

Product code	Description
CAY939-VxxAAH	CA71AL Reagent Set for aluminum

Components:

51517135	Reagent AL1, Component 1 for aluminum
51517136	Reagent AL1, Component 2 for aluminum
51517137	Reagent AL2, Component 1 for aluminum
51517138	Reagent AL2, Component 2 for aluminum
51517139	Reagent AL3 for aluminum

SECTION 1: Identification

Product identifier

Trade name: Reagent AL1, Component 1

Synonym: *for aluminum*

Article number: 51517135

Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

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*

*Regional representation:
Endress+Hauser Australia Pty Ltd
16 Giffnock Avenue
Macquarie Park, NSW 2113
Australia*

*Phone: 1300 363 707
Phone: +61 2 8877 7000*

Emergency telephone number: *Poison Hotline: 13 11 26*

SECTION 2: Hazard(s) 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.

Results of PBT and vPvB assessment

PBT: *Not applicable.*





vPvB: *Not applicable.*

SECTION 3: Composition and Information on Ingredients

Mixtures

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

Dangerous components:

CAS: 7697-37-2	<i>nitric acid</i>	<i>≤1%</i>
EINECS: 231-714-2	 Ox. Liq. 3, H272;  Acute Tox. 3, H331;  Skin Corr. 1A, H314	
CAS: 18851-33-7	<i>1,10-phenanthroline chloride monohydrate</i>	<i>≤1%</i>
EINECS: 223-325-1	 Acute Tox. 3, H301	

(Contd. on page 2)

Trade name: Reagent AL1, Component 1

(Contd. of page 1)

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

SECTION 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.***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.*

SECTION 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.*

SECTION 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).***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.*

SECTION 7: Handling and Storage**Precautions for safe handling** *No special measures required.***Information about fire - and explosion protection:** *No special measures required.***Conditions for safe storage, including any incompatibilities****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.*

(Contd. on page 3)

Trade name: Reagent AL1, Component 1

(Contd. of page 2)

SECTION 8: Exposure controls and personal protection**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

Appropriate engineering controls *No further data; see item 7.*

Individual protection measures, such as personal protective equipment

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection: *Not required.*

Hand protection *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.

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/face protection *Not required.*

Body protection: *Protective work clothing*

SECTION 9: Physical and Chemical Properties**Information on basic physical and chemical properties****General Information**

Physical state	<i>Fluid</i>
Colour:	<i>Clear</i>
Odour:	<i>Odourless</i>
Odour threshold:	<i>Not determined.</i>
Melting point/freezing point:	<i>Undetermined.</i>
Boiling point or initial boiling point and boiling range	<i>>100 °C</i>
Flammability	<i>Not applicable.</i>
Lower and upper explosion limit	
Lower:	<i>Not determined.</i>
Upper:	<i>Not determined.</i>
Flash point:	<i>Not applicable.</i>
Decomposition temperature:	<i>Not determined.</i>
pH at 20 °C	<i><2</i>
Viscosity:	
Kinematic viscosity	<i>Not determined.</i>
Dynamic:	<i>Not determined.</i>
Solubility	
water:	<i>Fully miscible.</i>
Partition coefficient n-octanol/water (log value)	<i>Not determined.</i>
Vapour pressure at 20 °C:	<i>23 hPa</i>
Density and/or relative density	
Density at 20 °C:	<i>1.12 g/cm³</i>
Relative density	<i>Not determined.</i>

(Contd. on page 4)

Trade name: Reagent AL1, Component 1

(Contd. of page 3)

Vapour density	Not determined.
Other information	
Appearance:	
Form:	Liquid
Important information on protection of health and environment, and on safety.	
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard. Not determined.
Solvent content:	
Water:	>85.0 %
Solids content:	0.0 %
Change in condition	
Evaporation rate	Not determined.
Information with regard to physical hazard classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 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.

SECTION 11: Toxicological Information

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

Acute toxicity

LD/LC50 values relevant for classification:

CAS: 7697-37-2 nitric acid

Inhalative LC50/4 h 2.65 mg/l (ATE)

(Contd. on page 5)

Trade name: Reagent AL1, Component 1

(Contd. of page 4)

Information on other hazards

Endocrine disrupting properties

None of the ingredients is listed.

