

23.01.2026

Kit Components

Product code	Description
CAY140-VxxAAH	CA7xAM Reagent Set for ammonium

Components:

71706256	Reagent AM1 for ammonium
51508914	Reagent AM2, Component 1 for ammonium
51508915	Reagent AM2, Component 2 for ammonium

1 Identifikasi Senyawa (Tunggal atau Campuran)

Product identifier

Trade name: Reagent AM1

Synonym: *for ammonium*

Article number: 71706256

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*

Emergency telephone number: +62 813 1082 6879 (24 hrs, Jakarta, Indonesien)

2 Identifikasi Bahaya

Classification of the substance or mixture



GHS07

Acute Tox. 4

H302 Harmful if swallowed.

Serious eye damage/irritation – Category 2A H319 Causes serious eye irritation.

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:

Sodium salicylate

Sodium nitroprusside

Hazard statements

Harmful if swallowed.

Causes serious eye irritation.

Precautionary statements

Wear eye protection / face protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

Rinse mouth.

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

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.

(Contd. on page 2)

Trade name: Reagent AM1

(Contd. of page 1)

Results of PBT and vPvB assessmentPBT: *Not applicable.*vPvB: *Not applicable.***3 Komposisi /Informasi tentang Bahan Penyusun Senyawa Tunggal****Chemical characterisation: Mixtures**Description: *Mixture of substances listed below with nonhazardous additions.*

Dangerous components:		
CAS: 54-21-7	Sodium salicylate ⚠ Acute Tox. 4, H302; Serious eye damage/irritation – Category 2A, H319	30-50%
CAS: 13755-38-9	Sodium nitroprusside ⚠ Acute Tox. 2, H300; Acute Tox. 2, H310	1-2.5%

Additional information: *For the wording of the listed hazard phrases refer to section 16.***4 Tindakan Pertolongan Pertama pada Kecelakaan****Description of first aid measures****General information:***Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.***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. If symptoms persist, consult a doctor.***After swallowing:** *Call for a doctor immediately.***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 Tindakan pemadaman kebakaran****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 Tindakan Penanggulangan jika terjadi Tumpahan dan Kebocoran****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:***Dispose contaminated material as waste according to section 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.*

(Contd. on page 3)

Trade name: Reagent AM1

(Contd. of page 2)

See Section 13 for disposal information.

*** 7 Penanganan dan Penyimpanan**

Precautions for safe handling *No special precautions are necessary if used correctly.*

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: *Keep container tightly sealed.*

Storage class: 13

Specific end use(s) *No further relevant information available.*

8 Kontrol Paparan/ Perlindungan Diri

Additional information about design of technical facilities: *No further data; see section 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:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Respiratory protection: *Not required.*

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.

Material of gloves

Nitrile rubber, NBR

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:



Tightly sealed goggles

(Contd. on page 4)

Trade name: Reagent AM1

(Contd. of page 3)

Body protection: *Protective work clothing*

* 9 Sifat fisika dan kimia

Information on basic physical and chemical properties

General Information

Appearance:

Form:	<i>Solid</i>
Colour:	<i>Coloured</i>
Odour:	<i>Characteristic</i>
Odour threshold:	<i>Not determined.</i>
pH-value at 20 °C:	<i>7-9</i>

Change in condition

Melting point/freezing point:	<i>Undetermined.</i>
Initial boiling point and boiling range:	<i>100 °C</i>

Flash point: *Not applicable.***Flammability** *Not determined.***Auto-ignition temperature:** *>250 °C***Decomposition temperature:** *Not determined.***Ignition temperature:** *Product is not selfigniting.***Explosive properties:** *Product does not present an explosion hazard.
Not determined.***Explosion limits:**

Lower:	<i>Not determined.</i>
Upper:	<i>Not determined.</i>

Vapour pressure at 20 °C: *23 hPa***Density at 20 °C:** *1.021 g/cm³***Relative density** *Not determined.***Vapour density** *Not applicable.***Evaporation rate** *Not applicable.***Solubility in / Miscibility with water:***Soluble.***Partition coefficient: n-octanol/water:** *Not determined.***Viscosity:****Dynamic:** *Not applicable.***Kinematic:** *Not applicable.***Solvent content:****Solids content:** *100.0 %***Other information** *No further relevant information available.*

10 Stabilitas dan Reaktifitas

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.*

(Contd. on page 5)

Trade name: Reagent AM1

(Contd. of page 4)

