

# Safety Data Sheet

## FULCRON EXTRA LAVAPAVIMENTI L9,2



Safety Data Sheet dated 18/12/2020, version 12

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

#### 1.1. Product identifier

Mixture identification:

Trade name: FULCRON EXTRA LAVAPAVIMENTI L9,2

Trade code: 2002

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

Recommended use:

Detergent/cleaner

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

Supplier:

Arexons S.p.A.

via Antica di Cassano, 23, 20063

Cernusco sul Naviglio (MI), Italy

Arexons S.p.A.

Tel. +39 (0)2/924361 - Fax +39 (0)2/92436306

Competent person responsible for the safety data sheet:

arexons@arexons.it

#### 1.4. Emergency telephone number

Arexons S.p.A.

Tel. +39 (0)2/924361 - Fax +39 (0)2/92436306

Centro Antiveleni di Pavia IRCCS- Fondazione Maugeri tel. +39 (0)382 24444 (h24; it, en)

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

In Ireland: Beaumont Hospital - National Poisons Information Centre 01 809 2166 (7days, 8:00 - 22:00)

In South Africa: Poison Information Helpline 0861 555 777

### SECTION 2: Hazards identification

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

EC regulation criteria 1272/2008 (CLP):

⚠ Danger, Skin Corr. 1A, Causes severe skin burns and eye damage.

⚠ Danger, Eye Dam. 1, Causes serious eye damage.

⚠ Warning, STOT RE 2, May cause damage to organs through prolonged or repeated exposure.

Adverse physicochemical, human health and environmental effects:

No other hazards

#### 2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing

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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].

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.

P405 Store locked up.

P501 Dispose of contents/container in accordance with applicable regulations.

#### Special Provisions:

PACK1 The packing must be featured by a safety lock for children.

PACK2 The packing must have tactile indications of danger for blind people.

#### Contains

tetrasodium ethylene diamine tetraacetate

Phosphonic acid , (1-hydroxyethylidene)bis-caustic soda

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

Regulation (EC) nr 648/2004 (detergents).

Product contents:

Phosphonates

< 5 %

EDTA and salts thereof

5 - 15 %

#### 2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

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## SECTION 3: Composition/information on ingredients

### 3.1. Substances

N.A.

### 3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

>= 15% - < 20% caustic soda

REACH No.: 01-2119457892-27, CAS: 1310-73-2, EC: 215-185-5

⚠ 3.2/1A Skin Corr. 1A H314

Specific Concentration Limits:

0,1% <= C < 2%: Skin Irrit. 2 H315

0,1% <= C < 2%: Eye Irrit. 2 H319

2% <= C < 5%: Skin Corr. 1B H314

C >= 5%: Skin Corr. 1A H314

>= 10% - < 12.5% tetrasodium ethylene diamine tetraacetate

REACH No.: 01-2119486762-27, Index number: 607-428-00-2, CAS: 64-02-8, EC: 200-573-9

⚠ 3.1/4/Oral Acute Tox. 4 H302

⚠ 3.3/1 Eye Dam. 1 H318

⚠ 3.1/4/Inhal Acute Tox. 4 H332

⚠ 3.9/2 STOT RE 2 H373

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>= 3% - < 5% Phosphonic acid , (1-hydroxyethylidene)bis-  
REACH No.: 01-2119510391-53, CAS: 2809-21-4, EC: 220-552-8

- ⚠ 2.16/1 Met. Corr. 1 H290
- ⚠ 3.3/1 Eye Dam. 1 H318
- ⚠ 3.1/4/Oral Acute Tox. 4 H302

>= 0.25% - < 0.5% sodium hydroxide; caustic soda

REACH No.: 01-2119457892-27, Index number: 011-002-00-6, CAS: 1310-73-2, EC: 215-185-5

- ⚠ 2.16/1 Met. Corr. 1 H290
- ⚠ 3.2/1A Skin Corr. 1A H314
- ⚠ 3.3/1 Eye Dam. 1 H318

>= 0.05% - < 0.1% acetic acid ... %

REACH No.: 01-2119475328-30, Index number: 607-002-00-6, CAS: 64-19-7, EC: 200-580-7

- ⚠ 2.6/3 Flam. Liq. 3 H226
- ⚠ 3.2/1A Skin Corr. 1A H314

Specific Concentration Limits:

10% <= C < 25%: Skin Irrit. 2 H315

10% <= C < 25%: Eye Irrit. 2 H319

25% <= C < 90%: Skin Corr. 1B H314

C >= 90%: Skin Corr. 1A H314

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#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

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#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

Appropriate Extinguishing Media:

To carbon dioxide.

To dust.

Foam

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Water spray.

