

19.09.2024


Kit Components

Product code	Description
CAY748-VxxAAH	CA71HA Reagent Set for hardness

Components:

51515586A	Reagent HA-A1 for hardness
51515587A	Reagent HA-A2, Component 1 for hardness
51515588A	Reagent HA-A2, Component 2 for hardness

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:** Reagent HA-A1**Synonym:** *for hardness***Article number:** 51515586A**1.2 Relevant identified uses of the substance or mixture and uses advised against****Product category** PC21 *Laboratory chemicals***Application of the substance / the mixture** *Laboratory chemicals***1.3 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***1.4 Emergency telephone number:** *Phone: +49(0)6131-19240***SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008***The product is not classified, according to the CLP regulation.***2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008** *Void***Hazard pictograms** *Void***Signal word** *Void***Hazard statements** *Void***Additional information:***Safety data sheet available on request.***2.3 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/information on ingredients****3.2 Mixtures****Description:** *Mixture of substances listed below with nonhazardous additions.***Dangerous components:**

CAS: 497-19-8 EINECS: 207-838-8 Registration number: 01-2119485498-19-XXXX	sodium carbonate	 Eye Irrit. 2, H319	1-2.5%
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Additional information: *For the wording of the listed hazard phrases refer to section 16.***SECTION 4: First aid measures****4.1 Description of first aid measures****After inhalation:** *Supply fresh air; consult doctor in case of complaints.*

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Trade name: Reagent HA-A1

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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.*

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 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*

5.2 Special hazards arising from the substance or mixture *No further relevant information available.*

5.3 Advice for firefighters *No further relevant information available.*

Protective equipment: *No special measures required.*

SECTION 6: Accidental release measures

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

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

6.3 Methods and material for containment and cleaning up:

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

6.4 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

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

Information about fire - and explosion protection: *No special measures required.*

7.2 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

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

SECTION 8: Exposure controls/personal protection**8.1 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.*

8.2 Exposure controls

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

Individual protection measures, such as personal protective equipment

General protective and hygienic measures: *Wash hands before breaks and at the end of work.*

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Trade name: Reagent HA-A1

(Contd. of page 2)

Respiratory protection: *Not required.***Hand protection***To avoid skin problems reduce the wearing of gloves to the required minimum.**The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.**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** *Goggles recommended during refilling***Body protection:** *Protective work clothing***SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information**

Physical state	<i>Fluid</i>
Colour:	<i>Yellow tint</i>
Odour:	<i>Characteristic</i>
Odour threshold:	<i>Not determined.</i>
Melting point/freezing point:	<i>0 °C</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>9-11</i>
Viscosity:	
Kinematic viscosity	<i>Not determined.</i>
Dynamic:	<i>Not determined.</i>
Solubility	
water:	<i>Not miscible or difficult to mix.</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:	<i>Not determined.</i>
Relative density	<i>Not determined.</i>
Vapour density	<i>Not determined.</i>

9.2 Other information**Appearance:****Form:** *Liquid***Important information on protection of health and environment, and on safety.****Ignition temperature:** *Product is not selfigniting.***Explosive properties:** *Product does not present an explosion hazard.
Not determined.***Solvent content:****Water:** *95.8 %*

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Trade name: Reagent HA-A1

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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**10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:** No dangerous decomposition products known.**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity** Based on available data, the classification criteria are not met.**LD/LC50 values relevant for classification:****CAS: 497-19-8 sodium carbonate**

Oral | LD50 | 4,090 mg/kg (rat)

Skin corrosion/irritation Based on available data, the classification criteria are not met.**Serious eye damage/irritation** Based on available data, the classification criteria are not met.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.**11.2 Information on other hazards****Endocrine disrupting properties**

None of the ingredients is listed.

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Trade name: Reagent HA-A1

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SECTION 12: Ecological information**12.1 Toxicity**

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**12.5 Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

12.7 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**13.1 Waste treatment methods****Recommendation**

Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

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

European waste catalogue

16 05 09 | discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information****14.1 UN number or ID number**

ADR, ADN, IMDG, IATA

Void

14.2 UN proper shipping name

ADR, ADN, IMDG, IATA

Void

14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

Void

14.4 Packing group

ADR, IMDG, IATA

Void

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO

instruments

Not applicable.