Hazardous decomposition products: *No dangerous decomposition products known.*

11 Informasi Toksikologi

Information on toxicological effects

Acute toxicity

LD/LC50 values relevant for classification:		
CAS: 54-21-7 Sodium salicylate		
Oral	LD50	930 mg/kg (rat)
CAS: 13755-38-9 Sodium nitroprusside		
Oral	LD50	20 mg/kg (human)
Dermal	LD50	99 mg/kg (rat)

Primary irritant effect:

Skin corrosion/irritation *No irritant effect.***Serious eye damage/irritation** *Irritating effect.***Respiratory or skin sensitisation** *No sensitising effects known.*

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:**Harmful**Irritant*

12 Informasi Ekologi

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 Pembuangan Limbah

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.*

14 Informasi Transpor/Pengangkutan

UN-Number

ADN, IMDG, IATA

Void

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

Void

(Contd. on page 6)

Trade name: Reagent AM1

(Contd. of page 5)

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 Informasi yang Berkaitan dengan Regulasi

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:

*Sodium salicylate**Sodium nitroprusside*

Hazard statements

*Harmful if swallowed.**Causes serious eye irritation.*

Precautionary statements

*Wear eye protection / face protection.**IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.**Rinse mouth.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**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.*

16 Informasi Lain

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.

Relevant phrases

*H300 Fatal if swallowed.**H302 Harmful if swallowed.**H310 Fatal in contact with skin.**H319 Causes serious eye irritation.*Department issuing SDS: *PCC-TWR*Contact: *MSDS.pcc@endress.com*

(Contd. on page 7)

Trade name: Reagent AM1

(Contd. of page 6)

Abbreviations and acronyms:

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

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

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

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Serious eye damage/irritation – Category 2A: Serious eye damage/eye irritation – Category 2A

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

1 Identifikasi Senyawa (Tunggal atau Campuran)

Product identifier

Trade name: **Reagent AM2, Component 1**

Synonym: *for ammonium*

Article number: 51508914

CAS Number:

1310-73-2

EC number:

215-185-5

Index number:

011-002-00-6

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

Emergency telephone number: +62 813 1082 6879 (24 hrs, Jakarta, Indonesia)

2 Identifikasi Bahaya

Classification of the substance or mixture



GHS05 corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Label elements

GHS label elements

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

Hazard pictograms



GHS05 GHS07

Signal word *Danger*

Hazard-determining components of labelling:

Sodium hydroxide

Hazard statements

Harmful if swallowed.

Causes severe skin burns and eye damage.

(Contd. on page 2)

Trade name: Reagent AM2, Component 1

(Contd. of page 1)

Precautionary statements*IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**Immediately call a POISON CENTER/doctor.**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.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***3 Komposisi /Informasi tentang Bahan Penyusun Senyawa Tunggal****Chemical characterisation: Substances****CAS No. Description***CAS: 1310-73-2 Sodium hydroxide***Identification number(s)****EC number:** *215-185-5***Index number:** *011-002-00-6***4 Tindakan Pertolongan Pertama pada Kecelakaan****Description of first aid measures****General information:***Immediately remove any clothing soiled by the product.**Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.***After inhalation:** *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. Then consult a doctor.***After swallowing:***Call for a doctor immediately.**Drink plenty of water and provide fresh air. Call for a doctor immediately.***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 Tindakan pemadaman kebakaran****Extinguishing media****Suitable extinguishing agents:** *Use fire extinguishing methods suitable to surrounding conditions.***For safety reasons unsuitable extinguishing agents:** *no further information***Special hazards arising from the substance or mixture***During heating or in case of fire poisonous gases are produced.**Formation of toxic gases is possible during heating or in case of fire.***Advice for firefighters** *No further relevant information available.***Protective equipment:***Mount respiratory protective device.*

(Contd. on page 3)

Trade name: Reagent AM2, Component 1

(Contd. of page 2)

Wear self-contained respiratory protective device.

6 Tindakan Penanggulangan jika terjadi Tumpahan dan Kebocoran

Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

Wear protective clothing.

Environmental precautions: *Do not allow to enter sewers/ surface or ground water.*

Methods and material for containment and cleaning up:

Use neutralising agent.

Dispose contaminated material as waste according to section 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 Penanganan dan Penyimpanan

Precautions for safe handling

Thorough dedusting.

Ensure good ventilation/exhaustion at the workplace.

