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
sodium carbonate	No data available	No data available	No data available	No data available
disodium trisilicate	No data available	No data available	No data available	0.8
disodium metasilicate	No data available	No data available	No data available	No data available

DNEL dermal exposure - Worker

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
sodium carbonate	No data available	No data available	No data available	No data available
disodium trisilicate	No data available	No data available	No data available	1.59
disodium metasilicate	No data available	No data available	No data available	No data available

DNEL dermal exposure - Consumer

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
sodium carbonate	No data available	No data available	No data available	No data available
disodium trisilicate	No data available	No data available	No data available	0.8
disodium metasilicate	No data available	No data available	No data available	No data available

DNEL inhalatory exposure - Worker (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
sodium carbonate	No data available	No data available	No data available	No data available
disodium trisilicate	No data available	No data available	No data available	5.61
disodium metasilicate	No data available	No data available	No data available	No data available

DNEL inhalatory exposure - Consumer (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
sodium carbonate	No data available	No data available	No data available	No data available
disodium trisilicate	No data available	No data available	No data available	1.38
disodium metasilicate	No data available	No data available	No data available	No data available

Environmental exposure

Environmental exposure - PNEC

Ingredient(s)	Surface water, fresh (mg/l)	Surface water, marine (mg/l)	Intermittent (mg/l)	Sewage treatment plant (mg/l)
sodium carbonate	No data available	No data available	No data available	No data available
disodium trisilicate	7.5	1	7.5	348
disodium metasilicate	No data available	No data available	No data available	No data available

Suma Revoflow Safe Pur-Eco P10

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m³)
sodium carbonate	No data available	No data available	No data available	No data available
disodium trisilicate	No data available	No data available	No data available	7.5
disodium metasilicate	No data available	No data available	No data available	No data available

8.2 Exposure controls**General health and safety measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Take off immediately all contaminated clothing. Wash hands before breaks and at the end of workday. Do not breathe dust. Avoid contact with skin and eyes.

The following information applies for the uses indicated in subsection 1.2.

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: If the product is diluted by using specific dosing systems with no risk of splashes or direct skin contact, the personal protection equipment as described in this section is not required.

Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

Personal protective equipment**Eye / face protection:**

No special requirements under normal use conditions.

Hand protection:

Chemical-resistant protective gloves (EN 374)

Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier
Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature

Suggested gloves for prolonged contact:

Material: butyl rubber

Penetration time: ≥ 480 min

Material thickness: ≥ 0.7 mm

Suggested gloves for protection against splashes:

Material: nitrile rubber

Penetration time: ≥ 30 min

Material thickness: ≥ 0.4 mm

In consultation with the supplier of protective gloves a different type providing similar protection may be chosen

Body protection:

No special requirements under normal use conditions.

Respiratory protection:

Respiratory protection is not normally required However, inhalation of dust should be avoided

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

Recommended safety measures for handling the diluted product:

Recommended maximum concentration (%): 0.2

Appropriate engineering controls: No special requirements under normal use conditions.

Appropriate organisational controls: No special requirements under normal use conditions.

Personal protective equipment .**Eye / face protection:**

No special requirements under normal use conditions.

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****Physical State:**

Solid

Colour

White

Odour

Product specific

Dilution pH:

≈ 12 (1%)

Boiling point/range (°C):

Not determined

Flash point (°C):

Not applicable.

Flammability

Not flammable.

Specific gravity:

0.98 g/cm³ (20°C)

Solubility in / Miscibility with

Water: Soluble

Suma Revoflow Safe Pur-Eco P10

Explosive properties Not explosive.
Oxidising properties: Not oxidising.

9.2 Other information

No other relevant information available

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

Reacts with acids.

10.6 Hazardous decomposition products

None known under normal storage and use conditions.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Mixtures**

No test data is available on the mixture

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	Method not given	
disodium trisilicate	LD ₅₀	3400	Rat	Method not given	
disodium metasilicate		No data available			

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
sodium carbonate	LD ₅₀	> 2000	Rabbit	Method not given	
disodium trisilicate	LD ₅₀	> 5000	Rat	Method not given	
disodium metasilicate		No data available			

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate	LC ₅₀	0.8	Pig		2
disodium trisilicate	LC ₅₀	> 2.06	Rat	Method not given	
disodium metasilicate		No data available			

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	Not irritant			
disodium trisilicate	Irritant			
disodium metasilicate	No data available			

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	Severe damage			

Suma Revoflow Safe Pur-Eco P10

disodium trisilicate	Severe damage			
disodium metasilicate	No data available			

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	No data available			
disodium trisilicate	No data available			
disodium metasilicate	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
sodium carbonate	No data available			
disodium trisilicate	Not sensitising			
disodium metasilicate	No data available			

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
sodium carbonate	No data available			
disodium trisilicate	No data available			
disodium metasilicate	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				
disodium trisilicate	NOAEL	> 159	Rat	Method not given		
disodium metasilicate		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				
disodium trisilicate		No data available				
disodium metasilicate		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				
disodium trisilicate		No data available				
disodium metasilicate		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					
disodium trisilicate			No data available					
disodium metasilicate			No data available					

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mixture data:

Based on available data, the classification criteria are not met.

