

# Safety Data Sheet



according to Regulation (EC) No 1907/2006

## Eco A

Revision date: 03.12.2020

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

#### 1.1. Product identifier

Eco A

UFI: F300-P0GY-Y009-G193

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

##### Use of the substance/mixture

Aqueous alkaline solution based on sodium hydroxide to create non biocidal circulation liquid for Reverse Osmosis membranes to remove chemically organic particulate deposits

##### Uses advised against

No information available.

#### 1.3. Details of the supplier of the safety data sheet

Company name: Pall GmbH  
Street: Philipp-Reis-Str. 6  
Place: D-63303 Dreieich  
Telephone: +49 (0) 6103 / 307 -0  
Internet: www.pall.com  
Responsible Department: Abt.: Quality Management  
E-Mail (competent person): paul\_garland@europe.pall.com  
Poison Centre (UK-Wales): +44 (0) 845 / 4647 (24 hours / 7 days)

#### 1.4. Emergency telephone number:

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Regulation (EC) No. 1272/2008

Hazard categories:

Substance or mixture corrosive to metals: Met. Corr. 1

Skin corrosion/irritation: Skin Corr. 1

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

May be corrosive to metals.

Causes severe skin burns and eye damage.

Causes serious eye damage.

#### 2.2. Label elements

##### Regulation (EC) No. 1272/2008

##### Hazard components for labelling

Sodium hydroxide

tetrasodium ethylene diamine tetraacetate

D-Glucopyranose, oligomers, decyl octyl glycosides

Signal word: Danger

Pictograms:



##### Hazard statements

H290

May be corrosive to metals.

H314

Causes severe skin burns and eye damage.

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### Precautionary statements

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
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 CENTER/doctor.

### Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Pictograms:



### Hazard statements

H314

### Precautionary statements

P260-P280-P303+P361+P353-P305+P351+P338-P310

### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Hazardous components

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	GHS Classification			
1310-73-2	Sodium hydroxide			1 - < 5 %
	215-185-5	011-002-00-6	01-2119487136-33	
	Skin Corr. 1A; H314			
64-02-8	tetrasodium ethylene diamine tetraacetate			1 - < 5 %
	200-573-9	607-428-00-2	01-2119486762-27	
	Acute Tox. 4, Eye Dam. 1; H302 H318			
68515-73-1	D-Glucopyranose, oligomers, decyl octyl glycosides			1 - < 5 %
	500-220-1		01-2119488530-36	
	Eye Dam. 1; H318			

Full text of H and EUH statements: see section 16.

#### Specific concentration limits and M-factors

CAS No	EC No	Chemical name	Quantity	
	Specific concentration limits and M-factors			
1310-73-2	215-185-5	Sodium hydroxide	1 - < 5 %	
	Skin Corr. 1A; H314: >= 5 - 100 Skin Corr. 1B; H314: >= 2 - < 5 Skin Irrit. 2; H315: >= 0,5 - < 2 Eye Irrit. 2; H319: >= 0,5 - < 2			

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### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### **General information**

Take off immediately all contaminated clothing and wash it before reuse.  
If unconscious place in recovery position and seek medical advice.  
First aider: Pay attention to self-protection!

##### **After inhalation**

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

##### **After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin irritation, consult a physician.

##### **After contact with eyes**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

##### **After ingestion**

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Let 1 glass of water be drunken in little sips (dilution effect).  
Do NOT induce vomiting.

#### 4.2. Most important symptoms and effects, both acute and delayed

No data available

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

First Aid, decontamination, treatment of symptoms.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### **Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.  
The product itself does not burn.

##### **Unsuitable extinguishing media**

Full water jet

#### 5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated:  
- Carbon monoxide  
- Carbon dioxide

#### 5.3. Advice for firefighters

Co-ordinate fire-fighting measures to the fire surroundings.  
In case of fire: Wear self-contained breathing apparatus. Chemical protection clothing

##### **Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.  
Use water spray jet to protect personnel and to cool endangered containers.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation.  
Avoid contact with skin, eyes and clothes.  
Remove persons to safety.

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Personal protection equipment: see section 8

Safe handling: see section 7

### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Cover drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

### **6.3. Methods and material for containment and cleaning up**

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

Treat the recovered material as prescribed in the section on waste disposal.

Provide adequate ventilation.

The product is an alkaline. Before discharge into sewage plants the product normally needs to be neutralised.

### **6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

## SECTION 7: Handling and storage

### **7.1. Precautions for safe handling**

#### **Advice on safe handling**

Keep container tightly closed.

Provide adequate ventilation as well as local exhaust at critical locations.

Avoid contact with skin, eyes and clothes.

Do not breathe gas/vapour/aerosol.

Personal protection equipment: see section 8

#### **Advice on protection against fire and explosion**

No special fire protection measures are necessary.

### **7.2. Conditions for safe storage, including any incompatibilities**

#### **Requirements for storage rooms and vessels**

Keep container tightly closed in a cool, well-ventilated place. Keep/Store only in original container.

