

03/19/2022

### Kit Components

| Product code         | Description                                |
|----------------------|--|
| <b>CAY939-VxxAAE</b> | <b>CA71AL Reagent Set<br/>for aluminum</b> |

Components:

|          |                          |
|----------|--------------------------|
| 71260903 | Reagent AL1 for aluminum |
| 71260904 | Reagent AL2 for aluminum |
| 51517139 | Reagent AL3 for aluminum |



## 1 Identification

### Product identifier

**Trade name:** Reagent AL1

**Synonym:** *for aluminum*

**Article number:** 71260903

**Application of the substance / the mixture** *Laboratory chemicals*

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

#### Manufacturer/Supplier:

*Endress+Hauser  
Conducta GmbH+Co. KG  
Dieselstraße 24  
D-70839 Gerlingen*

#### Further information obtainable from:

*Phone: +49 (0)7156 209-10117  
E-Mail: MSDS.PCC@endress.com*

**Emergency telephone number:** +1 604 682 5050

## 2 Hazard identification

### Classification of the substance or mixture

*The product is not classified, according to the Globally Harmonised System (GHS).*

#### Label elements

**GHS label elements** *Void*

**Hazard pictograms** *Void*

**Signal word** *Void*

**Hazard statements** *Void*

#### Other hazards

*The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.*

## \* 3 Composition/Information on ingredients

### Chemical characterisation: Mixtures

**Description:** *aqueous solution*

**Dangerous components:** *Void*

**Additional information:** *For the wording of the listed hazard phrases refer to section 16.*

## 4 First-aid measures

### Description of first aid measures

**General information:** *No special measures required.*

**After inhalation:** *Supply fresh air; consult doctor in case of complaints.*

**After skin contact:** *Generally the product does not irritate the skin.*

**After eye contact:** *Rinse opened eye for several minutes under running water.*

**After swallowing:** *If symptoms persist consult doctor.*

### Information for doctor:

**Most important symptoms and effects, both acute and delayed**

*No further relevant information available.*

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

*No further relevant information available.*

(Contd. on page 2)

— CDN —



Trade name: Reagent AL1

(Contd. of page 1)

## 5 Fire-fighting measures

**Extinguishing media****Suitable extinguishing agents:***CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.***For safety reasons unsuitable extinguishing agents:** *no further information***Special hazards arising from the substance or mixture** *No further relevant information available.***Advice for firefighters** *No further relevant information available.***Protective equipment:** *No special measures required.*

## 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures** *Wear protective clothing.***Environmental precautions:***Do not allow product to reach sewage system or any water course.**Inform respective authorities in case of seepage into water course or sewage system.**Dilute with plenty of water.**Do not allow to enter sewers/ surface or ground water.***Methods and material for containment and cleaning up:***Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).**Dispose contaminated material as waste according to item 13.***Reference to other sections***No dangerous substances are released.**See Section 7 for information on safe handling.**See Section 8 for information on personal protection equipment.**See Section 13 for disposal information.*

## 7 Handling and storage

**Precautions for safe handling** *No special measures required.***Information about fire - and explosion protection:** *No special measures required.***Storage:****Requirements to be met by storerooms and receptacles:** *No special requirements.***Information about storage in one common storage facility:** *Not required.***Further information about storage conditions:** *None.***Storage class:** 12**Specific end use(s)** *No further relevant information available.*

## 8 Exposure controls/ Personal protection

**Additional information about design of technical facilities:** *No further data; see item 7.***Control parameters****Ingredients with limit values that require monitoring at the workplace:***The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.***Additional information:** *The lists valid during the making were used as basis.***Exposure controls****Personal protective equipment:****General protective and hygienic measures:***The usual precautionary measures are to be adhered to when handling chemicals.***Respiratory protection:** *Not required.***Protection of hands:** *No chemical-protective gloves required.***Material of gloves***The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several*

(Contd. on page 3)



**Trade name: Reagent AL1**

(Contd. of page 2)

substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Not required.