Information about fire - and explosion protection: *Keep respiratory protective device available.*

Storage:

Requirements to be met by storerooms and receptacles:

Use only receptacles specifically permitted for this substance/product.

Unsuitable material for receptacle: aluminium.

Information about storage in one common storage facility: *Not required.*

Further information about storage conditions:

Keep container tightly sealed.

Store in dry conditions.

Storage class: *8 B*

Specific end use(s) *No further relevant information available.*

8 Kontrol Paparan/ Perlindungan Diri

Additional information about design of technical facilities: *No further data; see section 7.*

Control parameters

Ingredients with limit values that require monitoring at the workplace:

CAS: 1310-73-2 Sodium hydroxide

NAB | *Ceiling limit: 2 mg/m³*

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

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

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.

Filter P2

(Contd. on page 4)

Trade name: Reagent AM2, Component 1

(Contd. of page 3)

Use suitable respiratory protective device only when aerosol or mist is formed.

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.

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.

Nitrile rubber, NBR

Chloroprene rubber, CR

Recommended thickness of the material: ≥ 0.11 mm

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:

Tightly sealed goggles

Body protection: Protective work clothing

9 Sifat fisika dan kimia**Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Granulate
Colour:	White
Odour:	Odourless
Odour threshold:	Not determined.
pH-value:	20

Change in condition

Melting point/freezing point:	323 °C 323 °C
Initial boiling point and boiling range:	1,390 °C

Flash point: Not applicable.

Flammability Product is not flammable.

Decomposition temperature: Not determined.

Ignition temperature: Not determined.

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

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure: Not applicable.

Density at 20 °C: 2.13 g/cm³

(Contd. on page 5)

Trade name: Reagent AM2, Component 1

(Contd. of page 4)

Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with water at 20 °C:	1090 g/l
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
Solids content:	100.0 %
Other information	No further relevant information available.

10 Stabilitas dan Reaktifitas

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

Reacts with light alloys to form hydrogen.

Reacts with metals forming hydrogen.

Diluting or dissolving in water always causes rapid heating.

Conditions to avoid No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

11 Informasi Toksikologi**Information on toxicological effects****Acute toxicity****LD/LC50 values relevant for classification:****CAS: 1310-73-2 Sodium hydroxide**

Oral	LD50	2,000 mg/kg (rat)
Inhalative	LC50/4 h	125 mg/l (fish)

Primary irritant effect:

Skin corrosion/irritation Strong caustic effect on skin and mucous membranes.

Serious eye damage/irritation Strong caustic effect.

Respiratory or skin sensitisation No sensitising effects known.

Additional toxicological information:

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Informasi Ekologi**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.

Ecotoxicological effects:

Remark: Harmful to water fleas

(Contd. on page 6)

Trade name: Reagent AM2, Component 1

(Contd. of page 5)

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.*

Must not reach sewage water or drainage ditch undiluted or unneutralised.

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

Results of PBT and vPvB assessment

PBT: *Not applicable.*

vPvB: *Not applicable.*

Other adverse effects *No further relevant information available.*

13 Pembuangan Limbah

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.*

14 Informasi Transpor/Pengangkutan

UN-Number

IMDG, IATA

UN1823

UN proper shipping name

ADR

UN1823 SODIUM HYDROXIDE, SOLID

IMDG

SODIUM HYDROXIDE, SOLID

IATA

Sodium hydroxide, solid

Transport hazard class(es)

ADR



Class

8 (C6) Corrosive substances.

Label

8

IMDG, IATA



Class

8 Corrosive substances.

Label

8

Packing group

ADR, IMDG, IATA

II

Environmental hazards:

Not applicable.

Special precautions for user

Warning: Corrosive substances.

Hazard identification number (Kemler code):

80

EMS Number:

F-A,S-B

Segregation groups

(SGG18) Alkalis

Stowage Category

A

(Contd. on page 7)

Trade name: Reagent AM2, Component 1

(Contd. of page 6)

Segregation Code SG35 Stow "separated from" SGG1-acids

Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ)

1 kg

Transport category

2

Tunnel restriction code

E

IMDG

Limited quantities (LQ)

1 kg

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

UN "Model Regulation":

UN 1823 SODIUM HYDROXIDE, SOLID, 8, II

15 Informasi yang Berkaitan dengan Regulasi

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

GHS label elements

GHS label elements

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

Hazard pictograms



GHS05 GHS07

Signal word *Danger*

Hazard-determining components of labelling:

Sodium hydroxide

Hazard statements

Harmful if swallowed.