#### **Hints on joint storage**

To follow: TRGS 510

Keep away from food, drink and animal feedingstuffs.

Keep away from: Acids

#### **Further information on storage conditions**

Keep away from: Frost

Unsuitable container/equipment material: Light metal

### **7.3. Specific end use(s)**

Cleaning agent, alkaline

## SECTION 8: Exposure controls/personal protection

### **8.1. Control parameters**

#### **Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
1310-73-2	Sodium hydroxide	-	2		STEL (15 min)	WEL

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### DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
1310-73-2	Sodium hydroxide		
Worker DNEL, long-term	inhalation	local	1 mg/m <sup>3</sup>
Consumer DNEL, long-term	inhalation	local	1 mg/m <sup>3</sup>
64-02-8	tetrasodium ethylene diamine tetraacetate		
Worker DNEL, long-term	inhalation	local	1,5 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	local	3 mg/m <sup>3</sup>
Consumer DNEL, long-term	inhalation	local	0,6 mg/m <sup>3</sup>
Consumer DNEL, acute	inhalation	local	1,2 mg/m <sup>3</sup>
Consumer DNEL, long-term	oral	systemic	25 mg/kg bw/day
68515-73-1	D-Glucopyranose, oligomers, decyl octyl glycosides		
Worker DNEL, long-term	inhalation	systemic	420 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	595000 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	124 mg/m <sup>3</sup>
Consumer DNEL, long-term	dermal	systemic	357000 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	35,7 mg/kg bw/day

### PNEC values

CAS No	Substance	
Environmental compartment	Value	
1310-73-2	Sodium hydroxide	
Freshwater		
64-02-8	tetrasodium ethylene diamine tetraacetate	
Freshwater	2,2 mg/l	
Freshwater (intermittent releases)	1,2 mg/l	
Marine water	0,22 mg/l	
Micro-organisms in sewage treatment plants (STP)	43 mg/l	
Soil	0,72 mg/kg	
68515-73-1	D-Glucopyranose, oligomers, decyl octyl glycosides	
Freshwater	0,176 mg/l	
Freshwater (intermittent releases)	0,27 mg/l	
Marine water	0,018 mg/l	
Freshwater sediment	1,516 mg/kg	
Marine sediment	0,152 mg/kg	
Secondary poisoning	111,11 mg/kg	
Micro-organisms in sewage treatment plants (STP)	560 mg/l	
Soil	0,654 mg/kg	

### 8.2. Exposure controls

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### Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

### Protective and hygiene measures

Avoid contact with skin, eyes and clothes. Use protective skin cream before handling the product. Remove contaminated, saturated clothing immediately. When using do not eat, drink, smoke, sniff. Wash hands and face before breaks and after work and take a shower if necessary.

### Eye/face protection

Suitable eye protection: goggles, Tightly sealed safety glasses., Face protection umbrella (DIN EN 166)

### Hand protection

Tested protective gloves must be worn: EN ISO 374

Butyl caoutchouc (butyl rubber), NBR (Nitrile rubber) PVC (polyvinyl chloride)

Thickness of the glove material  $\geq 0,5$  mm

Permeation time (maximum wear time)  $\geq 8$  h

Breakthrough times and swelling properties of the material must be taken into consideration.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Observe the wear time limits as specified by the manufacturer.

### Skin protection

For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

### Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Recommendation: Respiratory protection (Filter type: B (DN EN 141))

### Environmental exposure controls

Do not allow to enter into surface water or drains.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	brown
Odour:	Soap

pH-Value:	13,2	<b>Test method</b>
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#### Changes in the physical state

Melting point:	< - 12 °C
Initial boiling point and boiling range:	No data available
Flash point:	not applicable

#### Flammability

Solid:	not applicable
Gas:	not applicable

#### Explosive properties

not explosive.

Lower explosion limits:	No data available
Upper explosion limits:	No data available
Ignition temperature:	No data available

#### Auto-ignition temperature

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Solid:	No data available
Gas:	No data available
Decomposition temperature:	No data available
<b>Oxidizing properties</b>	
No information available.	
Vapour pressure: (at 20 °C)	No data available
Density (at 20 °C):	1,088 g/cm <sup>3</sup> ISO 387
Water solubility: (at 20 °C)	completely miscible
<b>Solubility in other solvents</b>	
No information available.	
Partition coefficient:	No data available
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Vapour density:	No data available
Evaporation rate:	No data available

### 9.2. Other information

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

Exothermic reaction with: Etchant and acids

### 10.4. Conditions to avoid

No special measures are necessary.

### 10.5. Incompatible materials

Light metal, Etchant and acids

### 10.6. Hazardous decomposition products

Slowly corrodes aluminium and zink under hydrogen evolution.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### **Acute toxicity**

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

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-02-8	tetrasodium ethylene diamine tetraacetate				
	oral	LD50 1913 mg/kg	Rat	Study report (1983)	BASF-TEST: In principle, the methods des
68515-73-1	D-Glucopyranose, oligomers, decyl octyl glycosides				
	oral	LD50 > 2000 mg/kg	Rat	Study report (2004)	OECD Guideline 423
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1987)	OECD Guideline 402

### Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes serious eye damage.