* SECTION 12: Ecological Information

Toxicity

Aquatic toxicity: *No further relevant information available.***Persistence and degradability** *No further relevant information available.***Bioaccumulative potential** *No further relevant information available.***Mobility in soil** *No further relevant information available.*

Results of PBT and vPvB assessment

PBT: *Not applicable.***vPvB:** *Not applicable.*

Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

Other adverse effects

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.**Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.*

* SECTION 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.*

* SECTION 14: Transport information

UN number or ID number

ADN, IMDG, IATA

Void

UN proper shipping name

ADG, ADN, IMDG, IATA

Void

Transport hazard class(es)

ADG, ADN, IMDG, IATA

Class

Void

Packing group

ADG, IMDG, IATA

Void

Environmental hazards:

Marine pollutant:

No

Special precautions for user

Not applicable.

Maritime transport in bulk according to IMO instruments

Not applicable.

Transport/Additional information:

Not dangerous according to the above specifications.

UN "Model Regulation":

Void

(Contd. on page 6)

Trade name: Reagent AL1, Component 1

(Contd. of page 5)

SECTION 15: Regulatory information

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

Australian Inventory of Industrial Chemicals

CAS: 7732-18-5 water

CAS: 7487-88-9 magnesium sulphate

Standard for the Uniform Scheduling of Medicines and Poisons

CAS: 7487-88-9 magnesium sulphate

S3

Australia: Priority Existing Chemicals

None of the ingredients is listed.

GHS label elements Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

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.**SECTION 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**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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)

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Liq. 3: Oxidizing liquids – Category 3

Acute Tox. 3: Acute toxicity – Category 3

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

* Data compared to the previous version altered.

— AUS —

SECTION 1: Identification

Product identifier

Trade name: Reagent AL1, Component 2

Synonym: *for aluminum*

Article number: 51517136

CAS Number:

50-81-7

EC number:

200-066-2

Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

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

Regional representation:

Endress+Hauser Australia Pty Ltd

16 Giffnock Avenue

Macquarie Park, NSW 2113

Australia

Phone: 1300 363 707

Phone: +61 2 8877 7000

Emergency telephone number: *Poison Hotline: 13 11 26*

SECTION 2: Hazard(s) Identification

Classification of the substance or mixture

The substance 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.

Results of PBT and vPvB assessment

PBT: *Not applicable.*

vPvB: *Not applicable.*

SECTION 3: Composition and Information on Ingredients

Substances

CAS No. Description

CAS: 50-81-7 L (+) - ascorbic acid

(Contd. on page 2)

— AUS —

Trade name: Reagent AL1, Component 2

Identification number(s)
EC number: 200-066-2

(Contd. of page 1)

SECTION 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.***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.

SECTION 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.*

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures *Wear protective clothing.***Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.***Methods and material for containment and cleaning up:** *Pick up mechanically.***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.*

SECTION 7: Handling and Storage

Precautions for safe handling *No special measures required.***Information about fire - and explosion protection:** *No special measures required.***Conditions for safe storage, including any incompatibilities****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:** 11**Specific end use(s)** *No further relevant information available.*

SECTION 8: Exposure controls and personal protection

Control parameters**Ingredients with limit values that require monitoring at the workplace:** *Not required.*

(Contd. on page 3)

Trade name: Reagent AL1, Component 2

(Contd. of page 2)

Additional information: *The lists valid during the making were used as basis.*

Exposure controls

Appropriate engineering controls *No further data; see item 7.*

Individual protection measures, such as personal protective equipment

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection: *Not required.*

Hand protection *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.

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/face protection *Not required.*

Body protection: *Protective work clothing*

SECTION 9: Physical and Chemical Properties**Information on basic physical and chemical properties****General Information****Physical state***Solid***Colour:***Whitish***Odour:***Odourless***Odour threshold:***Not determined.***Melting point/freezing point:***191 °C***Boiling point or initial boiling point and boiling range***Undetermined.***Flammability***Product is not flammable.***Lower and upper explosion limit****Lower:***Not determined.***Upper:***Not determined.***Flash point:***Not applicable.***Decomposition temperature:***Not determined.***pH***Slightly acidic***Viscosity:****Kinematic viscosity***Not applicable.***Dynamic:***Not applicable.***Solubility****water at 20 °C:***333 g/l***Partition coefficient n-octanol/water (log value)***Not determined.***Vapour pressure:***Not applicable.***Density and/or relative density****Density at 20 °C:***0.95 g/cm³***Relative density***Not determined.***Vapour density***Not applicable.***Other information****Appearance:****Form:***Crystalline powder***Important information on protection of health and environment, and on safety.****Auto-ignition temperature:***Not determined.***Explosive properties:***Product does not present an explosion hazard.**Not determined.*