**Body protection:** Protective work clothing

**9 Physical and chemical properties****Information on basic physical and chemical properties****General Information****Appearance:**

|                  |                 |
|------------------|-----------------|
| Form:            | Fluid           |
| Colour:          | Clear           |
| Odour:           | Characteristic  |
| Odour threshold: | Not determined. |
| pH-value:        | Slightly acidic |

**Change in condition**

|  |               |
|--|---------------|
| Melting point/freezing point:            | Undetermined. |
| Initial boiling point and boiling range: | 100 °C        |

**Flash point:** Not applicable.

**Flammability (solid, gas):** Not applicable.

**Decomposition temperature:** Not determined.

**Auto-ignition temperature:** Product is not selfigniting.

**Explosive properties:** Product does not present an explosion hazard.  
Not determined.

**Explosion limits:**

|        |                 |
|--------|-----------------|
| Lower: | Not determined. |
| Upper: | Not determined. |

**Vapour pressure at 20 °C:** 23 hPa

**Density:** Not determined.

**Relative density** Not determined.

**Vapour density** Not determined.

**Evaporation rate** Not determined.

**Solubility in / Miscibility with water:**

Fully miscible.

**Partition coefficient: n-octanol/water:** Not determined.

**Viscosity:**

|            |                 |
|------------|-----------------|
| Dynamic:   | Not determined. |
| Kinematic: | Not determined. |

**Solvent content:**

**Water:** 82.3 %

**Solids content:** 0.0 %

**Other information**

No further relevant information available.

(Contd. on page 4)

— CDN —



Trade name: Reagent AL1

(Contd. of page 3)

## 10 Stability and reactivity

**Reactivity** No further relevant information available.**Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**Possibility of hazardous reactions** No dangerous reactions known.**Conditions to avoid** No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**Information on toxicological effects****Acute toxicity****Primary irritant effect:****Skin corrosion/irritation** No irritant effect.**Serious eye damage/irritation** No irritating effect.**Respiratory or skin sensitisation** No sensitising effects known.**Additional toxicological information:**

The product is not subject to classification according to the calculation method of the General EU

Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

## 12 Ecological information

**Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behaviour in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.

## 13 Disposal considerations

**Waste treatment methods****Recommendation** Smaller quantities can be disposed of with household waste.**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

**UN-Number****ADN, IMDG, IATA**

Void

(Contd. on page 5)

— CDN —



## Trade name: Reagent AL1

(Contd. of page 4)

|  |  |
|--|--|
| UN proper shipping name  |  |
| ADR, ADN, IMDG, IATA   | Void   |
| Transport hazard class(es)   |  |
| ADR, ADN, IMDG, IATA   |  |
| Class  | Void   |
| Packing group  |  |
| ADR, IMDG, IATA  | Void   |
| Environmental hazards:   |  |
| Marine pollutant:  | No   |
| Special precautions for user                                       | Not applicable.                                      |
| Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable.                                      |
| Transport/Additional information:                                  | Not dangerous according to the above specifications. |
| UN "Model Regulation":   | Void   |

## 15 Regulatory information

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

GHS label elements Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

National regulations:

Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: PCC-TWR

Contact: MSDS.pcc@endress.com

Date of the latest revision of the safety data sheet 03/19/2022 / 7

**Abbreviations and acronyms:**

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

\* Data compared to the previous version altered.



## 1 Identification

**Product identifier**

**Trade name:** Reagent AL2

**Synonym:** *for aluminum*

**Article number:** 71260904

**Application of the substance / the mixture** *Laboratory chemicals*

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

**Manufacturer/Supplier:**

*Endress+Hauser*

*Conducta GmbH+Co. KG*

*Dieselstraße 24*

*D-70839 Gerlingen*

**Further information obtainable from:**

*Phone: +49 (0)7156 209-10117*

*E-Mail: MSDS.PCC@endress.com*

**Emergency telephone number:** +1 604 682 5050

## 2 Hazard identification

**Classification of the substance or mixture**

*The product is not classified, according to the Globally Harmonised System (GHS).*