### Sensitising effects

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

### Carcinogenic/mutagenic/toxic effects for reproduction

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

### STOT-single exposure

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

### STOT-repeated exposure

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

### Aspiration hazard

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

## SECTION 12: Ecological information

### 12.1. Toxicity



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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
1310-73-2	Sodium hydroxide					
	Acute fish toxicity	LC50 mg/l	45,4	96 h	Onchorhynchus mykiss	
	Acute crustacea toxicity	EC50 mg/l	40,4	48 h	Ceriodaphnia sp.	Ecotoxicology and Environmental Safety,4 other: acute 48-h immobilization test ac
64-02-8	tetrasodium ethylene diamine tetraacetate					
	Acute fish toxicity	LC50	41 mg/l	96 h	Lepomis macrochirus	Bull. Environm. Contam. Toxicol. 24: 543 The static water acute toxicity tests fo
	Acute algae toxicity	ErC50 mg/l	> 100	72 h	Pseudokirchneriella subcapitata	Study report (2001) OECD Guideline 201
	Acute crustacea toxicity	EC50	140 mg/l	48 h	Daphnia magna	Study report (1989) other: DIN 38412, part 11
	Fish toxicity	NOEC mg/l	>= 25,7	35 d	Danio rerio	Study report (2001) OECD Guideline 210
	Crustacea toxicity	NOEC	25 mg/l	21 d	Daphnia magna	Study report (1998) other: EEC Guideline XI/681/86, Draft 4:
68515-73-1	D-Glucopyranose, oligomers, decyl octyl glycosides					
	Acute fish toxicity	LC50 mg/l	100,81	96 h	Danio rerio	Study report (1993) ISO 7346/1-3
	Acute algae toxicity	ErC50 mg/l	27,22	72 h	Desmodesmus subspicatus	Study report (1994) other: DIN 38412, part 9
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna	Study report (1992) OECD Guideline 202
	Fish toxicity	NOEC	1,8 mg/l	28 d	Danio rerio	Study report (1995) OECD Guideline 204
	Crustacea toxicity	NOEC	2 mg/l	21 d	Daphnia magna	Study report (1995) other: OECD Guideline 202 Part II

### 12.2. Persistence and degradability

No information available.

### 12.3. Bioaccumulative potential

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
68515-73-1	D-Glucopyranose, oligomers, decyl octyl glycosides	1,72

#### BCF

CAS No	Chemical name	BCF	Species	Source
64-02-8	tetrasodium ethylene diamine tetraacetate	ca. 1,8	Lepomis macrochirus	Proc. 3rd. Ann. Symp

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### 12.6. Other adverse effects

No data available

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### Further information

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations

Dispose of waste according to applicable legislation.

#### Contaminated packaging

Non-contaminated packages may be recycled. Packing which cannot be properly cleaned must be disposed of.  
Dispose of waste according to applicable legislation.

Cleaning agent: Water (with cleaning agent)

## SECTION 14: Transport information

### Land transport (ADR/RID)

<b>14.1. UN number:</b>	UN 1760
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, N.O.S. (Sodium hydroxide)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Classification code:	C9
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E

### Inland waterways transport (ADN)

<b>14.1. UN number:</b>	UN 1760
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, N.O.S. (Sodium hydroxide)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Classification code:	C9
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2

### Marine transport (IMDG)

<b>14.1. UN number:</b>	UN 1760
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, N.O.S. (Sodium hydroxide)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-A, S-B

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### Air transport (ICAO-TI/IATA-DGR)

<b>14.1. UN number:</b>	UN 1760
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, N.O.S. (Sodium hydroxide)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Special Provisions:	A3 A803
Limited quantity Passenger:	0.5 L
Passenger LQ:	Y840
Excepted quantity:	E2
IATA-packing instructions - Passenger:	851
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

### 14.6. Special precautions for user

No information available.

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No information available.

## SECTION 15: Regulatory information

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

#### EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

2004/42/EC (VOC): 0,0 %

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

#### National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water hazard class (D): 1 - slightly hazardous to water

### 15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

Sodium hydroxide

tetrasodium ethylene diamine tetraacetate

D-Glucopyranose, oligomers, decyl octyl glycosides

## SECTION 16: Other information

### Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international conernat le transport des marchandises dangereuses par chemin de fer

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(Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Refulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
CLP: Regulation on Classification, Labelling and Packaging of Substances and Mixtures,  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
EC50: Effectice concentration, 50 percent  
DNEL: Derived No Effect Level  
PNEC: Predicted No Effect Concentration  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative

### Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data

### Relevant H and EUH statements (number and full text)

H290 May be corrosive to metals.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.

### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*