Not Recommended Extinguishing Media:

Do not use direct water jets.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

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#### SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

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

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

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#### SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

None in particular

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#### SECTION 8: Exposure controls/personal protection

8.1. Control parameters

caustic soda

- CAS: 1310-73-2

ACGIH - STEL: Ceiling 2 mg/m<sup>3</sup> - Notes: URT, eye, and skin irr

tetrasodium ethylene diamine tetraacetate - CAS: 64-02-8

20101.12 - TWA: 5 mg/m<sup>3</sup>

sodium hydroxide; caustic soda - CAS: 1310-73-2

20101.10 - TWA: 2 mg/m<sup>3</sup>

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ACGIH - STEL: Ceiling 2 mg/m<sup>3</sup> - Notes: URT, eye, and skin irr  
acetic acid ... % - CAS: 64-19-7  
EU - TWA(8h): 25 mg/m<sup>3</sup>, 10 ppm - STEL: 50 mg/m<sup>3</sup>, 20 ppm  
ACGIH - TWA(8h): 10 ppm - STEL: 15 ppm - Notes: URT and eye irr, pulm func

**DNEL Exposure Limit Values**  
caustic soda

- CAS: 1310-73-2  
Worker Professional: 1 mg/m<sup>3</sup> - Consumer: 1 mg/m<sup>3</sup> - Exposure: Human Inhalation -  
Frequency: Long Term, systemic effects  
tetrasodium ethylene diamine tetraacetate - CAS: 64-02-8  
Worker Industry: 1.5 mg/m<sup>3</sup> - Consumer: 1.7 - Exposure: Human Inhalation - Frequency:  
Long Term, systemic effects  
sodium hydroxide; caustic soda - CAS: 1310-73-2  
Worker Professional: 1 mg/m<sup>3</sup> - Consumer: 1 mg/m<sup>3</sup> - Exposure: Human Inhalation -  
Frequency: Long Term, systemic effects

**PNEC Exposure Limit Values**  
tetrasodium ethylene diamine tetraacetate - CAS: 64-02-8  
Target: Fresh Water - Value: 2.86 mg/l  
Target: Marine water - Value: 0.286 mg/l  
Target: 08 - Value: 1.56 mg/l  
Target: Soil (agricultural) - Value: 0.937 mg/kg  
Target: 09 - Value: 55.94 mg/l

**8.2. Exposure controls**  
**Eye protection:**  
Eye glasses with side protection.  
Compliant with EN 166

**Protection for skin:**  
protective clothing

**Protection for hands:**  
Nitrile or Viton gloves.  
Compliant with EN 374.

**Respiratory protection:**  
Not needed for normal use.

**Thermal Hazards:**  
None

**Environmental exposure controls:**  
None

**Appropriate engineering controls:**  
None

## SECTION 9: Physical and chemical properties

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

| Properties                      | Value          | Method: | Notes: |
|---------------------------------|----------------|---------|--------|
| Appearance and colour:          | Liquid Yellow  | --      | --     |
| Odour:                          | Characteristic | --      | --     |
| Odour threshold:                | N.A.           | --      | --     |
| pH:                             | 12.77          | --      | --     |
| Melting point / freezing point: | N.A.           | --      | --     |

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|                                               |            |    |    |
|-----------------------------------------------|------------|----|----|
| Initial boiling point and boiling range:      | N.A.       | -- | -- |
| Flash point:                                  | N.A.       | -- | -- |
| Evaporation rate:                             | N.A.       | -- | -- |
| Solid/gas flammability:                       | N.A.       | -- | -- |
| Upper/lower flammability or explosive limits: | N.A.       | -- | -- |
| Vapour pressure:                              | N.A.       | -- | -- |
| Vapour density:                               | N.A.       | -- | -- |
| Relative density:                             | 1.300 g/ml | -- | -- |
| Solubility in water:                          | N.A.       | -- | -- |
| Solubility in oil:                            | N.A.       | -- | -- |
| Partition coefficient (n-octanol/water):      | N.A.       | -- | -- |
| Auto-ignition temperature:                    | N.A.       | -- | -- |
| Decomposition temperature:                    | N.A.       | -- | -- |
| Viscosity:                                    | N.A.       | -- | -- |
| Explosive properties:                         | N.A.       | -- | -- |
| Oxidizing properties:                         | N.A.       | -- | -- |

#### 9.2. Other information

| Properties                           | Value | Method: | Notes: |
|--------------------------------------|-------|---------|--------|
| Miscibility:                         | N.A.  | --      | --     |
| Fat Solubility:                      | N.A.  | --      | --     |
| Conductivity:                        | N.A.  | --      | --     |
| Substance Groups relevant properties | N.A.  | --      | --     |

NA=not applicable

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions

### 10.2. Chemical stability

Stable under normal conditions

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- 10.3. Possibility of hazardous reactions  
None
- 10.4. Conditions to avoid  
Stable under normal conditions.
- 10.5. Incompatible materials  
None in particular.
- 10.6. Hazardous decomposition products  
None.

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#### SECTION 11: Toxicological information

##### 11.1. Information on toxicological effects

Toxicological information of the product:

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a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

b) skin corrosion/irritation

The product is classified: Skin Corr. 1A H314

c) serious eye damage/irritation

The product is classified: Eye Dam. 1 H318

d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

e) germ cell mutagenicity

Not classified

Based on available data, the classification criteria are not met

f) carcinogenicity

Not classified

Based on available data, the classification criteria are not met

g) reproductive toxicity

Not classified

Based on available data, the classification criteria are not met

h) STOT-single exposure

Not classified

Based on available data, the classification criteria are not met

i) STOT-repeated exposure

The product is classified: STOT RE 2 H373

j) aspiration hazard

Not classified

Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

caustic soda

- CAS: 1310-73-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rabbit 325 mg/kg

tetrasodium ethylene diamine tetraacetate - CAS: 64-02-8

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 1780 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat > 1-5 mg/l - Duration: 4h

b) skin corrosion/irritation:

