

**Apex Power****Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier**

Product name : Apex Power

Product code : 116634E

Use of the Substance/Mixture : Machine Warewashing Detergent

Substance type: : Mixture

For professional users only.

Product dilution information : 0.12 % - 0.2 %

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

Identified uses : Dishwash and rinse aid product; Automatic process

Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company : Ecolab Ltd.
PO Box 11; Winnington Avenue
Northwich, Cheshire, United Kingdom CW8 4DX
+ 44 (0)1606 74488
ccs@ecolab.com

1.4 Emergency telephone number

Emergency telephone number : Food & Beverage, Institutional, Agriculture, Textile Hygiene:
Northwich: +44 (0)1606 74488
Healthcare Leeds: +44 (0)113 232 2480
Healthcare Swansea: +44 (0)1235 239670

Poison Information Centre telephone number : Not Available

Date of Compilation/Revision : 24.05.2017
Version : 1.2

Section: 2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)****Product AS SOLD**

Eye irritation, Category 2 H319
Chronic aquatic toxicity, Category 3 H412

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Not a hazardous substance or mixture.

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)****Product AS SOLD**

Hazard pictograms

:



Signal Word

: Warning

Hazard Statements

: H319
H412

Causes serious eye irritation.

Harmful to aquatic life with long lasting effects.

Precautionary Statements

: **Prevention:**
P273

Avoid release to the environment.

Product AT USE DILUTION

Not a hazardous substance or mixture.

2.3 Other hazards**Product AS SOLD**

Mixing this product with acid or ammonia releases chlorine gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures****Product AS SOLD****Hazardous components**

Chemical Name	CAS-No. EC-No. REACH No.	ClassificationREGULATION (EC) No 1272/2008	Concentration: [%]
Sodium Carbonate	497-19-8 207-838-8 01-2119485498-19	Eye irritation Category 2; H319	≥ 50 - ≤ 100
Phosphonates	67953-76-8 267-956-0	Acute toxicity Category 4; H302	≥ 2.5 - < 5
Sodium dichloro-s-triazinetrione dihydrate	51580-86-0 220-767-7 01-2119489371-33	Acute toxicity Category 4; H302 Eye irritation Category 2; H319 Specific target organ toxicity - single exposure Category 3; H335 Acute aquatic toxicity Category 1; H400 Chronic aquatic toxicity Category 1; H410	≥ 1 - < 2.5

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Substances with a workplace exposure limit :

aluminium sodium dioxide	1302-42-7	Corrosive to metals Category 1; H290 Skin corrosion Category 1; H314 Serious eye damage Category 1; H318	$\geq 0.1 - < 0.25$
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Product AT USE DILUTION

Remarks : No hazardous ingredients

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section: 4. FIRST AID MEASURES**4.1 Description of first aid measures****Product AS SOLD**

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.

In case of skin contact : Rinse with plenty of water.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Get medical attention if symptoms occur.

Product AT USE DILUTION

In case of eye contact : Rinse with plenty of water.

In case of skin contact : Rinse with plenty of water.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES**Product AS SOLD****5.1 Extinguishing media**

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Not flammable or combustible.

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Hazardous combustion products : Decomposition products may include the following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulphur oxides
Oxides of phosphorus

5.3 Advice for firefighters

Special protective equipment for firefighters : Use personal protective equipment.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Product AS SOLD

Advice for non-emergency personnel : Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Advice for emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

Product AT USE DILUTION

Advice for non-emergency personnel : Refer to protective measures listed in sections 7 and 8.

Advice for emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

6.2 Environmental precautions

Product AS SOLD

Environmental precautions : Do not allow contact with soil, surface or ground water.

Product AT USE DILUTION

Environmental precautions : No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up

Product AS SOLD

Methods for cleaning up : Sweep up and shovel into suitable containers for disposal.

Product AT USE DILUTION

Methods for cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

6.4 Reference to other sections

See Section 1 for emergency contact information.

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For personal protection see section 8.
See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE**7.1 Precautions for safe handling****Product AS SOLD**

Advice on safe handling : Avoid contact with skin and eyes. Use only with adequate ventilation. Wash hands thoroughly after handling. Mixing this product with acid or ammonia releases chlorine gas.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Product AT USE DILUTION

Advice on safe handling : Wash hands after handling. For personal protection see section 8.