UN "Model Regulation":

Void

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

Labelling according to Regulation (EC) No 1272/2008 Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

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Trade name: Reagent HA-A1

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Directive 2012/18/EU**Named dangerous substances - ANNEX I** *None of the ingredients is listed.***DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II***None of the ingredients is listed.***REGULATION (EU) 2019/1148****Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))***None of the ingredients is listed.***Annex II - REPORTABLE EXPLOSIVES PRECURSORS***None of the ingredients is listed.***Regulation (EC) No 273/2004 on drug precursors***None of the ingredients is listed.***Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors***None of the ingredients is listed.***National regulations:****Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.***15.2 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.***16.3 Recommended restriction of use****Department issuing SDS:** *PCC-TWR***Contact:** *MSDS.pcc@endress.com***Date of previous version:** *10.09.2021***Version number of previous version:** *6***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)**ICAO: International Civil Aviation Organisation**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**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**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**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**** Data compared to the previous version altered.**

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

1.1 Product identifier

Trade name: Reagent HA-A2, Component 1

Synonym: *for hardness*

Article number: 51515587A

UFI: JGH0-C09A-000D-UYPK

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

Product category PC21 *Laboratory chemicals*

Application of the substance / the mixture *Laboratory chemicals*

1.3 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

1.4 Emergency telephone number: *Phone: +49(0)6131-19240*

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS02 *flame*

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02

Signal word *Danger*

Hazard statements

H225 Highly flammable liquid and vapour.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

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

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

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 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 HA-A2, Component 1

(Contd. of page 1)

Results of PBT and vPvB assessmentPBT: *Not applicable.*vPvB: *Not applicable.***SECTION 3: Composition/information on ingredients****3.2 Mixtures**Description: *Mixture of substances listed below with nonhazardous additions.***Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6 Registration number: 01-2119457610-43-XXXX	ethanol	 Flam. Liq. 2, H225	30-50%
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Additional information: *For the wording of the listed hazard phrases refer to section 16.***SECTION 4: First aid measures****4.1 Description of first aid measures**General information: *Immediately remove any clothing soiled by the product.*After inhalation: *Supply fresh air; consult doctor in case of complaints.*After skin contact: *Immediately rinse with water.*After eye contact: *Rinse opened eye for several minutes under running water.*After swallowing: *If symptoms persist consult doctor.***4.2 Most important symptoms and effects, both acute and delayed***No further relevant information available.***4.3 Indication of any immediate medical attention and special treatment needed***No further relevant information available.***SECTION 5: Firefighting measures****5.1 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***5.2 Special hazards arising from the substance or mixture** *No further relevant information available.***5.3 Advice for firefighters** *No further relevant information available.***Protective equipment:** *No special measures required.***SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures***Wear protective equipment. Keep unprotected persons away.**Wear protective clothing.***6.2 Environmental precautions:***Prevent seepage into sewage system, workpits and cellars.**Dilute with plenty of water.**Do not allow to enter sewers/ surface or ground water.***6.3 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 section 13.**Ensure adequate ventilation.***6.4 Reference to other sections***See Section 7 for information on safe handling.**See Section 8 for information on personal protection equipment.*

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Trade name: Reagent HA-A2, Component 1

(Contd. of page 2)

See Section 13 for disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Keep receptacles tightly sealed.

Keep away from heat and direct sunlight.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities**Storage:**

Requirements to be met by storerooms and receptacles: Store in a cool location.

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: 3

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

SECTION 8: Exposure controls/personal protection**8.1 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.

8.2 Exposure controls

Appropriate engineering controls No further data; see section 7.

Individual protection measures, such as personal protective equipment**General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Respiratory protection: Not required.

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

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.

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Trade name: Reagent HA-A2, Component 1

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Eye/face protection



Tightly sealed goggles

Body protection: Protective work clothing

* SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Physical state	Fluid
Colour:	Yellow tint
Odour:	Odourless
Odour threshold:	Not determined.
Melting point/freezing point:	Undetermined.
Boiling point or initial boiling point and boiling range	78 °C
Flammability	Highly flammable.
Lower and upper explosion limit	
Lower:	3.5 Vol %
Upper:	15 Vol %
Flash point:	< 23 °C
Auto-ignition temperature:	425 °C
Decomposition temperature:	Not determined.
pH at 20 °C	12.7
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:	59 hPa
Density and/or relative density	
Density at 20 °C:	0.895 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.

