

**SCI® 5580**

According to the Regulation No. 1907/2006/EC (REACH)  
Annex II, as amended by Regulation No. 2020/878/EC

Date of revision: 2024-10-03 / EN  
Date of previous revision: 2020-12-18 / EN

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

**Product name:** SCI® 5580

**Product description:** Potassium hydroxide, tetrasodium EDTA and surfactant aqueous solution.

**Product type:** Liquid.

**UFI:** -

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

Relevant identified uses: Alkaline concentrate cleaner for RO membranes.

**Uses advised against:**

Do not use for non-specified uses.

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

Company: JSC „Arionex LT“

Address: Ašigalio str. 6c, LT-49142, Kaunas, Lithuania

Telephone: +370 37 214669

E-mail: [info@arionex.eu](mailto:info@arionex.eu)

**1.4. Emergency telephone**

Poisoning control and information bureau

Telephone number: 8 5 236 20 52

E-mail: [info@tox.lt](mailto:info@tox.lt)

Work time: All day (24 hours).

**SECTION 2: Hazards Identification****2.1. Classification of the substance or mixture**

**Product type:** Mixture

**According to Regulation (EC) No 1272/2008 [CLP]**

Skin corrosion Category 1 H314 Causes severe skin burns and eye damage.

Eye damage Category 1 H318 Causes serious eye damage.

**2.2. Label elements****According to Regulation (EC) No 1272/2008 [CLP].****Pictogram:**

GHS05

**Signal Word:** Dangerous.

**Hazardous substances in the mixture:**

Potassium hydroxide, Na<sub>4</sub> EDTA.

**Hazard Statement:**

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

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**Precautionary Statements:****Prevention:**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

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

**Response:**

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.  
Rinse skin with water/shower.

P363 Wash contaminated clothing before reuse.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 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 or doctor/physician.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/container to accordance with local regulations.

**2.3. Other hazards****Evaluation of PBT and vPvB results**

**PBT:** Not applicable.

**vPvB:** Not applicable.

No specific dangers known, if the regulations/notes for storage and handling are considered.

**SECTION 3: Composition/Information on Ingredients****3.1. Substances**

Not applicable.

**3.2. Mixtures**

Chemical name: Potassium hydroxide, tetrasodium EDTA and surfactant aqueous solution.

| Name                | CAS No.    | EINECS No. | Index No.    | REACH Registration No. | Concentration range (%) | Classification according to Regulation (EC) No 1272/2008 [CLP] |
|---------------------|------------|------------|--------------|------------------------|-------------------------|--|
| Potassium hydroxide | 1310-58-3  | 215-181-3  | 019-002-00-8 | 01-2119487136-33-xxxx  | 1-<5                    | Met. Corr. 1. H290<br>Skin Corr. 1A. H314<br>Acute tox.4. H302 |
| Tetrasodium EDTA    | 64-02-8    | 200-573-9  | 607-428-00-2 | 012119486762-27        | 1-<5                    | Acute Tox. 4 oral H302<br>Eye Dam. 1 H318                      |
| Surfactant          | 97489-15-1 | 307-055-2  | -            | 01-2119488530-36       | 1-<5                    | Acute Tox. 4 Skin Irrit 2<br>Eye Dam. 1 H318                   |

For the full text of the H-statements mentioned in the Section 16.

**Additional information:**

Specific concentration limits: Potassium hydroxide

Skin Corr. 1A; H314:  $C \geq 5\%$

Skin Corr. 1B; H314:  $2\% \leq C < 5\%$

Skin Irrit. 2; H315:  $0,5\% \leq C < 2\%$

Eye Irrit. 2; H319:  $0,5\% \leq C < 2\%$

M-factor: None.

ATE (Acute toxicity estimates):  $ATE_{mix}=5000\text{ mg/kg bw}$  (calculated, oral).

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**SECTION 4: First-Aid Measures****4.1. Description of first aid measures**

Remove contaminated clothing.

**If inhaled:**

The product is not volatile. If symptoms are felt, it is recommended to bring to fresh air to breathe.