(Contd. on page 4)

Trade name: Reagent AL1, Component 2

(Contd. of page 3)

Solids content: 100.0 %
 Change in condition
 Evaporation rate Not applicable.

Information with regard to physical hazard classes

Explosives Void
 Flammable gases Void
 Aerosols Void
 Oxidising gases Void
 Gases under pressure Void
 Flammable liquids Void
 Flammable solids Void
 Self-reactive substances and mixtures Void
 Pyrophoric liquids Void
 Pyrophoric solids Void
 Self-heating substances and mixtures Void
 Substances and mixtures, which emit flammable gases in contact with water Void
 Oxidising liquids Void
 Oxidising solids Void
 Organic peroxides Void
 Corrosive to metals Void
 Desensitised explosives Void

SECTION 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.

SECTION 11: Toxicological Information

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

Acute toxicity

LD/LC50 values relevant for classification:

CAS: 50-81-7 L (+) - ascorbic acid

Oral LD50 11,900 mg/kg (rat)

Information on other hazards**Endocrine disrupting properties**

Substance is not listed.

SECTION 12: Ecological Information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Results of PBT and vPvB assessment

PBT: Not applicable.

(Contd. on page 5)

Trade name: Reagent AL1, Component 2

(Contd. of page 4)

vPvB: *Not applicable.***Endocrine disrupting properties***The product does not contain substances with endocrine disrupting properties.***Other adverse effects****Additional ecological information:****General notes:***Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water**Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.***SECTION 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.***SECTION 14: Transport information****UN number or ID number****ADN, IMDG, IATA** *Void***UN proper shipping name****ADG, ADN, IMDG, IATA** *Void***Transport hazard class(es)****ADG, ADN, IMDG, IATA****Class** *Void***Packing group****ADG, IMDG, IATA** *Void***Environmental hazards:****Marine pollutant:** *No***Special precautions for user** *Not applicable.***Maritime transport in bulk according to IMO instruments** *Not applicable.***Transport/Additional information:** *Not dangerous according to the above specifications.***UN "Model Regulation":** *Void***SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****Australian Inventory of Industrial Chemicals***Substance is listed.***Standard for the Uniform Scheduling of Medicines and Poisons***Substance is not listed.***Australia: Priority Existing Chemicals***Substance is not listed.***GHS label elements** *Void***Hazard pictograms** *Void***Signal word** *Void***Hazard statements** *Void***Directive 2012/18/EU****Named dangerous substances - ANNEX I** *Substance is not listed.*

(Contd. on page 6)

Trade name: Reagent AL1, Component 2

(Contd. of page 5)

National regulations:**Waterhazard class:** *Water hazard class 1 (Assessment by list): slightly hazardous for water.***Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***SECTION 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***Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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)

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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

SECTION 1: Identification

Product identifier

Trade name: Reagent AL2, Component 1

Synonym: *for aluminum*

Article number: 51517137

CAS Number:

7732-18-5

EC number:

231-791-2

Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

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

Regional representation:

Endress+Hauser Australia Pty Ltd

16 Giffnock Avenue

Macquarie Park, NSW 2113

Australia

Phone: 1300 363 707

Phone: +61 2 8877 7000

Emergency telephone number: *Poison Hotline: 13 11 26*

SECTION 2: Hazard(s) Identification

Classification of the substance or mixture

The substance 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.

