

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

Printing date 03.07.2023

Version number 7 (replaces version 6)

Revision: 03.07.2023

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

#### 1.1 Product identifier

Product name: **DEHA Test Solution**

#### 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  
NL 3144 NA Maassluis  
The Netherlands

Telephone: +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.  
Skin Corr. 1B H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.

#### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

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

##### Hazard pictograms



GHS05

Signal word Danger

##### Hazard-determining components of labelling:

nitric acid 8.5%  
iron(III) nitrate nonahydrate

##### Hazard statements

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

##### Precautionary statements

P260 Do not breathe mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a doctor.

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Danger of pulmonary oedema.

Risk of serious damage to eyes.

· **4.3 Indication of any immediate medical attention and special treatment needed:**

If swallowed or in case of vomiting, danger of entering the lungs

Subsequent observation for pneumonia and pulmonary oedema

### 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:

nitrous gases

Nitrogen oxides (NO<sub>x</sub>)

iron oxide

· **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.

Avoid substance contact.

Ensure adequate ventilation

· **Advice for emergency responders:** Protective equipment: see section 8

· **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.

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

Ensure adequate ventilation.

Neutralize with diluted sodium hydroxide solution or by throwing on lime sand, lime or sodium carbonate.

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:**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· **Hygiene measures:**

Do not inhale gases / fumes / aerosols.

Do not get in eyes, on skin, or on clothing.

Take off immediately all contaminated clothing.

Wash hands during breaks and at the end of the work.

Do not eat, drink or smoke when using this product.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Requirements to be met by storerooms and containers:**

Store in cool location.

Keep only in original packaging.

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- **Information about storage in one common storage facility:**  
Store away from metals.  
Do not store together with alkalis (caustic solutions).
- **Further information about storage conditions:**  
Keep container tightly sealed.  
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: 7697-37-2 nitric acid

WEL (Great Britain)	Short-term value: 2.6 mg/m <sup>3</sup> , 1 ppm
IOELV (European Union)	Short-term value: 2.6 mg/m <sup>3</sup> , 1 ppm

- **Regulatory information**

WEL (Great Britain): EH40/2020  
IOELV (European Union): (EU) 2019/1831

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

- **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.

- **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**

Tightly sealed safety glasses.

Use safety glasses that have been tested and approved in accordance with government standards such as EN 166.

- **Hand protection**

Acid resistant gloves

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:  $\geq 0.11$  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:** Combination filter E-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:** Solution
- **Colour:** Brown

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**Product name: DEHA Test Solution**

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· <b>Odour:</b>	Weak, characteristic
· <b>Odour threshold:</b>	CAS 7697-37-2: 0.27 ppm (anhydrous substance)
· <b>Melting point/Freezing point:</b>	Not determined.
· <b>Boiling point or initial boiling point and boiling range</b>	Not determined.
· <b>Flammability</b>	The product is not combustible.
· <b>Explosive properties:</b>	Product is not explosive.
· <b>Lower and upper explosion limit</b>	
<b>Lower:</b>	Not applicable.
<b>Upper:</b>	Not applicable.
· <b>Flash point:</b>	Not applicable.
· <b>Auto-ignition temperature:</b>	Not applicable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH at 20°C</b>	<1 Strongly acidic
· <b>Kinematic viscosity</b>	Not determined.
· <b>Solubility</b>	
· <b>Water:</b>	Fully miscible
· <b>Partition coefficient n-octanol/water (log value)</b>	Not applicable (mixture).
· <b>Vapour pressure:</b>	Not determined.
· <b>Density and/or relative density</b>	
· <b>Density at 20°C:</b>	1.04 g/cm <sup>3</sup>
· <b>Relative density:</b>	Not determined.
· <b>Relative gas density</b>	Not determined.
· <b>Particle characteristics</b>	Not applicable (liquid).
<b>· 9.2 Other information</b>	
· <b>Information with regard to physical hazard classes</b>	.
· <b>Corrosive to metals</b>	May be corrosive to metals.
· <b>Metals that are corroded by the substance or mixture</b>	Information on incompatible materials can be found in Sections 7 and 10.
· <b>Other safety characteristics</b>	
· <b>Oxidising properties:</b>	CAS 7697-37-2 / 7782-61-8: is classified as oxidising. Oxidising potential
· <b>Additional information</b>	
· <b>Solids content:</b>	< 2.5 %
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	0 %
· <b>Water:</b>	> 85 %