**On skin contact:**

Remove contaminated clothing, footwear, watches, etc. And clean thoroughly before re-using them.  
Wash immediately with plenty of water. Seek medical treatment in all cases of irritation.

**On contact with eyes:**

Rinse immediately with plenty of water for at least 10-15 minutes. Immediately obtain medical attention.

**On ingestion:**

Immediately rinse mouth and drink at least 0.5 liters of water, seek medical attention.

**4.2. Most important symptoms and effects, both acute and delayed****Both acute symptoms:**

|                       |   |
|-----------------------|---|
| If inhaled:           | No information available.                     |
| On skin contact:      | May cause skin irritation or skin burns.      |
| On contact with eyes: | May causes eye irritation and damage eyes.    |
| On ingestion:         | May cause burns of mouth, throat and stomach. |

**Delayed symptoms:**

|                       |   |
|-----------------------|---|
| If inhaled:           | No information available.                   |
| On skin contact:      | Irritation, allergic reactions, skin burns. |
| On contact with eyes: | Tearing, redness, pain, eye damage.         |
| On ingestion:         | Stomach ache.                               |

**4.4. Indication of any immediate medical attention and special treatment needed**

Treatment: No information available.

**SECTION 5: Firefighting Measures****5.1. Extinguishing media****Suitable extinguishing media:**

All types of extinguishing media are suitable: water, dry powder, carbon dioxide, foam, sand and other.

**Unsuitable extinguishing media:**

None known.

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

Dangerous products of combustion of the mixture was not observed. Sulfur oxides may be formed.

**5.3. Advice for firefighters**

Wear protective working tools such boots, coveralls, gloves, eye and face protection.  
EN 469 - Protective clothing for firemen.

**SECTION 6: Accidental Release Measures****6.1. Personal precautions, protective equipment and emergency procedures****6.1.1. For non-emergency personnel**

Avoid contact with skin and eyes. Wear personal protective equipment as described under Heading 8.  
ensure adequate ventilation in the workplace.

**6.1.2. For emergency responders**

Avoid contact with skin and eyes. Wear personal protective equipment as described under Heading 8.

**6.2. Environmental precautions**

Do not wash product down sewage and drainage systems or into bodies of water. If getting really happened, heavily diluted with water. The mixture don't pose a significant risk to health.

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

Absorb the spillage into sand or other inert material, shovel into suitable containers. If containment is not possible and material enters the drain, dilute as much as possible with water.

**6.4. Reference to other sections**

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

**SECTION 7: Handling and Storage****7.1. Precautions for safe handling**

In the workplace should be equipped good ventilation. Do not eat, drink or smoke in the workplace. Avoid possible contact with skin, eyes or mouth. Wash hands after use. If work clothes or protective equipment become contaminated, remove them immediately. Follow good manufacturing practices. Avoid release to the environment. Keep away from water-reactive substances. Protection against fire and explosion: No special precautions necessary.

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

The product should be stored in a cool, dry area in original manufacturer's packaging.

**Storage stability:**

Keep storage area should be dry, cool, 5 to 35 ° C and ventilated. Avoid freezing and high temperature change.

Unsuitable (incompatible) storage of chemicals: Strong inorganic acids

The mixture don't present a risk of ignition or explosion.

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

Used as a alkaline concentrate for RO membranes.

Diluted by permeate product must be constantly and proportionally dosed at the inlet.

**SECTION 8: Exposure Controls/Personal Protection****8.1. Control parameters**

Components with occupational exposure limits:

| Name of chemical material |         | Exposure limits   |     |                    |     |                   |
|---------------------------|---------|-------------------|-----|--------------------|-----|-------------------|
|                           |         | long-term effects |     | short-term effects |     | DNEL              |
| -                         | CAS No. | mg/m <sup>3</sup> | ppm | mg/m <sup>3</sup>  | ppm | mg/m <sup>3</sup> |
| -                         | -       | -                 | -   | -                  | -   | -                 |

**Information on potassium hydroxide CAS No. 1310-58-3**

TWA (8 hours) 1 mg/m<sup>3</sup>.