Causes severe skin burns and eye damage.

Precautionary statements

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

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

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I Substance is not listed.

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.

16 Informasi Lain

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

(Contd. on page 8)

Trade name: Reagent AM2, Component 1

(Contd. of page 7)

Abbreviations and acronyms:

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

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

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

Acute Tox. 4: Acute toxicity – Category 4

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

IDN —

1 Identifikasi Senyawa (Tunggal atau Campuran)

Product identifier

Trade name: **Reagent AM2, Component 2**

Synonym: *for ammonium*

Article number: 51508915

CAS Number:

51580-86-0

EC number:

220-767-7

Index number:

613-030-01-7

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

Emergency telephone number: +62 813 1082 6879 (24 hrs, Jakarta, Indonesia)

2 Identifikasi Bahaya

Classification of the substance or mixture



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

Label elements

GHS label elements

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

Hazard pictograms



GHS07 GHS09

Signal word *Warning*

Hazard-determining components of labelling:

Sodium dichloroisocyanurate dihydrate

Trade name: Reagent AM2, Component 2

(Contd. of page 1)

Hazard statements*Harmful if swallowed.**Causes serious eye irritation.**May cause respiratory irritation.**Very toxic to aquatic life with long lasting effects.***Precautionary statements***Avoid breathing dust/fume/gas/mist/vapours/spray.**Wear eye protection / face protection.**IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**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.***3 Komposisi /Informasi tentang Bahan Penyusun Senyawa Tunggal****Chemical characterisation: Substances****CAS No. Description***CAS: 51580-86-0 Sodium dichloroisocyanurate dihydrate***Identification number(s)****EC number:** *220-767-7***Index number:** *613-030-01-7***4 Tindakan Pertolongan Pertama pada Kecelakaan****Description of first aid measures****General information:***Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.***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. If symptoms persist, consult a doctor.***After swallowing:***Call for a doctor immediately.**Rinse out mouth and then drink plenty of water.**Induce vomiting only, if affected person is fully conscious.***Information for doctor:****Most important symptoms and effects, both acute and delayed***Breathing difficulty**Coughing***Indication of any immediate medical attention and special treatment needed***No further relevant information available.***5 Tindakan pemadaman kebakaran****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*

(Contd. on page 3)

Trade name: Reagent AM2, Component 2

(Contd. of page 2)

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 Tindakan Penanggulangan jika terjadi Tumpahan dan Kebocoran****Personal precautions, protective equipment and emergency procedures***Ensure adequate ventilation**Avoid formation of dust.**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.**Do not allow to enter sewers/ surface or ground water.***Methods and material for containment and cleaning up:***Dispose contaminated material as waste according to section 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 Penanganan dan Penyimpanan****Precautions for safe handling** *Ensure good ventilation/exhaustion at the workplace.***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:***Keep container tightly sealed.**Store in cool, dry conditions in well sealed receptacles.***Storage class:** 11**Specific end use(s)** *No further relevant information available.***8 Kontrol Paparan/ Perlindungan Diri****Additional information about design of technical facilities:** *No further data; see section 7.***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****Personal protective equipment:****General protective and hygienic measures:***Keep away from foodstuffs, beverages and feed.**Immediately remove all soiled and contaminated clothing**Wash hands before breaks and at the end of work.**Avoid contact with the eyes.**Avoid contact with the eyes and skin.***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.*

(Contd. on page 4)

Trade name: Reagent AM2, Component 2

(Contd. of page 3)

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.

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.

Nitrile rubber, NBR

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:*Tightly sealed goggles*

Body protection: *Protective work clothing*

9 Sifat fisika dan kimia**Information on basic physical and chemical properties****General Information****Appearance:**

Form:	<i>Granulate</i>
Colour:	<i>White</i>
Odour:	<i>Like chlorine</i>
Odour threshold:	<i>Not determined.</i>
pH-value:	<i>6.7</i>

Change in condition

Melting point/freezing point:	<i>250 °C</i>
Initial boiling point and boiling range:	<i>Undetermined.</i>

Flash point: *Not applicable.*

Flammability: *Product is not flammable.*

Auto-ignition temperature: *250 °C*

Decomposition temperature: *> 240 °C*

Ignition temperature: *Not determined.*

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

Explosion limits:

Lower:	<i>Not determined.</i>
Upper:	<i>Not determined.</i>

Vapour pressure: *Not applicable.*

Density: *Not determined.*

Bulk density: *980 kg/m³*

Relative density: *Not determined.*

(Contd. on page 5)