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** see section 10.3
- **10.2 Chemical stability**  
Stable at ambient temperature (room temperature).  
sensitivity to light
- **10.3 Possibility of hazardous reactions**  
Reacts with metals forming hydrogen (Danger of explosion in case of large amounts!)  
Corrosive action on metals  
Reacts with alcohols  
Reacts with reducing agents  
Reacts with metals to form nitrous fumes and hydrogen  
Acts as an oxidizing agent on organic materials such as wood, paper and fats  
Reacts with acids and alkali (lyes).  
Reacts with ammonia (NH<sub>3</sub>).
- **10.4 Conditions to avoid** Strong heating (decomposition)
- **10.5 Incompatible materials:**  
metals  
alkali metals  
combustible substances  
organic solvents

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organic substances

- **10.6 Hazardous decomposition products:**

nitrous gases

In case of fire: 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: 7697-37-2 nitric acid		
Oral	LDLo	430 mg/kg (human) (IUCLID)
Inhalative	LC50/4h	2.65 mg/l (ATE) Registrant, ECHA: Under the conditions of the study (OECD 403) the LC50 for male and female rats after inhalation exposure to vapor atmosphere of nitric acid containing 0.8 % aerosol fraction is > 2.65 mg/L (referring to pure nitric acid).
CAS: 7782-61-8 iron(III) nitrate nonahydrate		
Oral	LD50	3250 mg/kg (rat) (RTECS)
Dermal	LD50.	>2000 mg/kg (rat) (OECD 402) Registrant, ECHA: No deaths occurred at the limit dose level of 2000 mg/kg/bw.

- **Skin corrosion/irritation** Causes severe skin burns and eye damage.

- **Serious eye damage/irritation**

Causes serious eye damage.

Risk of blindness!

- **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.

- **Information on likely routes of exposure**

An intake of nitric acid (during occupational handling) is mainly to be expected via the respiratory tract.

Exposure to acid vapors caused irritation to the eyes and skin but damage to the airways is of the greatest concern. [GESTIS]

- **Additional toxicological information:**

The following applies to soluble iron compounds: nausea and vomiting after swallowing. The absorption of large quantities is followed by cardiovascular disorders. Toxic effect on liver and kidneys.

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

The aerosol is corrosive to the eyes, the skin and the respiratory tract. Inhalation of aerosols may cause lung oedema.

#### CAS: 7697-37-2 nitric acid

(source: GESTIS)

## Main toxic effects

Acute: Irritation and corrosion to the eyes, airways and skin, danger of severe damage to the eyes and lungs, after swallowing life threatening chemical burns in the gastrointestinal tract

Chronic: Diseases of the airways, damage to the teeth

#### CAS: 7782-61-8 iron(III) nitrate nonahydrate

(source: GESTIS)

## Main toxic effects CAS 10421-48-4, (anhydrous):

Acute effects: irritant and corrosive effect on the eyes, the mucosae and the skin

Oral toxicities cause injuries of the gastrointestinal tract, the liver and the cardiovascular system, life-threatening toxicities are possible.

In susceptible individuals and after exposure to high nitrate doses: methaemoglobin formation.

Chronic effects: accumulation entails tissue damage of the internal organs.

In susceptible individuals and after exposure to high nitrate doses: methaemoglobin formation.