Test: Skin Irritant - Species: Rabbit Negative

c) serious eye damage/irritation:

Test: Eye Irritant - Species: Rabbit Positive

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Species: IND Negative

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g) reproductive toxicity:  
Test: NOAEL - Species: Rat > 250 mg/kg

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#### SECTION 12: Ecological information

##### 12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.  
caustic soda

- CAS: 1310-73-2

##### a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 35-189 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia 40.4 mg/l - Duration h: 48

tetrasodium ethylene diamine tetraacetate - CAS: 64-02-8

##### a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 100 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia 140 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae > 100 mg/l - Duration h: 72

##### b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish > 25.7 mg/l - Duration h: 840

Endpoint: NOEC - Species: Daphnia > 25 mg/l - Duration h: 504

sodium hydroxide; caustic soda - CAS: 1310-73-2

##### a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia 40.4 mg/l - Duration h: 48

##### 12.2. Persistence and degradability

None

tetrasodium ethylene diamine tetraacetate - CAS: 64-02-8

Biodegradability: Non-readily biodegradable

##### 12.3. Bioaccumulative potential

N.A.

##### 12.4. Mobility in soil

N.A.

##### 12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

##### 12.6. Other adverse effects

None

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#### SECTION 13: Disposal considerations

##### 13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

Additional disposal information:

Reuse if possible. Act in accordance with the local and national laws in force.

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#### SECTION 14: Transport information



##### 14.1. UN number

ADR-UN Number: 1824

IATA-UN Number: 1824

IMDG-UN Number: 1824

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- 14.2. UN proper shipping name  
ADR-Shipping Name: SODIUM HYDROXIDE SOLUTION  
IATA-Shipping Name: SODIUM HYDROXIDE SOLUTION  
IMDG-Shipping Name: SODIUM HYDROXIDE SOLUTION
- 14.3. Transport hazard class(es)  
ADR-Class: 8  
ADR - Hazard identification number: 80  
IATA-Class: 8  
IATA-Label: 8  
IMDG-Class: 8  
Sea (IMO): Classe 8 PG III
- 14.4. Packing group  
ADR-Packing Group: III  
IATA-Packing group: III  
IMDG-Packing group: III
- 14.5. Environmental hazards  
ADR-Enviromental Pollutant: No  
IMDG-Marine pollutant: No
- 14.6. Special precautions for user  
ADR-Subsidiary hazards: -  
ADR-S.P.: -  
ADR-Transport category (Tunnel restriction code): 3 (E)  
IATA-Passenger Aircraft: 852  
IATA-Subsidiary hazards: -  
IATA-Cargo Aircraft: 856  
IATA-S.P.: A3 A803  
IATA-ERG: 8L  
IMDG-EmS: F-A,  
S-B  
IMDG-Subsidiary hazards: -  
IMDG-Stowage and handling: Category A  
IMDG-Segregation: SG35
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code  
No  
Limited Quantity: 5 L  
Exempted Quantity: E1

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## SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
Dir. 98/24/EC (Risks related to chemical agents at work)  
Dir. 2000/39/EC (Occupational exposure limit values)  
Regulation (EC) n. 1907/2006 (REACH)  
Regulation (EC) n. 1272/2008 (CLP)  
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013  
Regulation (EU) 2015/830  
Regulation (EU) n. 286/2011 (ATP 2 CLP)  
Regulation (EU) n. 618/2012 (ATP 3 CLP)  
Regulation (EU) n. 487/2013 (ATP 4 CLP)  
Regulation (EU) n. 944/2013 (ATP 5 CLP)  
Regulation (EU) n. 605/2014 (ATP 6 CLP)  
Regulation (EU) n. 2015/1221 (ATP 7 CLP)  
Regulation (EU) n. 2016/918 (ATP 8 CLP)  
Regulation (EU) n. 2016/1179 (ATP 9 CLP)  
Regulation (EU) n. 2017/776 (ATP 10 CLP)  
Regulation (EU) n. 2018/669 (ATP 11 CLP)  
Regulation (EU) n. 2018/1480 (ATP 13 CLP)

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Regulation (EU) n. 2019/521 (ATP 12 CLP)  
Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restriction 40

Restrictions related to the substances contained:

No restriction.

Volatile Organic compounds - VOCs = 0.07 %

Volatile Organic compounds - VOCs = 0.67 g/Kg

Volatile Organic compounds - VOCs = 0.87 g/l

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

None

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

None

## SECTION 16: Other information

Text of phrases referred to under heading 3:

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure.

H290 May be corrosive to metals.