Results of PBT and vPvB assessment

PBT: *Not applicable.*

vPvB: *Not applicable.*

SECTION 3: Composition and Information on Ingredients

Substances

CAS No. Description

CAS: 7732-18-5 water

(Contd. on page 2)

— AUS —

Trade name: Reagent AL2, Component 1

(Contd. of page 1)

Identification number(s)
EC number: 231-791-2**SECTION 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.***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.***SECTION 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.***SECTION 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.***SECTION 7: Handling and Storage****Precautions for safe handling** *No special measures required.***Information about fire - and explosion protection:** *No special measures required.***Conditions for safe storage, including any incompatibilities****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.*

(Contd. on page 3)

— AUS —

Trade name: Reagent AL2, Component 1

(Contd. of page 2)

SECTION 8: Exposure controls and personal protection

Control parameters**Ingredients with limit values that require monitoring at the workplace:** *Not required.***Additional information:** *The lists valid during the making were used as basis.***Exposure controls****Appropriate engineering controls** *No further data; see item 7.***Individual protection measures, such as personal protective equipment****General protective and hygienic measures:***The usual precautionary measures are to be adhered to when handling chemicals.***Respiratory protection:** *Not required.***Hand protection** *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.***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/face protection** *Not required.***Body protection:** *Protective work clothing*

SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties**General Information****Physical state***Fluid***Colour:***Colourless***Odour:***Odourless***Odour threshold:***Not determined.***Melting point/freezing point:***0 °C***Boiling point or initial boiling point and boiling range***100 °C***Flammability***Not applicable.***Lower and upper explosion limit****Lower:***Not determined.***Upper:***Not determined.***Flash point:***Not applicable.***Decomposition temperature:***Not determined.***pH***Not determined.***Viscosity:****Kinematic viscosity***Not determined.***Dynamic at 20 °C:***0.952 mPas***Solubility****water:***Fully miscible.***Partition coefficient n-octanol/water (log value)** *Not determined.***Vapour pressure at 20 °C:***23 hPa***Density and/or relative density****Density at 20 °C:***1 g/cm³***Relative density***Not determined.***Vapour density***Not determined.*

(Contd. on page 4)

Trade name: Reagent AL2, Component 1

(Contd. of page 3)

Other information

Appearance:

Form:

Fluid

Important information on protection of health and environment, and on safety.

Auto-ignition temperature:

Not determined.

Explosive properties:

Product does not present an explosion hazard.

Not determined.

Water:

100.0 %

Solids content:

0.0 %

Change in condition

Evaporation rate

Not determined.

Information with regard to physical hazard classes

Explosives

Void

Flammable gases

Void

Aerosols

Void

Oxidising gases

Void

Gases under pressure

Void

Flammable liquids

Void

Flammable solids

Void

Self-reactive substances and mixtures

Void

Pyrophoric liquids

Void

Pyrophoric solids

Void

Self-heating substances and mixtures

Void

Substances and mixtures, which emit flammable gases in contact with water

Void

Oxidising liquids

Void

Oxidising solids

Void

Organic peroxides

Void

Corrosive to metals

Void

Desensitised explosives

Void

SECTION 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.

SECTION 11: Toxicological Information

Information on other hazards

Endocrine disrupting properties

Substance is not listed.

SECTION 12: Ecological Information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Bioaccumulative potential No further relevant information available.

(Contd. on page 5)

Trade name: Reagent AL2, Component 1

(Contd. of page 4)

Mobility in soil *No further relevant information available.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***Endocrine disrupting properties***The product does not contain substances with endocrine disrupting properties.***Other adverse effects****Additional ecological information:****General notes:** *Not hazardous for water.***SECTION 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.***SECTION 14: Transport information****UN number or ID number****ADN, IMDG, IATA** *Void***UN proper shipping name****ADG, ADN, IMDG, IATA** *Void***Transport hazard class(es)****ADG, ADN, IMDG, IATA****Class** *Void***Packing group****ADG, IMDG, IATA** *Void***Environmental hazards:****Marine pollutant:** *No***Special precautions for user** *Not applicable.***Maritime transport in bulk according to IMO instruments** *Not applicable.***Transport/Additional information:** *Not dangerous according to the above specifications.***UN "Model Regulation":** *Void***SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****Australian Inventory of Industrial Chemicals***Substance is listed.***Standard for the Uniform Scheduling of Medicines and Poisons***Substance is not listed.***Australia: Priority Existing Chemicals***Substance is not listed.***GHS label elements** *Void***Hazard pictograms** *Void***Signal word** *Void***Hazard statements** *Void***Directive 2012/18/EU****Named dangerous substances - ANNEX I** *Substance is not listed.*

(Contd. on page 6)