**Label elements**

**GHS label elements** *Void*

**Hazard pictograms** *Void*

**Signal word** *Void*

**Hazard statements** *Void*

**Other hazards**

*The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.*

## 3 Composition/Information on ingredients

**Chemical characterisation:** **Mixtures**

**Description:** *aqueous solution*

**Dangerous components:** *Void*

**Additional information:** *For the wording of the listed hazard phrases refer to section 16.*

## 4 First-aid measures

**Description of first aid measures**

**General information:** *No special measures required.*

**After inhalation:** *Supply fresh air; consult doctor in case of complaints.*

**After skin contact:** *Generally the product does not irritate the skin.*

**After eye contact:** *Rinse opened eye for several minutes under running water.*

**After swallowing:** *If symptoms persist consult doctor.*

**Information for doctor:**

**Most important symptoms and effects, both acute and delayed**

*No further relevant information available.*

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

*No further relevant information available.*

(Contd. on page 2)

— CDN —



---

Trade name: Reagent AL2

---

(Contd. of page 1)

---

**\* 5 Fire-fighting measures****Extinguishing media****Suitable extinguishing agents:***CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.***For safety reasons unsuitable extinguishing agents:** *no further information***Special hazards arising from the substance or mixture** *No further relevant information available.***Advice for firefighters** *No further relevant information available.***Protective equipment:** *No special measures required.*

---

**6 Accidental release measures****Personal precautions, protective equipment and emergency procedures** *Wear protective clothing.***Environmental precautions:** *Dilute with plenty of water.***Methods and material for containment and cleaning up:***Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).***Reference to other sections***No dangerous substances are released.**See Section 7 for information on safe handling.**See Section 8 for information on personal protection equipment.**See Section 13 for disposal information.*

---

**7 Handling and storage****Precautions for safe handling** *No special measures required.***Information about fire - and explosion protection:** *No special measures required.***Storage:****Requirements to be met by storerooms and receptacles:** *No special requirements.***Information about storage in one common storage facility:** *Not required.***Further information about storage conditions:** *None.***Storage class:** 12**Specific end use(s)** *No further relevant information available.*

---

**8 Exposure controls/ Personal protection****Additional information about design of technical facilities:** *No further data; see item 7.***Control parameters****Ingredients with limit values that require monitoring at the workplace:***The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.***Additional information:** *The lists valid during the making were used as basis.***Exposure controls****Personal protective equipment:****General protective and hygienic measures:***The usual precautionary measures are to be adhered to when handling chemicals.***Respiratory protection:** *Not required.***Protection of hands:** *No chemical-protective gloves required.***Material of gloves***The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.*

(Contd. on page 3)



**Trade name: Reagent AL2**

(Contd. of page 2)

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** *Not required.*

**Body protection:** *Protective work clothing*

**9 Physical and chemical properties****Information on basic physical and chemical properties****General Information****Appearance:**

|                         |                        |
|-------------------------|------------------------|
| <b>Form:</b>            | <i>Fluid</i>           |
| <b>Colour:</b>          | <i>Dark red</i>        |
| <b>Odour:</b>           | <i>Odourless</i>       |
| <b>Odour threshold:</b> | <i>Not determined.</i> |
| <b>pH-value:</b>        | <i>Neutral</i>         |

**Change in condition**

|   |               |
|---|---------------|
| <b>Melting point/freezing point:</b>            | <i>0 °C</i>   |
| <b>Initial boiling point and boiling range:</b> | <i>100 °C</i> |

**Flash point:** *Not applicable.*

**Flammability (solid, gas):** *Not applicable.*

**Decomposition temperature:** *Not determined.*

**Auto-ignition temperature:** *Product is not selfigniting.*

**Explosive properties:** *Product does not present an explosion hazard.  
Not determined.*

**Explosion limits:**

|               |                        |
|---------------|------------------------|
| <b>Lower:</b> | <i>Not determined.</i> |
| <b>Upper:</b> | <i>Not determined.</i> |

**Vapour pressure at 20 °C:** *23 hPa*

**Density at 20 °C:** *1 g/cm<sup>3</sup>*

**Relative density** *Not determined.*

**Vapour density** *Not determined.*

**Evaporation rate** *Not determined.*

**Solubility in / Miscibility with water:**

*Fully miscible.*

**Partition coefficient: n-octanol/water:** *Not determined.*

**Viscosity:**

|                   |                        |
|-------------------|------------------------|
| <b>Dynamic:</b>   | <i>Not determined.</i> |
| <b>Kinematic:</b> | <i>Not determined.</i> |