H226 Flammable liquid and vapour.

| Hazard class and hazard category | Code        | Description                                          |
|----------------------------------|-------------|------------------------------------------------------|
| Met. Corr. 1                     | 2.16/1      | Substance or mixture corrosive to metals, Category 1 |
| Flam. Liq. 3                     | 2.6/3       | Flammable liquid, Category 3                         |
| Acute Tox. 4                     | 3.1/4/Inhal | Acute toxicity (inhalation), Category 4              |
| Acute Tox. 4                     | 3.1/4/Oral  | Acute toxicity (oral), Category 4                    |
| Skin Corr. 1A                    | 3.2/1A      | Skin corrosion, Category 1A                          |
| Skin Corr. 1B                    | 3.2/1B      | Skin corrosion, Category 1B                          |
| Skin Irrit. 2                    | 3.2/2       | Skin irritation, Category 2                          |

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|              |       |                                                                |
|--------------|-------|----------------------------------------------------------------|
| Eye Dam. 1   | 3.3/1 | Serious eye damage, Category 1                                 |
| Eye Irrit. 2 | 3.3/2 | Eye irritation, Category 2                                     |
| STOT RE 2    | 3.9/2 | Specific target organ toxicity - repeated exposure, Category 2 |

Paragraphs modified from the previous revision:

#### SECTION 2: Hazards identification

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

| Classification according to Regulation (EC) Nr. 1272/2008 | Classification procedure   |
|-----------------------------------------------------------|----------------------------|
| Skin Corr. 1A, H314                                       | On basis of test data (pH) |
| Eye Dam. 1, H318                                          | On basis of test data (pH) |
| STOT RE 2, H373                                           | Calculation method         |

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,  
Commission of the European Communities  
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van  
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

|             |                                                                                      |
|-------------|--------------------------------------------------------------------------------------|
| ADR:        | European Agreement concerning the International Carriage of Dangerous Goods by Road. |
| ATE:        | Acute Toxicity Estimate                                                              |
| ATEmix:     | Acute toxicity Estimate (Mixtures)                                                   |
| CAS:        | Chemical Abstracts Service (division of the American Chemical Society).              |
| CLP:        | Classification, Labeling, Packaging.                                                 |
| DNEL:       | Derived No Effect Level.                                                             |
| EINECS:     | European Inventory of Existing Commercial Chemical Substances.                       |
| GefStoffVO: | Ordinance on Hazardous Substances, Germany.                                          |
| GHS:        | Globally Harmonized System of Classification and Labeling of Chemicals.              |
| IATA:       | International Air Transport Association.                                             |
| IATA-DGR:   | Dangerous Goods Regulation by the "International Air Transport Association" (IATA).  |
| ICAO:       | International Civil Aviation Organization.                                           |
| ICAO-TI:    | Technical Instructions by the "International Civil Aviation Organization" (ICAO).    |
| IMDG:       | International Maritime Code for Dangerous Goods.                                     |
| INCI:       | International Nomenclature of Cosmetic Ingredients.                                  |

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|       |                                                                                  |
|-------|----------------------------------------------------------------------------------|
| KSt:  | Explosion coefficient.                                                           |
| LC50: | Lethal concentration, for 50 percent of test population.                         |
| LD50: | Lethal dose, for 50 percent of test population.                                  |
| NA:   | Not applicable                                                                   |
| PNEC: | Predicted No Effect Concentration.                                               |
| RID:  | Regulation Concerning the International Transport of Dangerous Goods<br>by Rail. |
| STEL: | Short Term Exposure limit.                                                       |
| STOT: | Specific Target Organ Toxicity.                                                  |
| TLV:  | Threshold Limiting Value.                                                        |
| TWA:  | Time-weighted average                                                            |
| WGK:  | German Water Hazard Class.                                                       |

# Exposure Scenario, 10/07/2019

| Substance identity |                                            |
|--------------------|--------------------------------------------|
| Chemical name      | Hydroxyethandiphosphonic acid 60% solution |
| CAS No.            | --                                         |

## Table of contents

1. **ES 1** Use at industrial site; Various products (PC35, PC36)
2. **ES 2** Widespread use by professional workers; Various products (PC3, PC31, PC35, PC36)
3. **ES 3** Consumer use; Various products (PC3, PC31, PC35, PC36)