Trade name: Reagent AL2, Component 1

(Contd. of page 5)

Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.***SECTION 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***Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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)

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial 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.**

— AUS —

SECTION 1: Identification

Product identifier

Trade name: Reagent AL2, Component 2

Synonym: *for aluminum*

Article number: 51517138

CAS Number:

115-41-3

EC number:

204-088-3

Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

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

Regional representation:

Endress+Hauser Australia Pty Ltd

16 Giffnock Avenue

Macquarie Park, NSW 2113

Australia

Phone: 1300 363 707

Phone: +61 2 8877 7000

Emergency telephone number: *Poison Hotline: 13 11 26*

SECTION 2: Hazard(s) Identification

Classification of the substance or mixture

The substance 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.

Results of PBT and vPvB assessment

PBT: *Not applicable.*

vPvB: *Not applicable.*

SECTION 3: Composition and Information on Ingredients

Substances

CAS No. Description

CAS: 115-41-3 pyrocatechol violet

(Contd. on page 2)

— AUS —

Trade name: Reagent AL2, Component 2

(Contd. of page 1)

Identification number(s)**EC number:** 204-088-3

SECTION 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.***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.*

SECTION 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.*

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures *Wear protective clothing.***Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.***Methods and material for containment and cleaning up:** *Pick up mechanically.***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.*

SECTION 7: Handling and Storage

Precautions for safe handling *No special measures required.***Information about fire - and explosion protection:** *No special measures required.***Conditions for safe storage, including any incompatibilities****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:** 11**Specific end use(s)** *No further relevant information available.*

SECTION 8: Exposure controls and personal protection

Control parameters**Ingredients with limit values that require monitoring at the workplace:** *Not required.*

(Contd. on page 3)

Trade name: Reagent AL2, Component 2

(Contd. of page 2)

Additional information: *The lists valid during the making were used as basis.***Exposure controls****Appropriate engineering controls** *No further data; see item 7.***Individual protection measures, such as personal protective equipment****General protective and hygienic measures:***The usual precautionary measures are to be adhered to when handling chemicals.***Respiratory protection:** *Not required.***Hand protection** *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.***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/face protection** *Not required.***Body protection:** *Protective work clothing***SECTION 9: Physical and Chemical Properties****Information on basic physical and chemical properties****General Information****Physical state***Solid***Colour:***Dark red***Odour:***Odourless***Odour threshold:***Not determined.***Melting point/freezing point:***Undetermined.***Boiling point or initial boiling point and boiling range***Undetermined.***Flammability***Product is not flammable.***Lower and upper explosion limit****Lower:***Not determined.***Upper:***Not determined.***Flash point:***Not applicable.***Decomposition temperature:***Not determined.***pH***Not applicable.***Viscosity:****Kinematic viscosity***Not applicable.***Dynamic:***Not applicable.***Solubility****water:***Soluble.***Partition coefficient n-octanol/water (log value)***Not determined.***Vapour pressure:***Not applicable.***Density and/or relative density****Density:***Not determined.***Relative density***Not determined.***Vapour density***Not applicable.***Other information****Appearance:****Form:***Crystalline powder***Important information on protection of health and environment, and on safety.****Auto-ignition temperature:***Not determined.***Explosive properties:***Product does not present an explosion hazard.**Not determined.*

(Contd. on page 4)

Trade name: Reagent AL2, Component 2

(Contd. of page 3)

Change in condition**Evaporation rate***Not applicable.***Information with regard to physical hazard classes**

Explosives	<i>Void</i>
Flammable gases	<i>Void</i>
Aerosols	<i>Void</i>
Oxidising gases	<i>Void</i>
Gases under pressure	<i>Void</i>
Flammable liquids	<i>Void</i>
Flammable solids	<i>Void</i>
Self-reactive substances and mixtures	<i>Void</i>
Pyrophoric liquids	<i>Void</i>
Pyrophoric solids	<i>Void</i>
Self-heating substances and mixtures	<i>Void</i>
Substances and mixtures, which emit flammable gases in contact with water	<i>Void</i>
Oxidising liquids	<i>Void</i>
Oxidising solids	<i>Void</i>
Organic peroxides	<i>Void</i>
Corrosive to metals	<i>Void</i>
Desensitised explosives	<i>Void</i>