Hygiene measures : Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities**Product AS SOLD**

Requirements for storage areas and containers : Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

Storage temperature : 0 °C to 50 °C

Product AT USE DILUTION

Requirements for storage areas and containers : Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

7.3 Specific end uses**Product AS SOLD****Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters****Product AS SOLD****Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
aluminium sodium dioxide	1302-42-7	TWA	2 mg/m ³ (Aluminium)	UKCOSSTD
Further information	2	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used		

DNEL

Sodium Carbonate	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 10 mg/m ³
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		End Use: Consumers Exposure routes: Inhalation Potential health effects: Acute local effects Value: 10 mg/m ³

8.2 Exposure controls**Product AS SOLD****Appropriate engineering controls**

Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Eye/face protection (EN 166) : Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.

Hand protection (EN 374) : No special protective equipment required.

Skin and body protection (EN 14605) : No special protective equipment required.

Respiratory protection (EN 143, 14387) : No personal respiratory protective equipment normally required.

When respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization, consider the use of certified respiratory protection equipment meeting EU requirements (89/656/EEC, 89/686/EEC), or equivalent, with filter type:A-P

Product AT USE DILUTION**Appropriate engineering controls**

Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Wash hands before breaks and immediately after handling the product.

Eye/face protection (EN 166) : No special protective equipment required.

Hand protection (EN 374) : No special protective equipment required.

Skin and body protection (EN 14605) : No special protective equipment required.

Respiratory protection (EN : None required if airborne concentrations are maintained below the

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143, 14387)

exposure limit listed in Exposure Limit Information. Use certified respiratory protection equipment meeting EU requirements(89/656/EEC, 89/686/EEC), or equivalent, when respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization.

Environmental exposure controls

General advice : Consider the provision of containment around storage vessels.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

	Product AS SOLD	Product AT USE DILUTION
Appearance	: solid	liquid
Colour	: white	colourless
Odour	: Chlorine	Chlorine
pH	: 10.65 - 11.4, 1 %	10.65 - 11.4
Flash point	: Not applicable.	
Odour Threshold	: Not applicable and/or not determined for the mixture	
Melting point/freezing point	: Not applicable and/or not determined for the mixture	
Initial boiling point and boiling range	: > 100 °C	
Evaporation rate	: Not applicable and/or not determined for the mixture	
Flammability (solid, gas)	: Not applicable and/or not determined for the mixture	
Upper explosion limit	: Not applicable and/or not determined for the mixture	
Lower explosion limit	: Not applicable and/or not determined for the mixture	
Vapour pressure	: Not applicable and/or not determined for the mixture	
Relative vapour density	: Not applicable and/or not determined for the mixture	
Relative density	: 1.2 - 1.7	
Water solubility	: soluble	
Solubility in other solvents	: Not applicable and/or not determined for the mixture	
Partition coefficient: n-octanol/water	: Not applicable and/or not determined for the mixture	
Auto-ignition temperature	: Not applicable and/or not determined for the mixture	
Thermal decomposition	: Not applicable and/or not determined for the mixture	
Viscosity, kinematic	: Not applicable and/or not determined for the mixture	
Explosive properties	: Not applicable and/or not determined for the mixture	
Oxidizing properties	: The substance or mixture is not classified as oxidizing.	

9.2 Other information

VOC : Not applicable.

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Section: 10. STABILITY AND REACTIVITY

Product AS SOLD

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Mixing this product with acid or ammonia releases chlorine gas.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Decomposition products may include the following materials:

Carbon oxides

nitrogen oxides (NO_x)

Sulphur oxides

Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Product AS SOLD

Information on likely routes of exposure : Eye contact, Skin contact

Product

Acute oral toxicity : Acute toxicity estimate : > 2,000 mg/kg

Acute inhalation toxicity : There is no data available for this product.

Acute dermal toxicity : There is no data available for this product.

Skin corrosion/irritation : There is no data available for this product.

Serious eye damage/eye irritation : There is no data available for this product.