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#### · 11.2 Information on other hazards

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

#### · Other information

According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

### SECTION 12: Ecological information

#### · 12.1 Toxicity

##### · Aquatic toxicity:

**CAS: 7697-37-2 nitric acid**

LC50	72 mg/l/96h (mosquitofish) (IUCLID)
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· **12.2 Persistence and degradability** No further relevant information available.

#### · 12.3 Bioaccumulative potential

Pow = n-octanol/wasser partition coefficient

log Pow < 1 = Does not accumulate in organisms.

**CAS: 7697-37-2 nitric acid**

log Pow	-2.3 (.)
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· **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

Depending on the concentration, phosphorus and/or nitrogen compounds may contribute to the eutrophication of water supplies. Harmful effect due to pH shift.

Forms corrosive mixtures with water even if diluted.

Avoid transfer into the environment.

#### · Water hazard:

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

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

### 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**

UN2031

#### · 14.2 UN proper shipping name

· **ADR**

2031 NITRIC ACID mixture

· **IMDG, IATA**

NITRIC ACID mixture

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· <b>14.3 Transport hazard class(es)</b>	
· <b>ADR</b>	
	
· <b>Class</b>	8 (C1) Corrosive substances.
· <b>Label</b>	8
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	8 Corrosive substances.
· <b>Label</b>	8
· <b>14.4 Packing group</b>	
· <b>ADR, IMDG, IATA</b>	II
· <b>14.5 Environmental hazards:</b>	
Not applicable.	
· <b>14.6 Special precautions for user</b>	
· <b>Kemler Number:</b>	Warning: Corrosive substances.
· <b>EMS Number:</b>	80
· <b>Segregation groups</b>	F-A,S-B
· <b>Stowage Category</b>	Strong acids
· <b>Segregation Code</b>	D
	SG36 Stow "separated from" SGG18-alkalis.
	SG49 Stow "separated from" SGG6-cyanides
· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	
Not applicable.	
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· <b>Transport category</b>	2
· <b>Tunnel restriction code</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml

### SECTION 15: Regulatory information

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

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

Acquisition, introduction, possession or use of this product by the general public is restricted 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: 7697-37-2   nitric acid	*
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##### · Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)

None of the ingredients is listed.

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· <b>Regulation (EC) No 273/2004 on drug precursors</b>
None of the ingredients is listed.
· <b>Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors</b>
None of the ingredients is listed.
· <b>Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:</b>
None of the ingredients is listed.
· <b>REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)</b>
None of the ingredients is listed.
· <b>LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)</b>
None of the ingredients is listed.
· <b>Substances of very high concern (SVHC) according to REACH, Article 57</b>
This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).
· <b>Directive 2012/18/EU (SEVESO III):</b>
· <b>Named dangerous substances - ANNEX I</b> None of the ingredients is listed.
· <b>REGULATION (EC) No 1907/2006 ANNEX XVII</b> Conditions of restriction: 3
· <b>Information about limitation of use:</b> Employment restrictions concerning young persons must be observed (94/33/EC).
· <b>15.2 Chemical safety assessment:</b> 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**

H272 May intensify fire; oxidiser.  
 H290 May be corrosive to metals.  
 H314 Causes severe skin burns and eye damage.  
 H318 Causes serious eye damage.  
 H331 Toxic if inhaled.  
 EUH071 Corrosive to the respiratory tract.

· **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)  
 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  
 Ox. Liq. 3: Oxidizing liquids – Category 3  
 Ox. Sol. 3: Oxidizing solids – Category 3  
 Met. Corr. 1: Corrosive to metals – Category 1  
 Acute Tox. 3: Acute toxicity – Category 3  
 Skin Corr. 1A: Skin corrosion/irritation – Category 1A  
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1

· **Sources**

Data arise from safety data sheets, reference works and literature.  
 IUCLID (International Uniform Chemical Information Database)

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ECHA: European CHemicals Agency <http://echa.europa.eu>  
GESTIS- Stoffdatenbank (Substance Database, Germany)  
RTECS (Registry of Toxic Effects of Chemical Substances )

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

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

#### 1.1 Product identifier

Product name: **DEHA Indicator Solution**

#### 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  
NL 3144 NA Maassluis  
The Netherlands

Telephone: +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 GB 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; 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.