| 1. ES 1 Use at industrial site; Various products (PC35, PC36)                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1 TITLE SECTION                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                            |
| Exposure Scenario name                                                                                                                                                                                                                                                            | Use in cleaning agents                                                                                                                                                                                                                                                                                                                                     |
| Date - Version                                                                                                                                                                                                                                                                    | 09/07/2019 - 1.0                                                                                                                                                                                                                                                                                                                                           |
| Life Cycle Stage                                                                                                                                                                                                                                                                  | Use at industrial site                                                                                                                                                                                                                                                                                                                                     |
| Main user group                                                                                                                                                                                                                                                                   | Industrial uses                                                                                                                                                                                                                                                                                                                                            |
| Sector(s) of use                                                                                                                                                                                                                                                                  | Industrial uses (SU3)                                                                                                                                                                                                                                                                                                                                      |
| Product Categories                                                                                                                                                                                                                                                                | Washing and cleaning products (PC35) - Water softeners (PC36)                                                                                                                                                                                                                                                                                              |
| Environment Contributing Scenario                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                            |
| CS1 Water-based process                                                                                                                                                                                                                                                           | ERC4                                                                                                                                                                                                                                                                                                                                                       |
| Worker Contributing Scenario                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                            |
| CS2 Industrial                                                                                                                                                                                                                                                                    | PROC2 - PROC4 - PROC7 - PROC8b                                                                                                                                                                                                                                                                                                                             |
| 1.2 Conditions of use affecting exposure                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                            |
| 1.2. CS1: Environment Contributing Scenario: Water-based process (ERC4)                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                            |
| Environmental release categories                                                                                                                                                                                                                                                  | Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)                                                                                                                                                                                                                                                           |
| <i>Amount used, frequency and duration of use (or from service life)</i>                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                            |
| <b>Amounts used:</b><br>Application rate 50 kg/day<br>Annual site tonnage 11 t                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                            |
| <i>Technical and organisational conditions and measures</i>                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                            |
| <b>Control measures to prevent releases</b><br>Central biological waste water treatment                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                            |
| <i>Conditions and measures related to sewage treatment plant</i>                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                            |
| <b>STP type:</b><br>Municipal Sewage Treatment Plant<br><b>Additional information on STP:</b><br>Acclimated biological treatment<br><b>STP sludge treatment:</b><br>Controlled application of sewage sludge to agricultural soil<br><b>STP effluent (m<sup>3</sup>/day):</b> 4000 |                                                                                                                                                                                                                                                                                                                                                            |
| <i>Conditions and measures related to treatment of waste (including article waste)</i>                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                            |
| <b>Waste treatment</b><br>External treatment and disposal of waste should comply with applicable local and/or national regulations.<br>Household solid waste (e.g., product packaging) is treated at municipal waste disposal sites.                                              |                                                                                                                                                                                                                                                                                                                                                            |
| 1.2. CS2: Worker Contributing Scenario: Industrial (PROC2, PROC4, PROC7, PROC8b)                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                            |
| Process Categories                                                                                                                                                                                                                                                                | Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Chemical production where opportunity for exposure arises - Industrial spraying - Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC2, PROC4, PROC7, PROC8b) |
| <i>Amount used, frequency and duration of use/exposure</i>                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                            |
| <b>Amounts used:</b><br>Application rate 50 kg/day<br>Annual site tonnage 11 t<br><br><b>Duration:</b><br>Covers daily exposures up to 8 hours                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                            |

**Frequency:**

Use frequency 220 days per year

**Technical and organisational conditions and measures****Technical and organisational measures**

Ensure regular inspection, cleaning and maintenance of equipment and machines.

For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.

**Conditions and measures related to personal protection, hygiene and health evaluation****Personal protection**

Wear suitable gloves tested to EN374.

Use suitable eye protection.

**1.3 Exposure estimation and reference to its source****1.3. CS1: Environment Contributing Scenario: Water-based process (ERC4)**

| Release route | Release rate | Release estimation method |
|---------------|--------------|---------------------------|
| Water         | 50 kg/day    | N/A                       |

| protection target                   | Exposure level             | Calculation method | Risk Characterization Ratio (RCR) |
|-------------------------------------|----------------------------|--------------------|-----------------------------------|
| wastewater treatment plant microbes | 1.25 mg/L                  | N/A                | N/A                               |
| freshwater                          | 0.129 mg/L                 | N/A                | N/A                               |
| freshwater sediment                 | 5640 mg/kg KW              | N/A                | N/A                               |
| Non-agricultural soil               | 5.93 mg/kg KW              | N/A                | N/A                               |
| Non-agricultural soil               | 5.93 mg/kg KW              | N/A                | N/A                               |
| marine water                        | 0.0129 mg/L                | N/A                | N/A                               |
| marine sediment                     | 5.63 mg/kg KW              | N/A                | N/A                               |
| Air                                 | 2.87E-17 mg/m <sup>3</sup> | N/A                | N/A                               |

**1.3. CS2: Worker Contributing Scenario: Industrial (PROC2, PROC4, PROC7, PROC8b)**

| Exposure route, Health effect, Exposure indicator | Exposure level            | Calculation method | Risk Characterization Ratio (RCR) |
|---------------------------------------------------|---------------------------|--------------------|-----------------------------------|
| dermal, local, long-term                          | 2000 µg/cm <sup>2</sup>   | N/A                | N/A                               |
| dermal, systemic, long-term                       | < 0.42 mg/kg bw/day       | N/A                | N/A                               |
| inhalative, systemic, long-term                   | 0.00012 mg/m <sup>3</sup> | N/A                | N/A                               |
| oral, systemic, long-term                         | 2.1 mg/kg bw/day          | N/A                | N/A                               |

**1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES****Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 2. ES 2

Widespread use by professional workers; Various products (PC3, PC31, PC35, PC36)

**2.1 TITLE SECTION**

|                               |                                                                                                                          |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Exposure Scenario name</b> | Cleaning agent                                                                                                           |
| <b>Date - Version</b>         | 09/07/2019 - 1.0                                                                                                         |
| <b>Life Cycle Stage</b>       | Widespread use by professional workers                                                                                   |
| <b>Main user group</b>        | Professional uses                                                                                                        |
| <b>Sector(s) of use</b>       | Professional uses (SU22)                                                                                                 |
| <b>Product Categories</b>     | Air care products (PC3) - Polishes and wax blends (PC31) - Washing and cleaning products (PC35) - Water softeners (PC36) |

**Environment Contributing Scenario**

|                                |               |
|--------------------------------|---------------|
| <b>CS1 Water-based process</b> | ERC8a - ERC8d |
|--------------------------------|---------------|