TLV (threshold limit value) – 2 mg/m<sup>3</sup>

**DNEL values:**

DNEL for workers, long-term, local effect, inhalation: 1 mg/m<sup>3</sup>

DNEL for users, long-term, local effect, inhalation: 1 mg/m<sup>3</sup>

**DNEL values: EDTA\*4Na (CAS no. 64-02-8)**

DNEL for workers:

Long term effects - systemic and local effects, inhalation: 1.5 mg/m<sup>3</sup>

Short term effects - systemic and local effects, inhalation: 3 mg/m<sup>3</sup>

DNEL for users:

Long term effects - systemic and local effects, inhalation: 0.6 mg/m<sup>3</sup>

Short term effects - systemic and local effects, inhalation: 1.2 mg/m<sup>3</sup>

Long term effects - systemic and local effects, oral: 25 mg/m<sup>3</sup>

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**PNEC values:****EDTA\*4Na (CAS no. 64-02-8):**

PNEC fresh water: 2.2 mg/l

PNEC sea water: 0.22 mg/l

PNEC intermittent release: 1.2 mg/l

PNEC soil: 0.72 mg/kg

PNEC STP: 43 mg/l

**8.2. Exposure controls****8.2.1. Personal protective equipment**

**General safety and hygiene measures:** General indoor ventilation. Do not eat, drink or smoke when working with product to avoid contact with skin or mouth. Remove contaminated clothing, footwear, etc., and clean thoroughly before re-using them.

**Respiratory protection.** Not necessary.

**Eye protection.** Wear approved glasses or safety goggles (EN 166) to prevent contact with eyes.

**Skin protection.** Wear rubber gloves (EN 374), usual work clothes, rubber boots.

**8.2.2. Environmental exposure controls**

Do not wash product down sewage and drainage systems or into bodies of water.

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

|  |                           |
|--|---------------------------|
| <b>Physical state:</b>                                     | Liquid;                   |
| <b>Colour:</b>   | Colorless - yellowish;    |
| <b>Odour:</b>  | Weak smell product;       |
| <b>Odour threshold:</b>                                    | Not determined;           |
| <b>Melting/freezing point:</b>                             | -5°C;                     |
| <b>Boiling point/range:</b>                                | 100 ÷ 130 °C;             |
| <b>Flammability (solid, gas):</b>                          | Not applicable;           |
| <b>Upper/lower flammability:</b>                           | Not determined;           |
| <b>Flash point:</b>  | Not determined;           |
| <b>Auto-ignition temperature:</b>                          | Not determined;           |
| <b>Decomposition temperature:</b>                          | Not determined;           |
| <b>pH (20 °C):</b>   | 13,2;                     |
| <b>Viscosity:</b>  | Not determined;           |
| <b>Solubility:</b>   | Soluble in water;         |
| <b>Partitioning coefficient n-octanol/water (log Kow):</b> | Not applicable;           |
| <b>Vapour pressure:</b>                                    | Not determined;           |
| <b>Density (20 °C):</b>                                    | 1,084 g/cm <sup>3</sup> ; |
| <b>Relative vapor density:</b>                             | Not determined;           |
| <b>Particle size:</b>                                      | Not applicable;           |

All the listed properties apply to the product (mixture).

**9.2. Other Information**

|                           |                 |
|---------------------------|-----------------|
| Explosive materials:      | Not applicable. |
| Flammable gases:          | Not applicable. |
| Aerosols:                 | Not applicable. |
| Oxidizing gases:          | Not applicable. |
| Compressed gas:           | Not applicable. |
| Flammable liquids:        | Not applicable. |
| Flammable solids:         | Not applicable. |
| Self-reactive substances: | Not applicable. |
| Pyrophoric liquids:       | Not applicable. |
| Pyrophoric solids:        | Not applicable; |

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Substances and mixtures which, in contact with water, emit flammable gases: Not applicable.  
Self-heating substances and mixtures: Not applicable.  
Oxidizing liquids: Not applicable.  
Oxidizing solids: Not applicable.  
Organic peroxides: Not applicable.  
Corrosive to metals: Not applicable.  
Desensitized explosives: Not applicable.