9.2 Other information

Appearance:	
Form:	Liquid
Important information on protection of health and environment, and on safety.	
Ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Solvent content:	
Organic solvents:	42.0 %
Water:	58.0 %
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

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Trade name: Reagent HA-A2, Component 1

(Contd. of page 4)

Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Highly flammable liquid and vapour.
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

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

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

Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:

CAS: 64-17-5 ethanol

Oral	LD50	7,060 mg/kg (rat)
Inhalative	LC50/4 h	20,000 mg/l (rat)

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

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

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

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

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

11.2 Information on other hazards

Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

(Contd. on page 6)

Trade name: Reagent HA-A2, Component 1

(Contd. of page 5)

12.5 Results of PBT and vPvB assessment

PBT: *Not applicable.*

vPvB: *Not applicable.*

12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

12.7 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.

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.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

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

European waste catalogue

16 05 06*	<i>laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals</i>
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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

14.1 UN number or ID number

ADR, IMDG, IATA

UN1170

14.2 UN proper shipping name

ADR

UN1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

IMDG

ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

IATA

Ethanol solution

14.3 Transport hazard class(es)

ADR



Class

3 (F1) Flammable liquids.

Label

3

IMDG, IATA



Class

3 Flammable liquids.

Label

3

(Contd. on page 7)

Trade name: Reagent HA-A2, Component 1

(Contd. of page 6)

14.4 Packing group	II
ADR, IMDG, IATA	
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Warning: Flammable liquids.
Hazard identification number (Kemler code):	33
EMS Number:	F-E, S-D
Stowage Category	A
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.

Transport/Additional information:

ADR	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E

IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II

SECTION 15: Regulatory information

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

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02

Signal word *Danger*

Hazard statements

H225 Highly flammable liquid and vapour.

Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- P501 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.

Seveso category P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

(Contd. on page 8)

Trade name: Reagent HA-A2, Component 1

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REGULATION (EC) No 1907/2006 ANNEX XVII *Conditions of restriction: 3***DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II***None of the ingredients is listed.***REGULATION (EU) 2019/1148****Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))***None of the ingredients is listed.***Annex II - REPORTABLE EXPLOSIVES PRECURSORS***None of the ingredients is listed.***Regulation (EC) No 273/2004 on drug precursors***None of the ingredients is listed.***Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors***None of the ingredients is listed.***National regulations:****Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.***15.2 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.***16.3 Recommended restriction of use****Department issuing SDS:** *PCC-TWR***Contact:** *MSDS.pcc@endress.com***Date of previous version:** *10.09.2021***Version number of previous version:** *6***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)**ICAO: International Civil Aviation Organisation**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**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**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**Flam. Liq. 2: Flammable liquids – Category 2**** Data compared to the previous version altered.**

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:** Reagent HA-A2, Component 2**Synonym:** *for hardness***Article number:** 51515588A**UFI:** 6KH0-U0YQ-900W-GA8N**1.2 Relevant identified uses of the substance or mixture and uses advised against****Product category** PC21 *Laboratory chemicals***Application of the substance / the mixture** *Laboratory chemicals***1.3 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***1.4 Emergency telephone number:** *Phone: +49(0)6131-19240***SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

GHS07

*Eye Irrit. 2 H319 Causes serious eye irritation.***2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008***The product is classified and labelled according to the CLP regulation.***Hazard pictograms**

GHS07

Signal word *Warning***Hazard statements***H319 Causes serious eye irritation.***Precautionary statements***P264 Wash thoroughly after handling.**P280 Wear eye protection / face protection.**P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P337+P313 If eye irritation persists: Get medical advice/attention.***2.3 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.*

Trade name: Reagent HA-A2, Component 2

(Contd. of page 1)

SECTION 3: Composition/information on ingredients**3.2 Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 1787-61-7 EINECS: 217-250-3	Eriochrome black T	Eye Irrit. 2, H319	80-100%
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Additional information: For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures****4.1 Description of first aid measures****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: If symptoms persist consult doctor.**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 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**5.2 Special hazards arising from the substance or mixture** No further relevant information available.**5.3 Advice for firefighters** No further relevant information available.**Protective equipment:** No special measures required.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.**6.3 Methods and material for containment and cleaning up:** Pick up mechanically.**6.4 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**7.1 Precautions for safe handling**

Keep receptacles tightly sealed.

Keep away from heat and direct sunlight.

Information about fire - and explosion protection: No special measures required.**7.2 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:** Keep container tightly sealed.

