



Safety data sheet according to 1907/2006/EC, Article 31

Printing date 26.08.2021

Version number 6 (replaces version 5)

Revision: 29.01.2021

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

· 1.1 Product identifier

· Product name: **Reagent PA1 Phenolphthalein Ind. PALK**

· Catalog number: 100319

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

· Application of the substance / the preparation: Reagent for water analysis

· 1.3 Details of the supplier of the safety data sheet

· Supplier:

Vecom Marine B.V.
Mozartlaan 3
3144 NA Maassluis
The Netherlands

phone: + 31 (0)10 5930 210
Email: sales@vecom-marine.com

· 1.4 Emergency telephone number:

Dutch Poisons Information Center (NVIC): +31 (0)88 755 8000 (24 hour service)
Only for the purpose of informing medical personnel in case of acute intoxications.
See section 4 on first aid measures.

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 as hazardous 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

· 2.3 Other hazards No further relevant information available.

· Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

· Determination of endocrine-disrupting properties

The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· Description: aqueous solution

· Dangerous components: Void

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information Instantly remove any clothing soiled by the product.

· After inhalation Supply fresh air.

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- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**
Rinse opened eye for several minutes under running water (at least 15 min). If symptoms persist, consult doctor.
- **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
In case of persistent symptoms 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** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture**
mixture with combustible ingredients
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
- **Advice for non-emergency personnel:** Wear protective equipment. Keep unprotected persons away.
- **Advice for emergency responders:** Protective equipment: see section 8
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Dilute with much water.
- **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, universal binders).
Dispose of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
- **Advice on safe handling:** No special precautions necessary if used correctly.
- **Hygiene measures:**
The usual precautionary measures should be adhered to general rules for handling chemicals.
Do not eat, drink or smoke when using this product.
Wash hands during breaks and at the end of the work.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Protect from heat and direct sunlight.
Protect from the effects of light.
Protect from humidity and keep away from water.
- **Recommended storage temperature:** 20°C +/- 5°C

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

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Components 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 that were valid during the compilation were used as basis.

· 8.2 Exposure controls

· Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.

· Individual protection measures, such as personal protective equipment

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.

· Eye/face protection

Safety glasses

use against the effects of fumes / dust

· Hand protection

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

· Material of gloves

nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

· Penetration time of glove material

Value for the permeation: Level = 1 (< 10 min)

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

· Other skin protection (body protection):

Protective work clothing.

· Breathing equipment:

Use breathing protection against the effects of fumes/dust/aerosol.

· Recommended filter device for short term use:

Filter B

· Environmental exposure controls

Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· Physical state	Fluid
· Form:	Solution
· Colour:	Light brown
· Odour:	Odourless
· Odour threshold:	Not applicable.
· Melting point/Freezing point:	Not determined.
· Boiling point or initial boiling point and boiling range	Not determined.
· Flammability	The product is not combustible.
· Explosive properties:	Product is not explosive.
· Lower and upper explosion limit	
· Lower:	Not applicable.
· Upper:	Not applicable.
· Flash point:	270°C (CAS: 25322-68-3 Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy-Ethane-1,2-diol, ethoxylated)
· Ignition temperature:	420°C (CAS: 25322-68-3 Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy-Ethane-1,2-diol, ethoxylated)
· Decomposition temperature:	360 °C (CAS 25322-68-3)
· pH at 20°C	7
· Kinematic viscosity	Not determined.
· Solubility	
· Water:	Fully miscible
· Partition coefficient n-octanol/water (log value)	Not applicable (mixture).
· Vapour pressure:	Not determined.