**Solvent content:**

|                        |               |
|------------------------|---------------|
| <b>Water:</b>          | <i>99.9 %</i> |
| <b>Solids content:</b> | <i>0.0 %</i>  |

**Other information** *No further relevant information available.*

**10 Stability and reactivity**

**Reactivity** *No further relevant information available.*

(Contd. on page 4)



## Trade name: Reagent AL2

(Contd. of page 3)

**Chemical stability****Thermal decomposition / conditions to be avoided:***No decomposition if used according to specifications.***Possibility of hazardous reactions** *No dangerous reactions known.***Conditions to avoid** *No further relevant information available.***Incompatible materials:** *No further relevant information available.***Hazardous decomposition products:** *No dangerous decomposition products known.***11 Toxicological information****Information on toxicological effects****Acute toxicity****Primary irritant effect:****Skin corrosion/irritation** *No irritant effect.***Serious eye damage/irritation** *No irritating effect.***Respiratory or skin sensitisation** *No sensitising effects known.***Additional toxicological information:***The product is not subject to classification according to the calculation method of the General EU**Classification Guidelines for Preparations as issued in the latest version.**When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.***12 Ecological information****Toxicity****Aquatic toxicity:** *No further relevant information available.***Persistence and degradability** *No further relevant information available.***Behaviour in environmental systems:****Bioaccumulative potential** *No further relevant information available.***Mobility in soil** *No further relevant information available.***Additional ecological information:****General notes:** *Not hazardous for water.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***Other adverse effects** *No further relevant information available.***13 Disposal considerations****Waste treatment methods****Recommendation** *Smaller quantities can be disposed of with household waste.***Uncleaned packaging:****Recommendation:** *Disposal must be made according to official regulations.***Recommended cleansing agents:** *Water, if necessary together with cleansing agents.***\*14 Transport information****UN-Number****ADN, IMDG, IATA**

Void

**UN proper shipping name****ADR, ADN, IMDG, IATA**

Void

**Transport hazard class(es)****ADR, ADN, IMDG, IATA****Class**

Void

**Packing group****ADR, IMDG, IATA**

Void

(Contd. on page 5)

—CDN—



**Trade name: Reagent AL2**

(Contd. of page 4)

**Environmental hazards:****Marine pollutant:** No**Special precautions for user** Not applicable.**Transport in bulk according to Annex II of  
Marpol and the IBC Code** Not applicable.**Transport/Additional information:** Not dangerous according to the above specifications.**UN "Model Regulation":** Void**15 Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture**

No further relevant information available.

**GHS label elements** Void**Hazard pictograms** Void**Signal word** Void**Hazard statements** Void**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

**Department issuing SDS:** PCC-TWR**Contact:** MSDS.pcc@endress.com**Date of the latest revision of the safety data sheet** 03/19/2022 / 3**Abbreviations and acronyms:**

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

**\* Data compared to the previous version altered.**

— CDN —



## 1 Identification

### Product identifier

**Trade name:** Reagent AL3

**Synonym:** *for aluminum*

**Article number:** 51517139

**Application of the substance / the mixture** *Laboratory chemicals*

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

#### Manufacturer/Supplier:

Endress+Hauser  
Conducta GmbH+Co. KG  
Dieselstraße 24  
D-70839 Gerlingen

#### Further information obtainable from:

Phone: +49 (0)7156 209-10117  
E-Mail: MSDS.PCC@endress.com

**Emergency telephone number:** +1 604 682 5050

## 2 Hazard identification

### Classification of the substance or mixture



GHS07

*Skin Sensitizer - Category 1 H317 May cause an allergic skin reaction.*

### Label elements

#### GHS label elements

*The product is classified and labelled according to the Globally Harmonised System (GHS).*

#### Hazard pictograms



GHS07

**Signal word** *Warning*

#### Hazard-determining components of labelling:

*Hexamethylenetetramine*

#### Hazard statements

*May cause an allergic skin reaction.*

#### Precautionary statements

*Avoid breathing dust/fume/gas/mist/vapours/spray.*

*Wear protective gloves.*

*If skin irritation or rash occurs: Get medical advice/attention.*

*Specific treatment (see on this label).*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