SECTION 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.***SECTION 11: Toxicological Information****Information on other hazards****Endocrine disrupting properties***Substance is not listed.***SECTION 12: Ecological Information****Toxicity****Aquatic toxicity:** *No further relevant information available.***Persistence and degradability** *No further relevant information available.***Bioaccumulative potential** *No further relevant information available.***Mobility in soil** *No further relevant information available.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***Endocrine disrupting properties***The product does not contain substances with endocrine disrupting properties.*

(Contd. on page 5)

Trade name: Reagent AL2, Component 2

(Contd. of page 4)

Other adverse effects**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.***SECTION 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.***SECTION 14: Transport information****UN number or ID number****ADN, IMDG, IATA***Void***UN proper shipping name****ADG, ADN, IMDG, IATA***Void***Transport hazard class(es)****ADG, ADN, IMDG, IATA****Class***Void***Packing group****ADG, IMDG, IATA***Void***Environmental hazards:****Marine pollutant:***No***Special precautions for user***Not applicable.***Maritime transport in bulk according to IMO instruments***Not applicable.***Transport/Additional information:***Not dangerous according to the above specifications.***UN "Model Regulation":***Void***SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****Australian Inventory of Industrial Chemicals***Substance is listed.***Standard for the Uniform Scheduling of Medicines and Poisons***Substance is not listed.***Australia: Priority Existing Chemicals***Substance is not listed.***GHS label elements** *Void***Hazard pictograms** *Void***Signal word** *Void***Hazard statements** *Void***Directive 2012/18/EU****Named dangerous substances - ANNEX I** *Substance is not listed.***National regulations:****Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.*

(Contd. on page 6)

Trade name: Reagent AL2, Component 2

(Contd. of page 5)

Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.***SECTION 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***Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial 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.**

— AUS —

SECTION 1: Identification

Product identifier

Trade name: Reagent AL3

Synonym: *for aluminum*

Article number: 51517139

Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

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*

*Regional representation:
Endress+Hauser Australia Pty Ltd
16 Giffnock Avenue
Macquarie Park, NSW 2113
Australia*

*Phone: 1300 363 707
Phone: +61 2 8877 7000*

Emergency telephone number: *Poison Hotline: 13 11 26*

SECTION 2: Hazard(s) Identification

Classification of the substance or mixture



health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



Skin Sens. 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



GHS08

Signal word *Danger*

Hazard-determining components of labelling:

Hexamethylenetetramine

Hazard statements

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

(Contd. on page 2)

Trade name: Reagent AL3

(Contd. of page 1)

*May cause an allergic skin reaction.***Precautionary statements***Avoid breathing dust/fume/gas/mist/vapours/spray.**Wear protective gloves.**[In case of inadequate ventilation] wear respiratory protection.**If experiencing respiratory symptoms: Call a POISON CENTER/doctor.**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.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***SECTION 3: Composition and Information on Ingredients****Mixtures****Description:** *Mixture of substances listed below with nonhazardous additions.***Dangerous components:**

CAS: 100-97-0	Hexamethylenetetramine	20-40%
EINECS: 202-905-8	Flam. Sol. 1, H228; Resp. Sens. 1, H334; Skin Sens. 1, H317	

Additional information: *For the wording of the listed hazard phrases refer to section 16.***SECTION 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.***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.***SECTION 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.***SECTION 6: Accidental Release Measures****Personal precautions, protective equipment and emergency procedures** *Wear protective clothing.*

(Contd. on page 3)

Trade name: Reagent AL3

(Contd. of page 2)

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.***SECTION 7: Handling and Storage****Precautions for safe handling***Ensure good ventilation/exhaustion at the workplace.**Prevent formation of aerosols.***Information about fire - and explosion protection:** *No special measures required.***Conditions for safe storage, including any incompatibilities****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.**** SECTION 8: Exposure controls and personal protection****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.***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 ³ (worker) (systemic effect)
		1.2 mg/m ³ (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****Appropriate engineering controls** *No further data; see item 7.***Individual protection measures, such as personal protective equipment****General protective and hygienic measures:***Keep away from foodstuffs, beverages and feed.**Immediately remove all soiled and contaminated clothing*

(Contd. on page 4)

Trade name: Reagent AL3

(Contd. of page 3)

