



# A1 - THE SOLUTION HARD WATER DISHWASH DETERGENT

CODE : A1-SOL

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Revision date: 17/05/2024 Version: 10.9

Generated : 17/05/2024

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

### 1.1. Product identifier

Product form : Mixture  
Trade name : A1 - THE SOLUTION HARD WATER DISHWASH DETERGENT  
UFI : 5S16-P0TF-G005-C73H  
Product code : A1-SOL  
Type of product : Detergent

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

#### 1.2.1. Relevant identified uses

Main use category : Professional use  
Industrial/Professional use spec : For professional use only  
Use of the substance/mixture : Machine dishwashing detergent

#### 1.2.2. Uses advised against

No additional information available

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

#### SELDEN RESEARCH LIMITED

STADEN LANE  
BUXTON  
DERBYSHIRE  
SK17 9RZ  
UNITED KINGDOM

Tel: 01298 26226  
Email: safety@selden.co.uk

#### SELDEN EUROPE B.V.

WATERMOLEN 13  
6229 PM  
MAASTRICHT  
NEDERLAND

Tel: +31 (0) 43 363 42 89  
Email: sds@selden.eu

### 1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	Only for healthcare professionals

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 1 H314  
Serious eye damage/eye irritation, Category 1 H318  
Full text of H- and EUH-statements: see section 16

#### Adverse physicochemical, human health and environmental effects

No additional information available

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## 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS05

Signal word (CLP)

: Danger

Contains

: sodium hydroxide; caustic soda

Hazard statements (CLP)

: H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP)

: P264 - Wash hands thoroughly after handling.

P280 - Wear eye protection, protective gloves.

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.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P315 - Get immediate medical advice/attention.

P405 - Store locked up.

## 2.3. Other hazards

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: Composition/information on ingredients

## 3.1. Substances

Not applicable

## 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
sodium hydroxide; caustic soda substance with national workplace exposure limit(s) (IE, GB)	CAS-No.: 1310-73-2 EC-No.: 215-185-5 EC Index-No.: 011-002-00-6 REACH-no: 01-2119457892-27	5 – 10	Skin Corr. 1A, H314
N,N-dimethyldodecylamine N-oxide	CAS-No.: 2605-79-0 EC-No.: 220-020-5 REACH-no: 01-2119959297-22	0.1 – 1	Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411 Acute Tox. 4 (Oral), H302

## Specific concentration limits:

Name	Product identifier	Specific concentration limits
sodium hydroxide; caustic soda	CAS-No.: 1310-73-2 EC-No.: 215-185-5 EC Index-No.: 011-002-00-6 REACH-no: 01-2119457892-27	( 0.5 ≤C < 2) Skin Irrit. 2, H315 ( 0.5 ≤C < 2) Eye Irrit. 2, H319 ( 2 ≤C < 5) Skin Corr. 1B, H314 ( 5 ≤C ≤ 100) Skin Corr. 1A, H314

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

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### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: Get medical advice/attention if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
First-aid measures after ingestion	: Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Get medical advice/attention.

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

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Burns.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide. Dry powder. Foam.
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#### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Corrosive vapours.
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#### 5.3. Advice for firefighters

No additional information available

### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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##### 6.1.2. For emergency responders

Protective equipment	: Use personal protective equipment as required.
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#### 6.2. Environmental precautions

Avoid release to the environment.

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

For containment	: Collect spillage.
Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

#### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes.  
Hygiene measures : Do not eat, drink or smoke when using this product.

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

Technical measures : Does not require any specific or particular technical measures.  
Storage conditions : Keep container closed when not in use.  
Incompatible products : Oxidizing agent. Strong acids.  
Incompatible materials : Metals.  
Special rules on packaging : Keep only in original container.

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

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

###### sodium hydroxide; caustic soda (1310-73-2)

###### Ireland - Occupational Exposure Limits

Local name	Sodium hydroxide
OEL STEL	2 mg/m <sup>3</sup>

###### United Kingdom - Occupational Exposure Limits

Local name	Sodium hydroxide
WEL STEL (OEL STEL)	2 mg/m <sup>3</sup>

##### 8.1.2. Recommended monitoring procedures

No additional information available

##### 8.1.3. Air contaminants formed

No additional information available

##### 8.1.4. DNEL and PNEC

No additional information available

##### 8.1.5. Control banding

No additional information available

#### 8.2. Exposure controls

##### 8.2.1. Appropriate engineering controls

**Appropriate engineering controls:**  
Good standard of general ventilation.

##### 8.2.2. Personal protection equipment

**Personal protective equipment symbol(s):**



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### 8.2.2.1. Eye and face protection