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· Density and/or relative density	
· Density:	Not determined.
· Relative density:	Not determined.
· Relative gas density	Not determined.
· Particle characteristics	Not applicable (liquid).
· 9.2 Other information	
· Information with regard to physical hazard classes	
· Corrosive to metals	Void
· Other safety characteristics	
· Oxidising properties:	none
· Additional information	
· Solids content:	0.5 %
· Solvent content:	
· Organic solvents:	0 %
· Water:	< 40 %

SECTION 10: Stability and reactivity

- **10.1 Reactivity** see section 10.3
- **10.2 Chemical stability** Stable at ambient temperature (room temperature).
- **10.3 Possibility of hazardous reactions** No further relevant information available.
- **10.4 Conditions to avoid** To avoid thermal decomposition do not overheat.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** see section 5

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** 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 (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

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.

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· 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects** Avoid transfer into the environment.

· Water hazard:

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

Danger to drinking water if even small quantities leak into soil.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

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

Disposal must be made according to official regulations.

· European waste catalogue

16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08
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· Uncleaned packagings:

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· 14.1 UN number or ID number

· ADR, IMDG, IATA Void

· 14.2 UN proper shipping name

· ADR, IMDG, IATA Void

· 14.3 Transport hazard class(es)

· ADR, 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.

· Transport/Additional information:

Not dangerous according to the above specifications.

SECTION 15: Regulatory information

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

· Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)

None of the ingredients is listed.

· Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

None of the ingredients is listed.

· REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)

None of the ingredients is listed.

· Directive 2012/18/EU (SEVESO III):

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

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· LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)
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None of the ingredients is listed.

· Substances of very high concern (SVHC) according to REACH, Article 57
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This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).
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· Information about limitation of use: Not required.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.
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SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Abbreviations and acronyms:**

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

EC50: half maximal effective concentration

IC50: half maximal inhibitory concentration

NOEL or NOEC: No Observed Effect Level or Concentration

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

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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

· **Sources** Data arise from safety data sheets, reference works and literature.

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



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Revision: 13.02.2021

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

· 1.1 Product identifier

· Product name: **Reagent PA2/TA2 Alkalinity HR Titrant**

· Catalog number: 100339

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

· Application of the substance / the preparation: Reagent for water analysis

· 1.3 Details of the supplier of the safety data sheet

· Supplier:

Vecom Marine B.V.
Mozartlaan 3
3144 NA Maassluis
The Netherlands

phone: + 31 (0)10 5930 210
Email: sales@vecom-marine.com

· 1.4 Emergency telephone number:

Dutch Poisons Information Center (NVIC): +31 (0)88 755 8000 (24 hour service)
Only for the purpose of informing medical personnel in case of acute intoxications.
See section 4 on first aid measures.

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008



GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.

· 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



GHS05

· Signal word Warning

· Hazard statements

H290 May be corrosive to metals.

· Precautionary statements

P234 Keep only in original packaging.

P390 Absorb spillage to prevent material damage.

· 2.3 Other hazards No further relevant information available.

· Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

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- **Determination of endocrine-disrupting properties**
The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** weak sulfuric acid solution

- **Dangerous components:**

CAS: 7664-93-9 EINECS: 231-639-5 Index No: 016-020-00-8 Reg.nr.: 01-2119458838-20-XXXX	sulphuric acid  Met. Corr. 1, H290; Skin Corr. 1A, H314 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 15 % Skin Irrit. 2; H315: 5 % ≤ C < 15 % Eye Dam. 1; H318: C ≥ 15 % Eye Irrit. 2; H319: 5 % ≤ C < 15 %	0.1-≤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**
- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**
Rinse opened eye for several minutes under running water (at least 15 min). If symptoms persist, consult doctor.
- **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
In case of persistent symptoms consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed:** Causes mild skin irritation.
- **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** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture**
The product is not combustible.
Formation of toxic gases is possible during heating or in case of fire.
Can be released in case of fire:
Sulphur oxides (SO_x)
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
- **Advice for non-emergency personnel:** No special measures required.
- **Advice for emergency responders:** Protective equipment: see section 8
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Dilute with much water.