**Worker Contributing Scenario**

|                                                    |                                                                              |
|----------------------------------------------------|------------------------------------------------------------------------------|
| <b>CS2 General use from professional operators</b> | PROC2 - PROC4 - PROC8a - PROC8b - PROC10 - PROC11 - PROC13 - PROC15 - PROC19 |
|----------------------------------------------------|------------------------------------------------------------------------------|

**2.2 Conditions of use affecting exposure****2.2. CS1: Environment Contributing Scenario: Water-based process (ERC8a, ERC8d)**

|                                         |                                                                                                                                                                                                       |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Environmental release categories</b> | Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d) |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

*Amount used, frequency and duration of use (or from service life)***Amounts used:**

Annual site tonnage 105 kg  
Amount per use 30 kg/day

*Technical and organisational conditions and measures***Control measures to prevent releases**

Pre-treatment of waste water by neutralization

*Conditions and measures related to sewage treatment plant***STP type:**

Onsite Sewage Treatment Plant

**STP effluent (m<sup>3</sup>/day):** 2000

*Conditions and measures related to treatment of waste (including article waste)***Waste treatment**

External treatment and disposal of waste should comply with applicable local and/or national regulations.

**2.2. CS2: Worker Contributing Scenario: General use from professional operators (PROC2, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19)**

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Process Categories</b> | Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Chemical production where opportunity for exposure arises - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Roller application or brushing - Non industrial spraying - Treatment of articles by dipping and pouring - Use as laboratory reagent - Manual activities involving hand contact (PROC2, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19) |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

*Amount used, frequency and duration of use/exposure*

**Amounts used:**

Amount per use 30 kg/day  
Annual site tonnage 105 kg

**Duration:**

Covers daily exposures up to 8 hours

**Frequency:**

Covers frequency up to: 365 days per year

***Technical and organisational conditions and measures*****Technical and organisational measures**

Ensure regular inspection, cleaning and maintenance of equipment and machines.

***Conditions and measures related to personal protection, hygiene and health evaluation*****Personal protection**

Wear suitable gloves tested to EN374.  
Use suitable eye protection.

**2.3 Exposure estimation and reference to its source****2.3. CS1: Environment Contributing Scenario: Water-based process (ERC8a, ERC8d)**

| Release route | Release rate | Release estimation method |
|---------------|--------------|---------------------------|
| Water         | 0.29 kg/day  | N/A                       |

| protection target      | Exposure level             | Calculation method | Risk Characterization Ratio (RCR) |
|------------------------|----------------------------|--------------------|-----------------------------------|
| Sewage treatment plant | 1.45 mg/L                  | N/A                | N/A                               |
| freshwater             | 0.00945 mg/L               | N/A                | N/A                               |
| freshwater sediment    | 4.12 mg/kg KW              | N/A                | N/A                               |
| soil                   | 0.344 mg/kg KW             | N/A                | N/A                               |
| marine water           | 0.00219 mg/L               | N/A                | N/A                               |
| marine sediment        | 0.953 mg/kg KW             | N/A                | N/A                               |
| Air                    | 2.14E-19 mg/m <sup>3</sup> | N/A                | N/A                               |

**2.3. CS2: Worker Contributing Scenario: General use from professional operators (PROC2, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19)**

| Exposure route, Health effect, Exposure indicator | Exposure level             | Calculation method | Risk Characterization Ratio (RCR) |
|---------------------------------------------------|----------------------------|--------------------|-----------------------------------|
| dermal, local, long-term                          | 5000 µg/cm <sup>2</sup>    | N/A                | N/A                               |
| dermal, systemic, long-term                       | < 0.42 mg/kg bw/day        | N/A                | N/A                               |
| inhalative, systemic, long-term                   | 0.000124 mg/m <sup>3</sup> | N/A                | N/A                               |
| inhalative, systemic, long-term                   | 21 mg/m <sup>3</sup>       | N/A                | N/A                               |
| oral, systemic, long-term                         | 2.3 mg/kg bw/day           | N/A                | N/A                               |

## 2.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

### **Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

### 3. ES 3 Consumer use; Various products (PC3, PC31, PC35, PC36)

#### 3.1 TITLE SECTION

|                        |                                                                                                                          |
|------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Exposure Scenario name | Use in cleaning agents                                                                                                   |
| Date - Version         | 09/07/2019 - 1.0                                                                                                         |
| Life Cycle Stage       | Consumer use                                                                                                             |
| Main user group        | Consumer uses                                                                                                            |
| Sector(s) of use       | Professional uses (SU22)                                                                                                 |
| Product Categories     | Air care products (PC3) - Polishes and wax blends (PC31) - Washing and cleaning products (PC35) - Water softeners (PC36) |

#### Environment Contributing Scenario

|                         |               |
|-------------------------|---------------|
| CS1 Water-based process | ERC8a - ERC8d |
|-------------------------|---------------|

#### Consumer Contributing Scenario

|                       |                          |
|-----------------------|--------------------------|
| CS2 Detergent liquids | PC3 - PC31 - PC35 - PC36 |
|-----------------------|--------------------------|

### 3.2 Conditions of use affecting exposure

#### 3.2. CS1: Environment Contributing Scenario: Water-based process (ERC8a, ERC8d)

|                                  |                                                                                                                                                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d) |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### *Amount used, frequency and duration of use (or from service life)*

##### Amounts used:

Annual amount per site 105 kg  
Amount per use 30 kg

#### *Conditions and measures related to treatment of waste (including article waste)*

##### Waste treatment

External treatment and disposal of waste should comply with applicable local and/or national regulations.