Trade name: Reagent AM2, Component 2

(Contd. of page 4)

Vapour density	<i>Not applicable.</i>
Evaporation rate	<i>Not applicable.</i>
Solubility in / Miscibility with water at 25 °C:	250 g/l
Partition coefficient: n-octanol/water:	<i>Not determined.</i>
Viscosity:	
Dynamic:	<i>Not applicable.</i>
Kinematic:	<i>Not applicable.</i>
Solids content:	100.0 %
Other information	<i>No further relevant information available.</i>

10 Stabilitas dan Reaktifitas**Reactivity** *No further relevant information available.***Chemical stability****Thermal decomposition / conditions to be avoided:** *To avoid thermal decomposition do not overheat.***Possibility of hazardous reactions***Reacts with amines.**Reacts with strong acids.***Conditions to avoid** *No further relevant information available.***Incompatible materials:** *No further relevant information available.***Hazardous decomposition products:** *Poisonous gases/vapours***11 Informasi Toksikologi****Information on toxicological effects****Acute toxicity****LD/LC50 values relevant for classification:****CAS: 51580-86-0 Sodium dichloroisocyanurate dihydrate**

Oral LD50 550-1,600 mg/kg (rat)

Dermal LD50 >5,000 mg/kg (rabbit)

Primary irritant effect:**Skin corrosion/irritation** *No irritant effect.***Serious eye damage/irritation** *Irritating effect.***Respiratory or skin sensitisation** *No sensitising effects known.***12 Informasi Ekologi****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.***Ecotoxicological effects:****Remark:** *Very toxic for fish***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.**Also poisonous for fish and plankton in water bodies.**Very toxic for aquatic organisms*

(Contd. on page 6)

Trade name: Reagent AM2, Component 2

(Contd. of page 5)

Results of PBT and vPvB assessment

PBT: *Not applicable.*

vPvB: *Not applicable.*

Other adverse effects *No further relevant information available.*

13 Pembuangan Limbah

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.*

14 Informasi Transpor/Pengangkutan

UN-Number

UN3077

IMDG, IATA

UN proper shipping name

ADR

UN3077 ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, SOLID, N.O.S. (Sodium
dichloroisocyanurate dihydrate)

IMDG

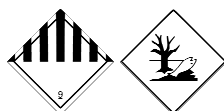
ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (Sodium dichloroisocyanurate dihydrate),
MARINE POLLUTANT

IATA

Environmentally hazardous substance, solid, n.o.s.
(containing Sodium dichloroisocyanurate dihydrate)

Transport hazard class(es)

ADR



Class

9 (M7) Miscellaneous dangerous substances and articles.

Label

9

IMDG, IATA



Class

9 Miscellaneous dangerous substances and articles.

Label

9

Packing group

ADR, IMDG, IATA

III

Environmental hazards:

Marine pollutant:

Yes

Symbol (fish and tree)

Special marking (ADR):

Symbol (fish and tree)

Special marking (IATA):

Symbol (fish and tree)

Special precautions for user

Warning: Miscellaneous dangerous substances and
articles.

Hazard identification number (Kemler code):

60

EMS Number:

F-A,S-F

Stowage Category

A

(Contd. on page 7)

Trade name: Reagent AM2, Component 2

(Contd. of page 6)

Stowage Code SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.

Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.

Transport/Additional information:**ADR**

Limited quantities (LQ) 5 kg

Transport category 3

Tunnel restriction code E

IMDG

Limited quantities (LQ) 5 kg

Excepted quantities (EQ) Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

UN "Model Regulation": UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SODIUM DICHLOROISOCYANURATE DIHYDRATE), 9, III

15 Informasi yang Berkaitan dengan Regulasi

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

GHS label elements

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

Hazard pictograms

GHS07 GHS09

Signal word Warning**Hazard-determining components of labelling:**

Sodium dichloroisocyanurate dihydrate

Hazard statements

Harmful if swallowed.

Causes serious eye irritation.

May cause respiratory irritation.

Very toxic to aquatic life with long lasting effects.

Precautionary statements

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

Wear eye protection / face protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

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

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I Substance is not listed.

Seveso category E1 Hazardous to the Aquatic Environment

Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

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.

(Contd. on page 8)

Trade name: Reagent AM2, Component 2

(Contd. of page 7)

16 Informasi Lain

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:

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

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

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

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1