**SECTION 10: Stability and Reactivity****10.1. Reactivity**

No hazardous reactions if stored and handled as prescribed/indicated.

**10.2. Chemical stability**

The product is stable if stored and handled as prescribed/indicated (see Heading 7).

**10.3. Possibility of hazardous reactions**

The heat released by mixing with strong inorganic acids (exothermic reaction).

**10.4. Conditions to avoid**

Avoid freezing.

**10.5. Incompatible materials**

The heat released by mixing with strong inorganic acids (exothermic reaction).

**10.6. Hazardous decomposition products**

The product is stable, but heating may release hazardous decomposition products: CO, CO<sub>2</sub>, PO<sub>x</sub>, NO<sub>x</sub>.

**SECTION 11: Toxicological Information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

Skin contact. Direct contact with product may cause skin irritation/skin burns. Based on available data, the classification are not met.

Ingestion. Tests with rats: LD50=333 mg/kg bw/day (potassium hydroxide). ATEmix=5000 mg/kg bw. Based on available data, the classification are not met.

Inhalation. Not volatile. Test with rats: LC50: > 1 mg/l (Na4\*EDTA). Based on available data, the classification are not met.

**Skin corrosion / irritation:** Skin Corrosion 1 Causes severe skin burns and eye damage. Skin corrosion is caused by potassium hydroxide.

**Eye damage / irritation:** Eye Damage, Category 1. Causes serious eye irritation. Eye damage is caused by potassium hydroxide.

**Sensitization:** Skin: Based on available data, the classification are not met.  
Respiratory: Based on available data, the classification are not met.

**Mutagenicity:** Based on available data, the classification are not met.

**Carcinogenicity:** Based on available data, the classification are not met.

**Reproductive toxicity:** Based on available data, the classification are not met.

**Specific target organ toxicity (STOT SE) – single exposure:** Based on available data, the classification are not met.

**Specific target organ toxicity (STOT RE) – repeated exposure:** Based on available data, the classification are not met.

**Aspiration hazard:** Based on available data, the classification are not met.

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**Information on likely routes of exposure**

Skin contact: Direct contact with product may cause serious eye damage or irritation.

Eye contact: Mixture causes eye irritation and damage. Eye protection must be worn.

Inhalation: The mixture does not present a respiratory hazard. The mixture is not volatile.

Ingestion: The mixture does present a risk of ingestion.

**Symptoms related to the physical, chemical and toxicological characteristics**

Skin contact: Direct contact with product may cause serious eye damage or irritation.

Eye contact: Mixture causes eye irritation and damage. Eye protection must be worn.

Inhalation: The mixture does not present a respiratory hazard. The mixture is not volatile.

Ingestion: The mixture is not dangerous if swallowed.

**Delayed and immediate effects as well as chronic effect from short and long-term exposure**Short time exposure:

Potential immediate effect: Not available.

Potential delayed effect: Not available.

Long term exposure:

Potential immediate effect: Not available.

Potential delayed effect: Not available.

**Potential chronic health effect:**

Carcinogenicity: No known significant effect or critical hazards.

Mutagenicity: No known significant effect or critical hazards.

Reproductive toxicity: No known significant effect or critical hazards.

**11.2. Information on other hazards**Endocrine disrupting properties:

Based on available data, the classification are not met.

Other information: None.

**SECTION 12: Ecological Information****12.1. Toxicity**

The product does not have any known adverse effects on the aquatic organisms tested. The addition of large amounts of product to water may cause a rise in pH (alkalinity).

**Information on Potassium hydroxide**

Toxicity to fish:

LC50=50 - 165 mg/l/ 96 h.

Toxicity to invertebrates:

EC50=30 - 1000 mg/l/ 48 h. - Daphnia magna (OECD 202)

**Information on Tetrasodium EDTA CAS no. 64-02-8**

Acute toxicity for fish:

LC50 > 100 mg/l, Lepomis macrochirus 96 h.