(Contd. on page 3)

Trade name: Reagent HA-A2, Component 2

(Contd. of page 2)

Storage class: 11**7.3 Specific end use(s)** *No further relevant information available.***SECTION 8: Exposure controls/personal protection****8.1 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.***8.2 Exposure controls****Appropriate engineering controls** *No further data; see section 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**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.***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.***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.***Eyeface protection***Tightly sealed goggles***Body protection:** *Protective work clothing***SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Physical state***Solid***Colour:***Black***Odour:***Characteristic***Odour threshold:***Not determined.***Melting point/freezing point:***Undetermined.*

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Trade name: Reagent HA-A2, Component 2

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Boiling point or initial boiling point and boiling range	<i>Undetermined.</i>
Flammability	<i>Not determined.</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	<i>Not applicable.</i>
Viscosity:	
Kinematic viscosity	<i>Not applicable.</i>
Dynamic:	<i>Not applicable.</i>
Solubility	
water:	<i>Soluble.</i>
Partition coefficient n-octanol/water (log value)	<i>Not determined.</i>
Vapour pressure:	<i>Not applicable.</i>
Density and/or relative density	
Density:	<i>Not determined.</i>
Relative density	<i>Not determined.</i>
Vapour density	<i>Not applicable.</i>
Particle characteristics	<i>See section 3.</i>
9.2 Other information	
Appearance:	
Form:	<i>Crystalline powder</i>
Important information on protection of health and environment, and on safety.	
Ignition temperature:	<i>Product is not selfigniting.</i>
Explosive properties:	<i>Product does not present an explosion hazard. Not determined.</i>
Solvent content:	
Solids content:	<i>100.0 %</i>
Change in condition	
Evaporation rate	<i>Not applicable.</i>
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 reactivity10.1 Reactivity *No further relevant information available.*

(Contd. on page 5)

Trade name: Reagent HA-A2, Component 2

(Contd. of page 4)

10.2 Chemical stability**Thermal decomposition / conditions to be avoided:***No decomposition if used according to specifications.***10.3 Possibility of hazardous reactions** *No dangerous reactions known.***10.4 Conditions to avoid** *No further relevant information available.***10.5 Incompatible materials:** *No further relevant information available.***10.6 Hazardous decomposition products:** *No dangerous decomposition products known.***SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity** *Based on available data, the classification criteria are not met.***Skin corrosion/irritation** *Based on available data, the classification criteria are not met.***Serious eye damage/irritation** *Causes serious eye irritation.***Respiratory or skin sensitisation** *Based on available data, the classification criteria are not met.***Germ cell mutagenicity** *Based on available data, the classification criteria are not met.***Carcinogenicity** *Based on available data, the classification criteria are not met.***Reproductive toxicity** *Based on available data, the classification criteria are not met.***STOT-single exposure** *Based on available data, the classification criteria are not met.***STOT-repeated exposure** *Based on available data, the classification criteria are not met.***Aspiration hazard** *Based on available data, the classification criteria are not met.***11.2 Information on other hazards****Endocrine disrupting properties***None of the ingredients is listed.***SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:** *No further relevant information available.***12.2 Persistence and degradability** *No further relevant information available.***12.3 Bioaccumulative potential** *No further relevant information available.***12.4 Mobility in soil** *No further relevant information available.***12.5 Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***12.6 Endocrine disrupting properties***The product does not contain substances with endocrine disrupting properties.***12.7 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.***SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation***Must not be disposed together with household garbage. Do not allow product to reach sewage system.***European waste catalogue**

16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals
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Uncleaned packaging:**Recommendation:** *Disposal must be made according to official regulations.*

(Contd. on page 6)

Trade name: Reagent HA-A2, Component 2

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Recommended cleansing agents: *Water, if necessary together with cleansing agents.***SECTION 14: Transport information**

14.1 UN number or ID number ADR, ADN, IMDG, IATA	Void
14.2 UN proper shipping name ADR, ADN, IMDG, IATA	Void
14.3 Transport hazard class(es) ADR, ADN, IMDG, IATA Class	Void
14.4 Packing group ADR, IMDG, IATA	Void
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Not applicable.
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
UN "Model Regulation":	Void

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS07

Signal word *Warning*

Hazard statements

H319 Causes serious eye irritation.

Precautionary statements

P264 Wash thoroughly after handling.

P280 Wear eye protection / face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

Directive 2012/18/EU

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

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

(Contd. on page 7)

Trade name: Reagent HA-A2, Component 2

(Contd. of page 6)

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors*None of the ingredients is listed.***National regulations:****Waterhazard class:** *Water hazard class 2 (Self-assessment): hazardous for water.***15.2 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.

16.3 Recommended restriction of use**Department issuing SDS:** *PCC-TWR***Contact:** *MSDS.pcc@endress.com***Date of previous version:** *10.09.2021***Version number of previous version:** *5***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)**ICAO: International Civil Aviation Organisation**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**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**** Data compared to the previous version altered.**