*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.***Hand protection***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**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/face protection** *Goggles recommended during refilling***Body protection:** *Protective work clothing***SECTION 9: Physical and Chemical Properties****Information on basic physical and chemical properties****General Information****Physical state***Fluid***Colour:***Clear***Odour:***Amine-like***Odour threshold:***Not determined.***Melting point/freezing point:***Undetermined.***Boiling point or initial boiling point and boiling range***>100 °C***Flammability***Not applicable.***Lower and upper explosion limit****Lower:***Not determined.***Upper:***Not determined.***Flash point:***Not applicable.***Decomposition temperature:***Not determined.***pH at 20 °C***8.5-10.5***Viscosity:****Kinematic viscosity***Not determined.***Dynamic:***Not determined.***Solubility****water:***Fully miscible.***Partition coefficient n-octanol/water (log value)** *Not determined.***Vapour pressure at 20 °C:***23 hPa***Density and/or relative density****Density at 20 °C:***1.122 g/cm³***Relative density***Not determined.***Vapour density***Not determined.*

(Contd. on page 5)

Trade name: Reagent AL3

(Contd. of page 4)

Other information

Appearance:

Form:

Fluid

Important information on protection of health and environment, and on safety.

Auto-ignition temperature:

Product is not selfigniting.

Explosive properties:

Product does not present an explosion hazard.
Not determined.

Solvent content:

Water:

63.0 %

Solids content:

0.0 %

Change in condition

Evaporation rate

Not determined.

Information with regard to physical hazard classes

Explosives

Void

Flammable gases

Void

Aerosols

Void

Oxidising gases

Void

Gases under pressure

Void

Flammable liquids

Void

Flammable solids

Void

Self-reactive substances and mixtures

Void

Pyrophoric liquids

Void

Pyrophoric solids

Void

Self-heating substances and mixtures

Void

Substances and mixtures, which emit flammable gases in contact with water

Void

Oxidising liquids

Void

Oxidising solids

Void

Organic peroxides

Void

Corrosive to metals

Void

Desensitised explosives

Void

SECTION 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.

SECTION 11: Toxicological Information

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

Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Information on other hazards

Endocrine disrupting properties

None of the ingredients is listed.

(Contd. on page 6)

Trade name: Reagent AL3

(Contd. of page 5)

SECTION 12: Ecological Information**Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

Other adverse effects**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.

SECTION 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.**SECTION 14: Transport information****UN number or ID number**

ADN, IMDG, IATA Void

UN proper shipping name

ADG, ADN, IMDG, IATA Void

Transport hazard class(es)

ADG, ADN, IMDG, IATA

Class Void

Packing group

ADG, IMDG, IATA Void

Environmental hazards: Not applicable.**Special precautions for user** Not applicable.**Maritime transport in bulk according to IMO**

instruments Not applicable.

UN "Model Regulation": Void*** SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****Australian Inventory of Industrial Chemicals**

All ingredients are listed.

Standard for the Uniform Scheduling of Medicines and Poisons

CAS: 100-97-0 Hexamethylenetetramine

S5

Australia: Priority Existing Chemicals

None of the ingredients is listed.

(Contd. on page 7)

Trade name: Reagent AL3

(Contd. of page 6)

GHS label elements

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

Hazard pictograms

GHS08

Signal word *Danger***Hazard-determining components of labelling:***Hexamethylenetetramine***Hazard statements***May cause allergy or asthma symptoms or breathing difficulties if inhaled.**May cause an allergic skin reaction.***Precautionary statements***Avoid breathing dust/fume/gas/mist/vapours/spray.**Wear protective gloves.**[In case of inadequate ventilation] wear respiratory protection.**If experiencing respiratory symptoms: Call a POISON CENTER/doctor.**Dispose of contents/container in accordance with local/regional/national/international regulations.***Directive 2012/18/EU****Named dangerous substances - ANNEX I** *None of the ingredients is listed.***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.***SECTION 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***Abbreviations and acronyms:***RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)**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)**ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)**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)**DNEL: Derived No-Effect Level (REACH)**PNEC: Predicted No-Effect Concentration (REACH)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Sol. 1: Flammable solids – Category 1**Resp. Sens. 1: Respiratory sensitisation – Category 1**Skin Sens. 1: Skin sensitisation – Category 1**** Data compared to the previous version altered.**