Substance data, where relevant and available

Carcinogenicity

Ingredient(s)	Effect
sodium carbonate	No data available
disodium trisilicate	No evidence for carcinogenicity, negative test results

Suma Revoflow Safe Pur-Eco P10

disodium metasilicate	No data available
-----------------------	-------------------

Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
sodium carbonate	No data available		No data available	
disodium trisilicate	No evidence for mutagenicity, negative test results		No data available	
disodium metasilicate	No data available		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				
disodium trisilicate			No data available				No evidence for reproductive toxicity
disodium metasilicate			No data available				

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

Mixtures

No test 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
disodium trisilicate	LC ₅₀	260 - 310	Oncorhynchus mykiss	Method not given	96
disodium metasilicate		No data available			

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate	EC ₅₀	265	Daphnia magna Straus	Method not given	96
disodium trisilicate	EC ₅₀	1700	Daphnia magna Straus	Method not given	48
disodium metasilicate		No data available			

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium carbonate		No data available			
disodium trisilicate	EC ₅₀	207	Desmodesmus subspicatus	Method not given	72
disodium metasilicate		No data available			

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
sodium carbonate		No data available			
disodium trisilicate		No data available			
disodium metasilicate		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			

Suma Revoflow Safe Pur-Eco P10

disodium trisilicate		No data available			
disodium metasilicate		No data available			

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				
disodium trisilicate	NOEC	348	Brachydanio rerio	Method not given	96 hour(s)	
disodium metasilicate		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				
disodium trisilicate		No data available				
disodium metasilicate		No data available				

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:

Abiotic degradation - hydrolysis, if available:

Abiotic degradation - other processes, if available:

Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT ₅₀	Method	Evaluation
sodium carbonate					No data available
disodium trisilicate					No data available
disodium metasilicate					No data available

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
sodium carbonate	No data available			
disodium trisilicate	No data available		Low potential for bioaccumulation	
disodium metasilicate	No data available			

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
sodium carbonate	No data available				

Suma Revoflow Safe Pur-Eco P10

disodium trisilicate	No data available				
disodium metasilicate	No data available				

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				Mobile in aqueous environment
disodium trisilicate	No data available				
disodium metasilicate	No data available				

12.5 Results of PBT and vPvB assessment

Substances that fulfill the criteria for PBT/vPvB, if any, are listed in section 3.

12.6 Other adverse effects

No other adverse effects known.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Waste from residues / unused products Dispose of in compliance with all Federal, state, provincial, and local laws and regulations.
European Waste Catalogue: 20 01 29* - detergents containing dangerous substances.

Empty packaging

Recommendation: Dispose of observing national or local regulations.

SECTION 14: Transport information**ADR, RID, ADN, 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

Class:-

14.4 Packing group: Non-dangerous goods**14.5 Environmental hazards:** Non-dangerous goods**14.6 Special precautions for user:** Non-dangerous goods**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** The product is not transported in bulk tankers.**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Ingredients according to EC Detergents Regulation 648/2004**

phosphates

15 - 30%

non-ionic surfactants, phosphonates, polycarboxylates

< 5%

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out on the mixture

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

MSDS code: MSDS8103**Version** 04**Revision:** 2012-04-12**Reason for revision:**

Overall design adjusted in accordance with Regulation (EC) No 1907/2006, Annex II

Full text of the R, H and EUH phrases mentioned in section 3

- R36 - Irritating to eyes.
- R34 - Causes burns.
- R37 - Irritating to respiratory system.
- R36/37/38 - Irritating to eyes, respiratory system and skin.

Suma Revoflow Safe Pur-Eco P10

- H314 - Causes severe skin burns and eye damage.
- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.
- H335 - May cause respiratory irritation.

Abbreviations and acronyms:

- AISE - The international Association for Soaps, Detergents and Maintenance Products
- DNEL - Derived No Effect Limit
- EUH - CLP Specific hazard statement
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative

End of Safety Data Sheet