Respiratory or skin sensitization : There is no data available for this product.

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Carcinogenicity : There is no data available for this product.

Reproductive effects : There is no data available for this product.

Germ cell mutagenicity : There is no data available for this product.

Teratogenicity : There is no data available for this product.

STOT - single exposure : There is no data available for this product.

STOT - repeated exposure : There is no data available for this product.

Aspiration toxicity : There is no data available for this product.

Components

Acute oral toxicity : Sodium Carbonate
LD50 rat: 2,800 mg/kg

Phosphonates
LD50 rat: 940 mg/kg

Sodium dichloro-s-triazinetriene dihydrate
LD50 rat: 1,823 mg/kg

Components

Acute dermal toxicity : Sodium dichloro-s-triazinetriene dihydrate
LD50 rat: > 5,000 mg/kg

Potential Health Effects

Product AS SOLD

Eyes : Causes serious eye irritation.

Skin : Health injuries are not known or expected under normal use.

Ingestion : Health injuries are not known or expected under normal use.

Inhalation : Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

Product AT USE DILUTION

Eyes : Health injuries are not known or expected under normal use.

Skin : Health injuries are not known or expected under normal use.

Ingestion : Health injuries are not known or expected under normal use.

Inhalation : Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

Experience with human exposure

Product AS SOLD

Eye contact : Redness, Pain, Irritation

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Skin contact : No symptoms known or expected.

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

Product AT USE DILUTION

Eye contact : No symptoms known or expected.

Skin contact : No symptoms known or expected.

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

Section: 12. ECOLOGICAL INFORMATION

Product AS SOLD

12.1 Ecotoxicity

Environmental Effects : Harmful to aquatic life with long lasting effects.

Product

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates : no data available

Toxicity to algae : no data available

Components

Toxicity to fish : Sodium Carbonate
96 h LC50 *Lepomis macrochirus* (Bluegill sunfish): 300 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates : Sodium Carbonate
48 h EC50 *Ceriodaphnia* (water flea): 213.5 mg/l

Phosphonates
48 h EC50: 167 mg/l

Sodium dichloro-s-triazinetriene dihydrate
48 h EC50 *Daphnia*: 0.196 mg/l

12.2 Persistence and degradability

Product

Biodegradability : The surfactants contained in the product are biodegradable according to the requirements of the detergent regulation 648/2004/EC

Components

Biodegradability : Sodium Carbonate
Result: Not applicable - inorganic

Phosphonates
Result: Poorly biodegradable

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Sodium dichloro-s-triazinetriane dihydrate
Result: Readily biodegradable.

aluminium sodium dioxide
Result: Not applicable - inorganic

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product AS SOLD

- Product : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
- Contaminated packaging : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.
- Guidance for Waste Code selection : Inorganic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.

Product AT USE DILUTION

Product : Diluted product can be flushed to sanitary sewer.

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Contaminated packaging : Dispose of in accordance with local, state, and federal regulations.

Section: 14. TRANSPORT INFORMATION**Product AS SOLD**

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number : Not dangerous goods
14.2 UN proper shipping name : Not dangerous goods
14.3 Transport hazard class(es) : Not dangerous goods
14.4 Packing group : Not dangerous goods
14.5 Environmental hazards : Not dangerous goods
14.6 Special precautions for user : Not dangerous goods

Air transport (IATA)

14.1 UN number : Not dangerous goods
14.2 UN proper shipping name : Not dangerous goods
14.3 Transport hazard class(es) : Not dangerous goods
14.4 Packing group : Not dangerous goods
14.5 Environmental hazards : Not dangerous goods
14.6 Special precautions for user : Not dangerous goods

Sea transport (IMDG/IMO)

14.1 UN number : Not dangerous goods
14.2 UN proper shipping name : Not dangerous goods
14.3 Transport hazard class(es) : Not dangerous goods
14.4 Packing group : Not dangerous goods
14.5 Environmental hazards : Not dangerous goods
14.6 Special precautions for user : Not dangerous goods
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not dangerous goods

Section: 15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

according to Detergents Regulation EC 648/2004 : 5 % or over but less than 15 %: Phosphates
less than 5 %: Phosphonates, Chlorine-based bleaching agents

Apex Power**National Regulations**

Take note of Dir 94/33/EC on the protection of young people at work.