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· 6.3 Methods and material for containment and cleaning up:

- Ensure adequate ventilation.
- Neutralize with diluted sodium hydroxide solution.
- Absorb with liquid-binding material (sand, diatomite, universal binders).
- Dispose of contaminated material as waste according to item 13.

· 6.4 Reference to other sections

- See Section 8 for information on personal protection equipment.
- See Section 13 for information on disposal.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

- **Advice on safe handling:** No special precautions necessary if used correctly.

· Hygiene measures:

- The usual precautionary measures should be adhered to general rules for handling chemicals.
- Do not eat, drink or smoke when using this product.
- Wash hands during breaks and at the end of the work.

· 7.2 Conditions for safe storage, including any incompatibilities

- **Requirements to be met by storerooms and containers:** Store in cool location.

· Information about storage in one common storage facility:

- Store away from metals.
- Store away from flammable substances.

· Further information about storage conditions:

- Protect from heat and direct sunlight.
- Protect from the effects of light.
- Protect from humidity and keep away from water.

- **Recommended storage temperature:** 20°C +/- 5°C

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

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

- **Components with limit values that require monitoring at the workplace:**

CAS: 7664-93-9 sulphuric acid

WEL (Great Britain)	Long-term value: 0.05* mg/m ³ *mist: defined as thoracic fraction
IOELV (European Union)	Long-term value: 0.05 mg/m ³
OEL (Sweden)	Short-term value: 0.2 mg/m ³ Long-term value: 0.1 mg/m ³ C, V

· Regulatory information

- WEL (Great Britain): EH40/2011
- IOELV (European Union): 91/322/EEC, 2000/39/EC, 2006/15/EC
- OEL (Sweden): AFS2011:18

- **Additional information:** IOELV = Indicative Occupational Exposure Limit

· DNELs

Derived No Effect Level (DNEL)

CAS: 7664-93-9 sulphuric acid

Inhalative	DNEL	0.1 mg/m ³ (Worker / acute / local effects)
		0.05 mg/m ³ (Worker / acute / systemic effects)

· Recommended monitoring procedures:

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

· PNECs

Predicted No Effect Concentration (PNEC)

CAS: 7664-93-9 sulphuric acid

PNEC	8.8 mg/l (Sewage treatment plant)
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PNEC	0.00025 mg/l (Marine water)
	0.0025 mg/l (Fresh water)
	0.002 mg/kg (Marine sediment)
	0.002 mg/kg (Fresh water sediment)

- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.
- **Individual protection measures, such as personal protective equipment**
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
- **Eye/face protection**
Safety glasses
use against the effects of fumes / dust
- **Hand protection**
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
- **Material of gloves**
nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
- **Penetration time of glove material**
Value for the permeation: Level = 1 (< 10 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Other skin protection (body protection):** Protective work clothing.
- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Filter P2
- **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **Physical state** Fluid
- **Form:** Liquid
- **Colour:** Colourless
- **Odour:** Odourless
- **Odour threshold:** Not applicable.
- **Melting point/Freezing point:** Not determined.
- **Boiling point or initial boiling point and boiling range** 100°C (CAS: 7732-18-5 water)
- **Flammability** Not applicable.
- **Explosive properties:** Product is not explosive.
- **Lower and upper explosion limit**
- **Lower:** Not applicable.
- **Upper:** Not applicable.
- **Flash point:** Not applicable.
- **Ignition temperature:** Not applicable.
- **Decomposition temperature:** Not determined.
- **pH at 20°C** < 2
- **Kinematic viscosity** Not determined.
- **Solubility**
- **Water:** Fully miscible
- **Partition coefficient n-octanol/water (log value)** Not applicable (mixture).
- **Vapour pressure:** Not determined.
- **Density and/or relative density**
- **Density at 20°C:** 1 g/cm³
- **Relative density:** Not determined.
- **Relative gas density** Not determined.
- **Particle characteristics** Not applicable (liquid).