#### 3.2. CS2: Consumer Contributing Scenario: Detergent liquids (PC3, PC31, PC35, PC36)

|                    |                                                                                                                       |
|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| Product Categories | Air care products - Polishes and wax blends - Washing and cleaning products - Water softeners (PC3, PC31, PC35, PC36) |
|--------------------|-----------------------------------------------------------------------------------------------------------------------|

#### *Amount used, frequency and duration of use/exposure*

##### Amounts used:

Amount per use 30 kg/day  
Annual amount per site 105 kg

##### Duration:

Covers daily exposures up to 8 hours

##### Frequency:

Covers frequency up to: 365 days per year

#### *Information and behavioural advice for consumers*

##### Information and behavioural advice for consumers:

No specific measures identified.

### 3.3 Exposure estimation and reference to its source

#### 3.3. CS1: Environment Contributing Scenario: Water-based process (ERC8a, ERC8d)

| Release route | Release rate | Release estimation method |
|---------------|--------------|---------------------------|
| Water         | 1.81 kg/day  | N/A                       |

| protection target      | Exposure level             | Calculation method | Risk Characterization Ratio (RCR) |
|------------------------|----------------------------|--------------------|-----------------------------------|
| Sewage treatment plant | 0.0905 mg/L                | N/A                | N/A                               |
| freshwater             | 7.33 mg/L                  | N/A                | N/A                               |
| soil                   | 2.15 mg/kg KW              | N/A                | N/A                               |
| marine water           | 0.00957 mg/L               | N/A                | N/A                               |
| marine sediment        | 4.17 mg/kg KW              | N/A                | N/A                               |
| Air                    | 2.44E-18 mg/m <sup>3</sup> | N/A                | N/A                               |

### 3.2. CS2: Consumer Contributing Scenario: Detergent liquids (PC3, PC31, PC35, PC36)

| Exposure route, Health effect, Exposure indicator | Exposure level         | Calculation method | Risk Characterization Ratio (RCR) |
|---------------------------------------------------|------------------------|--------------------|-----------------------------------|
| oral, local, short-term                           | 0.0207 mg/kg bw/day    | ConsExpo           | N/A                               |
| dermal, local, short-term                         | 0.0465 mg/kg bw/day    | ConsExpo           | N/A                               |
| dermal, systemic, short-term                      | 0.0004242 mg/kg bw/day | ConsExpo           | N/A                               |
| oral, systemic, long-term                         | 0.00045 mg/kg bw/day   | ConsExpo           | N/A                               |
| dermal, local, long-term                          | 0.0465 mg/kg bw/day    | ConsExpo           | N/A                               |
| dermal, systemic, long-term                       | 0.0004242 mg/kg bw/day | ConsExpo           | N/A                               |

## 3.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

### Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## Exposure Scenario, 01/08/2019

| Substance identity |                                                  |
|--------------------|--------------------------------------------------|
| Chemical name      | IDROSSIDO DI SODIO (SODA CAUSTICA SOLUZIONE 30%) |
| CAS No.            | 1310-73-2                                        |
| EINECS No.         | 215-185-5                                        |

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1. **ES 1** Widespread use by professional workers; Various products (PC2, PC14, PC15, PC19, PC20)
2. **ES 2** Consumer use; Various products (PC39, PC20, PC35)

|                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|--|
| 1. ES 1                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Widespread use by professional workers; Various products (PC2, PC14, PC15, PC19, PC20) |  |
| 1.1 TITLE SECTION                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        |  |
| Exposure Scenario name                                                                                                                                                     | Industrial and professional use                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        |  |
| Date - Version                                                                                                                                                             | 01/08/2019 - 1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                        |  |
| Life Cycle Stage                                                                                                                                                           | Widespread use by professional workers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                        |  |
| Main user group                                                                                                                                                            | Professional uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                        |  |
| Sector(s) of use                                                                                                                                                           | Industrial uses (SU3) - Consumer uses (SU21)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                        |  |
| Product Categories                                                                                                                                                         | Adsorbents (PC2) - Metal surface treatment products (PC14) - Non-metal surface treatment products (PC15) - Intermediate (PC19) - Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents (PC20) - Laboratory chemicals (PC21) - Washing and cleaning products (PC35) - Water softeners (PC36) - Water treatment chemicals (PC37)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                        |  |
| Environment Contributing Scenario                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        |  |
| CS1 Covered by                                                                                                                                                             | ERC1 - ERC4 - ERC6a - ERC2 - ERC6b - ERC7 - ERC8a - ERC8b - ERC8d - ERC9a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                        |  |
| Worker Contributing Scenario                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        |  |
| CS2 General use from professional operators                                                                                                                                | PROC5 - PROC1 - PROC2 - PROC3 - PROC4 - PROC8a - PROC8b - PROC9 - PROC10 - PROC11 - PROC13 - PROC15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                        |  |
| 1.2 Conditions of use affecting exposure                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        |  |
| 1.2. CS1: Environment Contributing Scenario: Covered by (ERC1, ERC4, ERC6a, ERC2, ERC6b, ERC7, ERC8a, ERC8b, ERC8d, ERC9a)                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        |  |
| Environmental release categories                                                                                                                                           | Manufacture of the substance - Use of non-reactive processing aid at industrial site (no inclusion into or onto article) - Use of intermediate - Formulation into mixture - Use of reactive processing aid at industrial site (no inclusion into or onto article) - Use of functional fluid at industrial site - Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) - Widespread use of functional fluid (indoor) (ERC1, ERC4, ERC6a, ERC2, ERC6b, ERC7, ERC8a, ERC8b, ERC8d, ERC9a)                                                                                                                                                                                                                       |                                                                                        |  |
| Product (article) characteristics                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        |  |
| Physical form of product:                                                                                                                                                  | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                        |  |
| Concentration of substance in product:                                                                                                                                     | Covers percentage substance in the product up to 100 %.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                        |  |
| Conditions and measures related to treatment of waste (including article waste)                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        |  |
| Waste treatment                                                                                                                                                            | Product residual disposal complies with applicable regulations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        |  |
| 1.2. CS2: Worker Contributing Scenario: General use from professional operators (PROC5, PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC15) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        |  |
| Process Categories                                                                                                                                                         | Mixing or blending in batch processes - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition - Chemical production where opportunity for exposure arises - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - Roller application or brushing - Non industrial spraying - Treatment of |                                                                                        |  |