Other regulations : The Chemicals (Hazard Information and Packaging for Supply) Regulations.
The Control of Substances Hazardous to Health Regulations.
Health and Safety at Work Act.

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

Section: 16. OTHER INFORMATION**Procedure used to derive the classification according to REGULATION (EC) No 1272/2008**

Classification	Justification
Eye irritation 2, H319	Calculation method
Chronic aquatic toxicity 3, H412	Calculation method

Full text of H-Statements

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

ADN – European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS – Australian Inventory of Chemical Substances; ASTM – American Society for the Testing of Materials; bw – Body weight; CLP – Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR – Carcinogen, Mutagen or Reproductive Toxicant; DIN – Standard of the German Institute for Standardisation; DSL – Domestic Substances List (Canada); ECHA – European Chemicals Agency; EC-Number – European Community number; EC_x – Concentration associated with x% response; EL_x – Loading rate associated with x% response; EmS – Emergency Schedule; ENCS – Existing and New Chemical Substances (Japan); ErC_x – Concentration associated with x% growth rate response; GHS – Globally Harmonized System; GLP – Good Laboratory Practice; IARC – International Agency for Research on Cancer; IATA – International Air Transport Association; IBC – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC₅₀ – Half maximal inhibitory concentration; ICAO – International Civil Aviation Organization; IECSC – Inventory of Existing Chemical Substances in China; IMDG – International Maritime Dangerous Goods; IMO – International Maritime Organization; ISHL – Industrial Safety and Health Law (Japan); ISO – International Organisation for Standardization; KECI – Korea Existing Chemicals Inventory; LC₅₀ – Lethal Concentration to 50 % of a test population; LD₅₀ – Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL – International Convention for the Prevention of Pollution from Ships; n.o.s. – Not Otherwise Specified; NO(A)EC – No Observed (Adverse) Effect Concentration; NO(A)EL – No Observed (Adverse) Effect Level; NOELR – No Observable Effect Loading Rate; NZIoC – New Zealand Inventory of Chemicals;

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OECD – Organization for Economic Co-operation and Development; OPPTS – Office of Chemical Safety and Pollution Prevention; PBT – Persistent, Bioaccumulative and Toxic substance; PICCS – Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR – (Quantitative) Structure Activity Relationship; REACH – Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID – Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT – Self-Accelerating Decomposition Temperature; SDS – Safety Data Sheet; TCSI – Taiwan Chemical Substance Inventory; TRGS – Technical Rule for Hazardous Substances; TSCA – Toxic Substances Control Act (United States); UN – United Nations; vPvB – Very Persistent and Very Bioaccumulative

Further information

Prepared by : Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

ANNEX: EXPOSURE SCENARIOS**DPD+ Substances:**

The following substances are the lead substances that contribute to the mixture Exposure Scenario according to the DPD+ Rule:

Route	Substance	CAS-No.	EINECS-No.
Ingestion	Phosphonates	67953-76-8	267-956-0
Inhalation	Sodium dichloro-s-triazinetriene dihydrate	51580-86-0	220-767-7
Dermal	No lead substance		
Eyes	Sodium Carbonate	497-19-8	207-838-8
aquatic environment	Sodium dichloro-s-triazinetriene dihydrate	51580-86-0	220-767-7

Physical properties DPD+ Substances:

Substance	Vapour pressure	Water solubility	Pow	Molar Mass
Sodium Carbonate		212.5 g/l		106 g/mol

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To calculate if your downstream Operating Conditions and Risk management Measures are safe, please calculate your risk factor at the website below:

www.ecetoc.org/tra

Short title of Exposure Scenario : **Dishwash and rinse aid product; Automatic process**

Use descriptors

Main User Groups : Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Sectors of end-use : **SU22:** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Process categories : **PROC2:** Use in closed, continuous process with occasional controlled exposure
PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

Product categories : **PC35:** Washing and cleaning products (including solvent based products)

Environmental Release Categories : **ERC8a:** Wide dispersive indoor use of processing aids in open systems