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· 9.2 Other information

· Information with regard to physical hazard classes

· Corrosive to metals

May be corrosive to metals.

· Metal corrosion rate:

acc. to "Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Fifth revised Edition"

· Other safety characteristics

· Oxidising properties:

none

· Additional information

· Solids content:

0 %

· Solvent content:

· Organic solvents:

0 %

· Water:

> 97 %

SECTION 10: Stability and reactivity

· 10.1 Reactivity see section 10.3

· 10.2 Chemical stability Stable at ambient temperature (room temperature).

· 10.3 Possibility of hazardous reactions

Reacts with metals forming hydrogen (--> Explosive!)

Corrosive action on metals

Reacts with acids and alkali (lyes).

Reacts with ammonia (NH₃).

· 10.4 Conditions to avoid No further relevant information available.

· 10.5 Incompatible materials:

metals

combustible substances

organic solvents

· 10.6 Hazardous decomposition products: see section 5

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 that are relevant for classification:

CAS: 7664-93-9 sulphuric acid

Oral	LD50	2140 mg/kg (rat) (IUCLID)
Inhalative	LC 50	510 mg/m ³ /2h (rat) IUCLID

· 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.

· Information on components: CAS 7664-93-9: chronic: dermatitis

· 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 (specific target organ toxicity) -single exposure Based on available data, the classification criteria are not met.

· STOT (specific target organ toxicity) -repeated exposure Based on available data, the classification criteria are not met.

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

· Additional toxicological information:

Vapours and aerosols may be irritant to the mucous membranes and upper respiratory tract.

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· 11.2 Information on other hazards

· Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

CAS: 7664-93-9 sulphuric acid

EC50	>100 mg/l/48h (Daphnia magna) (OECD 202) (ECHA)
LC50	16–29 mg/l/96h (bluegill) (Merck)

· **Bacterial toxicity:** sulphates toxic > 2.5 g/l

· Other information:

Toxic for fish:

sulphates > 7 g/l

· 12.2 Persistence and degradability .

· Other information:

Mixture of inorganic compounds.

Methods for the determination of biodegradability are not applicable to inorganic substances.

· **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

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

· 12.7 Other adverse effects

Harmful effect due to pH shift.

Forms corrosive mixtures with water even if diluted.

Avoid transfer into the environment.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

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

Hand over to disposers of hazardous waste.

· European waste catalogue

16 05 07*	discarded inorganic chemicals consisting of or containing hazardous substances
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· Uncleaned packagings:

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· 14.1 UN number or ID number

· ADR, IMDG, IATA

UN3264

· 14.2 UN proper shipping name

· ADR

3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHURIC ACID)

· IMDG, IATA

CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SULPHURIC ACID)

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Safety data sheet

according to 1907/2006/EC, Article 31



Printing date 26.08.2021

Version number 5 (replaces version 4)

Revision: 13.02.2021

Product name: Reagent PA2/TA2 Alkalinity HR Titrant

(Contd. of page 6)

<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR 	
	
<ul style="list-style-type: none"> · Class · Label 	8 (C1) Corrosive substances. 8
<ul style="list-style-type: none"> · IMDG, IATA 	
	
<ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances. 8
<ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA 	
	III
<ul style="list-style-type: none"> · 14.5 Environmental hazards: 	
	Not applicable.
<ul style="list-style-type: none"> · 14.6 Special precautions for user · Kemler Number: · EMS Number: · Segregation groups · Stowage Category · Stowage Code 	
	Warning: Corrosive substances. 80 F-A,S-B Acids A SW2 Clear of living quarters.
<ul style="list-style-type: none"> · 14.7 Maritime transport in bulk according to IMO instruments 	
	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · ADR · Limited quantities (LQ) · Excepted quantities (EQ) 	
	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> · Transport category · Tunnel restriction code 	3 E
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	
	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

* SECTION 15: Regulatory information

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

· Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)

None of the ingredients is listed.