**Eye protection:**

Safety glasses. ISO 16321-1

### 8.2.2.2. Skin protection

**Skin and body protection:**

Not required for normal conditions of use

**Hand protection:**

Chemical resistant gloves (according to European standard ISO 374-1 or equivalent). Nitrile rubber gloves

**Other skin protection****Materials for protective clothing:**

Not required for normal conditions of use

### 8.2.2.3. Respiratory protection

**Respiratory protection:**

Not required for normal conditions of use

### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

No additional information available

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: Yellow.
Appearance	: Liquid.
Odour	: odourless.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: $\geq 100\text{ }^{\circ}\text{C}$
Flammability	: Not available
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 13
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 1.135
Relative vapour density at 20°C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

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### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

Metals. Acids.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Causes severe skin burns. pH: 13
Serious eye damage/irritation	: Causes serious eye damage. pH: 13
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

### 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

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Hazardous to the aquatic environment, long-term (chronic) : Not classified

### N,N-dimethyldecylamine N-oxide (2605-79-0)

LC50 - Fish [1]	> 10 mg/l
EC50 - Other aquatic organisms [1]	4.4 mg/l waterflea
EC50 - Other aquatic organisms [2]	0.11 mg/l

### sodium hydroxide; caustic soda (1310-73-2)

LC50 - Fish [1]	> 35 mg/l
EC50 - Other aquatic organisms [1]	> 33 mg/l waterflea

## 12.2. Persistence and degradability

No additional information available

## 12.3. Bioaccumulative potential

### N,N-dimethyldecylamine N-oxide (2605-79-0)

Partition coefficient n-octanol/water (Log Pow)	3.69
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### sodium hydroxide; caustic soda (1310-73-2)

Partition coefficient n-octanol/water (Log Pow)	-3.88
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## 12.4. Mobility in soil

No additional information available

## 12.5. Results of PBT and vPvB assessment

No additional information available

## 12.6. Endocrine disrupting properties

No additional information available

## 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional waste regulation	: Dispose of in accordance with relevant local regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
European List of Waste (LoW, EC 2000/532)	: 20 01 15* - alkalines

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

### 14.1. UN number or ID number

UN-No. (ADR)	: UN 1824
UN-No. (IMDG)	: UN 1824
UN-No. (IATA)	: UN 1824

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### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: SODIUM HYDROXIDE SOLUTION
Proper Shipping Name (IMDG)	: SODIUM HYDROXIDE SOLUTION
Proper Shipping Name (IATA)	: Sodium hydroxide solution
Transport document description (ADR)	: UN 1824 SODIUM HYDROXIDE SOLUTION, 8, II, (E)
Transport document description (IMDG)	: UN 1824 SODIUM HYDROXIDE SOLUTION, 8, II
Transport document description (IATA)	: UN 1824 Sodium hydroxide solution, 8, II

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR)	: 8
Danger labels (ADR)	: 8



#### IMDG

Transport hazard class(es) (IMDG)	: 8
Danger labels (IMDG)	: 8



#### IATA

Transport hazard class(es) (IATA)	: 8
Danger labels (IATA)	: 8



### 14.4. Packing group

Packing group (ADR)	: II
Packing group (IMDG)	: II
Packing group (IATA)	: II

### 14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	: C5
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP2
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Hazard identification number (Kemler No.)	: 80

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Orange plates



Tunnel restriction code (ADR)

: E

EAC code

: 2R

### Transport by sea

Limited quantities (IMDG)

: 1 L

Excepted quantities (IMDG)

: E2

Packing instructions (IMDG)

: P001

IBC packing instructions (IMDG)

: IBC02

Tank instructions (IMDG)

: T7

Tank special provisions (IMDG)

: TP2

EmS-No. (Fire)

: F-A

EmS-No. (Spillage)

: S-B

Stowage category (IMDG)

: A

### Air transport

PCA Excepted quantities (IATA)

: E2

PCA Limited quantities (IATA)

: Y840

PCA limited quantity max net quantity (IATA)

: 0.5L

PCA packing instructions (IATA)

: 851

PCA max net quantity (IATA)

: 1L

CAO packing instructions (IATA)

: 855

CAO max net quantity (IATA)

: 30L

Special provisions (IATA)

: A3

ERG code (IATA)

: 8L

## 14.7. Maritime transport in bulk according to IMO instruments

IBC code

: Not applicable.

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

CESIO recommendations : 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.

Other information, restriction and prohibition regulations

: Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 and all its amendments and modifications. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 and all its amendments and modifications. Detergent Regulation (648/2004).

#### Detergent Regulation (648/2004/EC): Labelling of contents:

Component	%
non-ionic surfactants	<5%

#### 15.1.2. National regulations

No additional information available

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15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Detergent Regulation (648/2004).

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Skin Corr. 1	H314	On basis of test data
Eye Dam. 1	H318	On basis of test data

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.