#### Other hazards

*The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.*

## 3 Composition/Information on ingredients

### Chemical characterisation: Mixtures

**Description:** *Mixture of substances listed below with nonhazardous additions.*



(Contd. on page 2)

— CDN —



## Trade name: Reagent AL3

(Contd. of page 1)

|                              |   |          |
|------------------------------|---|----------|
| <b>Dangerous components:</b> |   |          |
| CAS: 100-97-0                | Hexamethylenetetramine  | 15-40% * |
|                              |  Flammable Solids - Category 2, H228;  Skin Sensitizer - Category 1, H317 |          |

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

## 4 First-aid measures

**Description of first aid measures****General information:** Immediately remove any clothing soiled by the product.**After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

Immediately rinse with water.

**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.**Information for doctor:****Most important symptoms and effects, both acute and delayed**

No further relevant information available.

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

No further relevant information available.

## 5 Fire-fighting measures

**Extinguishing media****Suitable extinguishing agents:**CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:** no further information**Special hazards arising from the substance or mixture** No further relevant information available.**Advice for firefighters** No further relevant information available.**Protective equipment:** No special measures required.

## 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Wear protective clothing.**Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

**Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

(Contd. on page 3)

CDN



## Trade name: Reagent AL3

(Contd. of page 2)

**Information about fire - and explosion protection:** *No special measures required.***Storage:****Requirements to be met by storerooms and receptacles:** *No special requirements.***Information about storage in one common storage facility:** *Not required.***Further information about storage conditions:** *None.***Storage class:** 12**Specific end use(s)** *No further relevant information available.*\* **8 Exposure controls/ Personal protection****Additional information about design of technical facilities:** *No further data; see item 7.***Control parameters****Ingredients with limit values that require monitoring at the workplace:****CAS: 100-97-0 Hexamethylenetetramine**

EL S(D)

EV STEL: 2 mg/m<sup>3</sup>, 0.35 ppm**DNELs****CAS: 100-97-0 Hexamethylenetetramine**

Oral DNEL long term exposure 0.8 mg/kg (consumer) (systemic effect)

Dermal DNEL long term 3.2 mg/kg (consumer) (systemic effect)

Inhalative DNEL long-term 5.6 mg/m<sup>3</sup> (worker) (systemic effect)1.2 mg/m<sup>3</sup> (consumer) (systemic effect)**PNECs****CAS: 100-97-0 Hexamethylenetetramine**

PNEC 100 mg/L (Wastewater treatment plant)

3 mg/L (fresh water)

0.3 mg/L (sea water)

PNEC 1.02 mg/kg (marine sediment)

10.2 mg/kg (freshwater sediment)

0.28 mg/kg (soil)

**Additional information:** *The lists valid during the making were used as basis.***Exposure controls****Personal protective equipment:****General protective and hygienic measures:***Immediately remove all soiled and contaminated clothing**Wash hands before breaks and at the end of work.***Respiratory protection:***In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.***Protection of hands:**

Protective gloves

*To avoid skin problems reduce the wearing of gloves to the required minimum.**Only use chemical-protective gloves with CE-labelling of category III.**The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.**No chemical-protective gloves required.***Material of gloves***Nitrile rubber, NBR*

(Contd. on page 4)

—CDN—



**Trade name: Reagent AL3**

(Contd. of page 3)

*Natural rubber, NR*

*The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.*

**Penetration time of glove material**

*The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*

**Eye protection:** *Goggles recommended during refilling*

**Body protection:** *Protective work clothing*

**9 Physical and chemical properties****Information on basic physical and chemical properties****General Information****Appearance:**

|                           |                        |
|---------------------------|------------------------|
| <b>Form:</b>              | <i>Fluid</i>           |
| <b>Colour:</b>            | <i>Clear</i>           |
| <b>Odour:</b>             | <i>Amine-like</i>      |
| <b>Odour threshold:</b>   | <i>Not determined.</i> |
| <b>pH-value at 20 °C:</b> | <i>8.5-10.5</i>        |