· Regulation (EU) 2019/1148 on the marketing and use of explosives precursors

This product is regulated by Regulation (EU) 2019/1148:

All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

Please see <https://ec.europa.eu>

· explosives precursors - ANNEX I

CAS 7664-93-9: c < 15%

CAS: 7664-93-9 | sulphuric acid

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.08.2021

Version number 5 (replaces version 4)

Revision: 13.02.2021

Product name: Reagent PA2/TA2 Alkalinity HR Titrant

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· Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

None of the ingredients is listed.

· REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)

None of the ingredients is listed.

· Directive 2012/18/EU (SEVESO III):

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

· LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)
--

None of the ingredients is listed.

· Substances of very high concern (SVHC) according to REACH, Article 57
--

This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).
--

· Information about limitation of use: Not required.

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

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Relevant phrases**

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

· **Abbreviations and acronyms:**

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

EC50: half maximal effective concentration

IC50: half maximal inhibitory concentration

NOEL or NOEC: No Observed Effect Level or Concentration

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

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Met. Corr.1: Corrosive to metals – Category 1

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

· **Sources**

Data arise from safety data sheets, reference works and literature.

IUCLID (International Uniform Chemical Information Database)

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



Safety data sheet according to 1907/2006/EC, Article 31

Printing date 26.08.2021

Version number 6 (replaces version 5)

Revision: 17.02.2021

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

· 1.1 Product identifier

· Product name: **Reagent TA4 pH4.5 Ind. PALK**

· Catalog number: 100321

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

· Application of the substance / the preparation: Reagent for water analysis

· 1.3 Details of the supplier of the safety data sheet

· Supplier:

Vecom Marine B.V.
Mozartlaan 3
3144 NA Maassluis
The Netherlands

phone: + 31 (0)10 5930 210
Email: sales@vecom-marine.com

· 1.4 Emergency telephone number:

Dutch Poisons Information Center (NVIC): +31 (0)88 755 8000 (24 hour service)
Only for the purpose of informing medical personnel in case of acute intoxications.
See section 4 on first aid measures.

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 as hazardous 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

· 2.3 Other hazards No further relevant information available.

· Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

· Determination of endocrine-disrupting properties

The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· Description: aqueous solution

· Dangerous components: Void

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information Instantly remove any clothing soiled by the product.

· After inhalation Supply fresh air.

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Safety data sheet

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Product name: Reagent TA4 pH4.5 Ind. PALK

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- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**
Rinse opened eye for several minutes under running water (at least 15 min). If symptoms persist, consult doctor.
- **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
In case of persistent symptoms 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** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture**
The product is not combustible.
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
- **Advice for non-emergency personnel:** Wear protective equipment. Keep unprotected persons away.
- **Advice for emergency responders:** Protective equipment: see section 8
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Dilute with much water.
- **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, universal binders).
Dispose of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
- **Advice on safe handling:** No special precautions necessary if used correctly.
- **Hygiene measures:**
The usual precautionary measures should be adhered to general rules for handling chemicals.
Do not eat, drink or smoke when using this product.
Wash hands during breaks and at the end of the work.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Protect from heat and direct sunlight.
Protect from the effects of light.
Protect from humidity and keep away from water.
- **Recommended storage temperature:** 20°C +/- 5°C

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Safety data sheet

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Product name: Reagent TA4 pH4.5 Ind. PALK

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

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Components 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 that were valid during the compilation were used as basis.

· 8.2 Exposure controls

· Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.

· Individual protection measures, such as personal protective equipment

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.

· Eye/face protection

Safety glasses

use against the effects of fumes / dust

· Hand protection

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

· Material of gloves

nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

· Penetration time of glove material

Value for the permeation: Level = 1 (< 10 min)

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

- **Other skin protection (body protection):** Protective work clothing.

- **Breathing equipment:** Not required.