NOEC > 36,9 mg/l Brachydanio rerio 35 days

Acute toxicity for invertebrates:

EC50 > 100 mg/l, Daphnia magna (Daphnia magna), 48 h.

Acute toxicity for microorganisms:

EC50 > 100 mg/l, Scenedesmus obliquus 72 h.

EC20 (30 min) > 500 mg/l, activated sludge

Conclusion: Based on available data, the classification are not met.

**12.2. Persistence and degradability**

**Information on Potassium hydroxide:** The substance is inorganic and is not subject to biodistribution. KOH dissociates into ions K<sup>+</sup> and OH<sup>-</sup>.



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**Information on Tetrasodium EDTA CAS no. 64-02-8**

Assessment of biodegradation and elimination (H<sub>2</sub>O):

It has been established that the substance is degradable by microorganisms.

Not easily decomposed by microorganisms (according to OECD criteria).

**12.3. Bioaccumulative potential****Information on Tetrasodium EDTA CAS no. 64-02-8**

Bioconcentration factor (BCF): about 1.8 (28 d), *Lepomis macrochirus*

It does not appreciably accumulate in organisms.

**12.4. Mobility in soil**

Potassium hydroxide is highly mobile in soil and soluble in air. Easily converted to carbonate.

**Information on Tetrasodium EDTA CAS no. 64-02-8**

Volatility: The material will not evaporate from the water surface into the atmosphere.

Adsorption to soil: Absorption to solid soil phase is not likely.

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

The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

**12.6. Endocrine disrupting properties**

The substances in the mixture don't have endocrine disrupting properties.

**12.7. Other adverse effects**

None.

**SECTION 13: Disposal Considerations****13.1. Waste treatment methods**

Not classified as harmful to aquatic organisms. Not classified as harmful to birds. Not allowed to dispose of empty containers or waste into the environment. Dispose of according to the local legislation. Empty containers should be returned to the supplier.

|                         |           |   |
|-------------------------|-----------|---|
| Waste code of packages: | 15 01 02  | plastic packaging   |
|                         | 15 01 10* | packaging containing residues of or contaminated by hazardous substances  |
| Waste code of mixture:  | 06 02 04* | alkaline solutions GMTN waste - sodium hydroxide and potassium hydroxide. |

**SECTION 14: Transport Information****14.1. UN Number or ID number**

None.

**14.2. UN Proper Shipping Name**

None.

**14.3. Transport hazard class(es)**

None.

**14.4. Packing Group**

None.

**14.5. Environmental hazards**

None.

**14.6. Special precautions for user**

None.

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

None.



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The product is not covered by the international regulation on the transport of dangerous goods (IMDG/ IATA, ADR/RID) and therefore no classification is required. No special precautions are needed apart from those mentioned under Heading 8.

**SECTION 15: Regulatory Information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010/EC, Regulation (EC) No 1272/2008 [CLP] and Regulation (EC) No. 2020/878.

**15.2. Chemical Safety Assessment**

Chemical Safety Assessment not required.

**SECTION 16: Other Information**

**SCI® 5580** - For industrial use only.

**SCI® 5580** safety data sheets and technical information developed by the manufacturer.

**Full text of H-Statements**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

**Abbreviations:**

CAS Chemical Abstracts Service

EINECS European Inventory of Existing Chemical Substances

GHS Globally Harmonised System of Classification and Labelling of Chemicals

CLP Classification, labelling and packaging of substances and mixtures

LD50 Lethal Concentration

LC50 Median lethal dose

EC50 Median effective concentration

UN United Nations number

ATE Acute toxicity estimate

DNEL Derived no effect level

PNEC Predicted non-effect concentration

PBT Persistent, bioaccumulative and toxic vPvB Very persistent and very bioaccumulate

*The information on this data sheet reflects the currently available knowledge and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product, including the use of the product in combination with any other product or any other process, is the responsibility of the user. It is implicate that the user is responsible for determining appropriate safety measures and for applying the legislation covering his own activities. Safety data sheet available for professional user on request.*