**Change in condition**

|   |  |
|---|--|
| <b>Melting point/freezing point:</b>            | <i>Undetermined.</i>   |
| <b>Initial boiling point and boiling range:</b> | <i>&gt;100 °C</i>  |
| <b>Flash point:</b>                             | <i>Not applicable.</i>   |
| <b>Flammability (solid, gas):</b>               | <i>Not applicable.</i>   |
| <b>Decomposition temperature:</b>               | <i>Not determined.</i>   |
| <b>Auto-ignition temperature:</b>               | <i>Product is not selfigniting.</i>                                      |
| <b>Explosive properties:</b>                    | <i>Product does not present an explosion hazard.<br/>Not determined.</i> |

**Explosion limits:**

|               |                        |
|---------------|------------------------|
| <b>Lower:</b> | <i>Not determined.</i> |
| <b>Upper:</b> | <i>Not determined.</i> |

**Vapour pressure at 20 °C:** *23 hPa*

|                          |                               |
|--------------------------|-------------------------------|
| <b>Density at 20 °C:</b> | <i>1.122 g/cm<sup>3</sup></i> |
| <b>Relative density</b>  | <i>Not determined.</i>        |
| <b>Vapour density</b>    | <i>Not determined.</i>        |
| <b>Evaporation rate</b>  | <i>Not determined.</i>        |

**Solubility in / Miscibility with water:**

*Fully miscible.*

**Partition coefficient: n-octanol/water:** *Not determined.*

**Viscosity:**

|                   |                        |
|-------------------|------------------------|
| <b>Dynamic:</b>   | <i>Not determined.</i> |
| <b>Kinematic:</b> | <i>Not determined.</i> |

**Solvent content:**

|                        |               |
|------------------------|---------------|
| <b>Water:</b>          | <i>63.0 %</i> |
| <b>Solids content:</b> | <i>0.0 %</i>  |

(Contd. on page 5)



Trade name: Reagent AL3

(Contd. of page 4)

Other information

No further relevant information available.

## 10 Stability and reactivity

**Reactivity** No further relevant information available.**Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**Possibility of hazardous reactions** No dangerous reactions known.**Conditions to avoid** No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

Information on toxicological effects

**Acute toxicity****Primary irritant effect:****Skin corrosion/irritation** No irritant effect.**Serious eye damage/irritation** No irritating effect.**Respiratory or skin sensitisation** Sensitisation possible through skin contact.**Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU

Classification Guidelines for Preparations as issued in the latest version:

Irritant

## 12 Ecological information

**Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behaviour in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.

## 13 Disposal considerations

**Waste treatment methods****Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

(Contd. on page 6)

— CDN —



Trade name: Reagent AL3

(Contd. of page 5)

## 14 Transport information

|  |                 |
|--|-----------------|
| UN-Number  |                 |
| ADN, IMDG, IATA  | Void            |
| UN proper shipping name  |                 |
| ADR, ADN, IMDG, IATA   | Void            |
| Transport hazard class(es)   |                 |
| ADR, ADN, IMDG, IATA   |                 |
| Class  | Void            |
| Packing group  |                 |
| ADR, IMDG, IATA  | Void            |
| Environmental hazards:   | Not applicable. |
| Special precautions for user                                       | Not applicable. |
| Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| UN "Model Regulation":   | Void            |

## 15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture  
GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

Hazard pictograms



GHS07

Signal word *Warning*

Hazard-determining components of labelling:

Hexamethylenetetramine

Hazard statements

May cause an allergic skin reaction.

Precautionary statements

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wear protective gloves.

If skin irritation or rash occurs: Get medical advice/attention.

Specific treatment (see on this label).

Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations:

Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: PCC-TWR

Contact: MSDS.pcc@endress.com

Date of the latest revision of the safety data sheet 03/19/2022 / 6

Abbreviations and acronyms:

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

(Contd. on page 7)

— CDN —



# Safety Data Sheet

according to HPR, Schedule 1

Page 7/7

Printing date 03/19/2022

Version 7

Revision: 03/19/2022

---

**Trade name: Reagent AL3**

---

(Contd. of page 6)

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*DNEL: Derived No-Effect Level (REACH)*

*PNEC: Predicted No-Effect Concentration (REACH)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

**\* Data compared to the previous version altered.**

---

CDN —