Seek medical treatment in case of complaints.

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### Product name: DEHA Indicator Solution

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- **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:** 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.
- **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 7 for information on safe handling  
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** No special precautions necessary if used correctly.
- **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
- **7.3 Specific end use(s)** No further relevant information available.

— GB —  
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# Safety data sheet

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### 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:  $\geq 0.11$  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

· <b>Physical state</b>	Fluid
· <b>Form:</b>	Solution
· <b>Colour:</b>	Yellowish
· <b>Odour:</b>	Odourless
· <b>Odour threshold:</b>	Not applicable.
· <b>Melting point/Freezing point:</b>	0°C
· <b>Boiling point or initial boiling point and boiling range</b>	100°C (CAS: 7732-18-5 water)
· <b>Flammability</b>	The product is not combustible.
· <b>Explosive properties:</b>	Product is not explosive.
· <b>Lower and upper explosion limit</b>	
<b>Lower:</b>	Not applicable.
<b>Upper:</b>	Not applicable.
· <b>Flash point:</b>	Not applicable.
· <b>Auto-ignition temperature:</b>	Not applicable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH</b>	Neutral
· <b>Kinematic viscosity</b>	Not determined.
· <b>Solubility</b>	
· <b>Water:</b>	Fully miscible
· <b>Partition coefficient n-octanol/water (log value)</b>	Not applicable (mixture).
· <b>Vapour pressure at 20°C:</b>	23 hPa (CAS: 7732-18-5 water)
· <b>Density and/or relative density</b>	
· <b>Density:</b>	Not determined.
· <b>Relative density:</b>	Not determined.
· <b>Relative gas density</b>	Not determined.

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· <b>Particle characteristics</b>	Not applicable (liquid).
· <b>9.2 Other information</b>	
· <b>Information with regard to physical hazard classes</b>	
· <b>Corrosive to metals</b>	Void
· <b>Other safety characteristics</b>	
· <b>Oxidising properties:</b>	none
· <b>Additional information</b>	
· <b>Solids content:</b>	≤ 1 %
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	0.0 %
· <b>Water:</b>	≥ 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**  
Violent reactions possible with:  
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** The product does not contain substances with endocrine disrupting properties.

### 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**  
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.

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- **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**  
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

- |  |  |
|--|--|
| · <b>14.1 UN number or ID number</b><br>· <b>ADR, IMDG, IATA</b>                       | Void   |
| · <b>14.2 UN proper shipping name</b><br>· <b>ADR, IMDG, IATA</b>                      | Void   |
| · <b>14.3 Transport hazard class(es)</b><br>· <b>ADR, IMDG, IATA</b><br>· <b>Class</b> | Void   |
| · <b>14.4 Packing group</b><br>· <b>ADR, IMDG, IATA</b>                                | Void   |
| · <b>14.5 Environmental hazards:</b><br>· <b>Marine pollutant:</b>                     | No   |
| · <b>14.6 Special precautions for user</b>   | Not applicable.                                      |
| · <b>14.7 Maritime transport in bulk according to IMO instruments</b>                  | Not applicable.                                      |
| · <b>Transport/Additional information:</b>   | 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) 2019/1148 on the marketing and use of explosives precursors** not regulated

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

None of the ingredients is listed.

- **Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:**

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.

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· <b>Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:</b>
None of the ingredients is listed.
· <b>REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)</b>
None of the ingredients is listed.
· <b>LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)</b>
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).

· **Substances of very high concern (SVHC) according to UK REACH**

This product does not contain any substances of very high concern above the legal concentration limit of  $\geq 0.1\%$  (w / w).  
see item 3 SVHC

· **Directive 2012/18/EU (SEVESO III):**

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

· **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**

ECHA: European CHemicals Agency <http://echa.europa.eu>

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

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