- **Recommended filter device for short term use:** Filter B

- **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· Physical state	Fluid
· Form:	Solution
· Colour:	Blue
· Odour:	Odourless
· Odour threshold:	Not applicable.
· Melting point/Freezing point:	Not determined.
· Boiling point or initial boiling point and boiling range	Not determined.
· Flammability	The product is not combustible.
· Explosive properties:	Product is not explosive.
· Lower and upper explosion limit	
· Lower:	Not applicable.
· Upper:	Not applicable.
· Flash point:	Not applicable.
· Ignition temperature:	Not applicable.
· Decomposition temperature:	Not determined.
· pH at 20°C	7
· Kinematic viscosity	Not determined.
· Solubility	
· Water:	Fully miscible
· Partition coefficient n-octanol/water (log value)	Not applicable (mixture).
· Vapour pressure at 20°C:	23 hPa (CAS: 7732-18-5 water)
· Density and/or relative density	
· Density at 20°C:	1 g/cm ³

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Safety data sheet

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Product name: Reagent TA4 pH4.5 Ind. PALK

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· Relative density:	Not determined.
· Relative gas density	Not determined.
· Particle characteristics	Not applicable (liquid).
· 9.2 Other information	
· Information with regard to physical hazard classes	
· Corrosive to metals	Void
· Other safety characteristics	
· Oxidising properties:	none
· Additional information	
· Solids content:	< 0.5 %
· Solvent content:	
· Organic solvents:	0.0 %
· Water:	> 99 %

SECTION 10: Stability and reactivity

- **10.1 Reactivity** see section 10.3
- **10.2 Chemical stability** Stable at ambient temperature (room temperature).
- **10.3 Possibility of hazardous reactions** The generally known reaction partners of water.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** see section 5

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** 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 (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· 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.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.08.2021

Version number 6 (replaces version 5)

Revision: 17.02.2021

Product name: Reagent TA4 pH4.5 Ind. PALK

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· 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

· 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.

· 12.7 Other adverse effects No further relevant information available.

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.

· European waste catalogue

16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08
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· Uncleaned packagings:
· Recommendation: Disposal must be made according to official regulations.

· Recommended cleaning agent: Water, if necessary with cleaning agent.

SECTION 14: Transport information

· 14.1 UN number or ID number

· ADR, IMDG, IATA	Void
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· 14.2 UN proper shipping name

· ADR, IMDG, IATA	Void
-------------------	------

· 14.3 Transport hazard class(es)

· ADR, IMDG, IATA	Void
· Class	

· 14.4 Packing group

· ADR, IMDG, IATA	Void
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· 14.5 Environmental hazards:	Not applicable.
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· 14.6 Special precautions for user	Not applicable.
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· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
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· Transport/Additional information:	Not dangerous according to the above specifications.
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* SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
· Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)

None of the ingredients is listed.

· Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

None of the ingredients is listed.

· REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)

None of the ingredients is listed.

· Directive 2012/18/EU (SEVESO III):
· Named dangerous substances - ANNEX I None of the ingredients is listed.

· LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)

None of the ingredients is listed.

· Substances of very high concern (SVHC) according to REACH, Article 57

This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.08.2021

Version number 6 (replaces version 5)

Revision: 17.02.2021

Product name: Reagent TA4 pH4.5 Ind. PALK

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- **Information about limitation of use:** Not required.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Training hints** Provide adequate information, instruction and training for operators.
- **Abbreviations and acronyms:**
 - STOT: specific target organ toxicity
 - SE: single exposure
 - RE: repeated exposure
 - EC50: half maximal effective concentration
 - IC50: half maximal inhibitory concentration
 - NOEL or NOEC: No Observed Effect Level or Concentration
 - 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
 - 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
 - SVHC: Substances of Very High Concern
 - vPvB: very Persistent and very Bioaccumulative
- **Sources** Data arise from safety data sheets, reference works and literature.
- *** Data compared to the previous version altered.**

— GB —