articles by dipping and pouring - Use as laboratory reagent (PROC5, PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC15)

### *Product (article) characteristics*

#### **Physical form of product:**

Liquid

#### **Concentration of substance in product:**

Covers percentage substance in the product up to 100 %.

### *Amount used, frequency and duration of use/exposure*

#### **Duration:**

Covers daily exposures up to 8 hours

#### **Frequency:**

Covers use up to 200 days per year

### *Technical and organisational conditions and measures*

#### **Technical and organisational measures**

- Sample via a closed loop or other system to avoid exposure.
- Handle substance within a closed system.
- Provide extract ventilation to points where emissions occur.
- Store substance within a closed system.

### *Conditions and measures related to personal protection, hygiene and health evaluation*

#### **Personal protection**

- Wear suitable gloves tested to EN374.
- Use eye protection according to EN 166.

## 1.3 Exposure estimation and reference to its source

### **1.3. CS2: Worker Contributing Scenario: General use from professional operators (PROC5, PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC15)**

| Exposure route, Health effect, Exposure indicator | Exposure level         | Calculation method | Risk Characterization Ratio (RCR) |
|---------------------------------------------------|------------------------|--------------------|-----------------------------------|
| inhalative, systemic, long-term                   | 0.17 mg/m <sup>3</sup> | N/A                | N/A                               |

## 1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

#### **Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## 2. ES 2 Consumer use; Various products (PC39, PC20, PC35)

### 2.1 TITLE SECTION

|                        |                                                                                                                                                                                  |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Exposure Scenario name | Consumer goods                                                                                                                                                                   |
| Date - Version         | 01/08/2019 - 1.0                                                                                                                                                                 |
| Life Cycle Stage       | Consumer use                                                                                                                                                                     |
| Main user group        | Consumer uses                                                                                                                                                                    |
| Sector(s) of use       | Consumer uses (SU21)                                                                                                                                                             |
| Product Categories     | Cosmetics, personal care products (PC39) - Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents (PC20) - Washing and cleaning products (PC35) |

### Environment Contributing Scenario

|                |                               |
|----------------|-------------------------------|
| CS1 Covered by | ERC8a - ERC8b - ERC8d - ERC9a |
|----------------|-------------------------------|

### Consumer Contributing Scenario

|              |                    |
|--------------|--------------------|
| CS2 Consumer | PC39 - PC20 - PC35 |
|--------------|--------------------|

## 2.2 Conditions of use affecting exposure

### 2.2. CS1: Environment Contributing Scenario: Covered by (ERC8a, ERC8b, ERC8d, ERC9a)

|                                  |                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental release categories | Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) -<br>Widespread use of reactive processing aid (no inclusion into or onto article, indoor) -<br>Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) -<br>Widespread use of functional fluid (indoor) (ERC8a, ERC8b, ERC8d, ERC9a) |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### *Product (article) characteristics*

#### Physical form of product:

Liquid

#### Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

### *Conditions and measures related to treatment of waste (including article waste)*

#### Waste treatment

Product residual disposal complies with applicable regulations.

### 2.2. CS2: Consumer Contributing Scenario: Consumer (PC39, PC20, PC35)

|                    |                                                                                                                                                                                |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Categories | Cosmetics, personal care products - Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents - Washing and cleaning products (PC39, PC20, PC35) |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### *Product (article) characteristics*

#### Physical form of product:

Liquid

#### Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

### *Information and behavioural advice for consumers*

#### Information and behavioural advice for consumers:

Avoid contact with eyes  
Avoid using without gloves.  
Do not inhale spray vapour.  
Packaging with child-resistant fastening  
Keep away from children.  
It is recommended to wear household gloves when handling undiluted product.

## 2.3 Exposure estimation and reference to its source

N/A

## 2.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

### **Guidance to check compliance with the exposure scenario:**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.