### according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 7, 2015 Revision: August 7, 2015

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

- · 1.1 Product identifier
- · Trade name: ODV Mecke's Reagent 1st Ampoule
- Article number: 924 (1006343), 7624 (1006047)
- 1.2 Relevant identified uses of the substance or mixture and uses advised against Mecke's Reagent / Heroin Test Kit
- · 1.3 Details of the supplier of the Safety Data Sheet
- · Manufacturer/Supplier:

Safariland, LLC

13386 International Parkway Jacksonville. FL 32218

Customer Care (800) 347-1200

· 1.4 Emergency telephone number:

ChemTel Inc.

(800)255-3924, +1 (813)248-0585



#### **SECTION 2: Hazards identification**

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.



#### health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer. Route of exposure: Inhalation.



#### corrosion

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

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

Eye Dam. 1 H318 Causes serious eye damage.



Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· Additional information:

There are no other hazards not otherwise classified that have been identified.

0 % of the mixture consists of component(s) of unknown toxicity.

(Cont'd. on page 2)

## according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 7, 2015 Revision: August 7, 2015

Trade name: ODV Mecke's Reagent 1st Ampoule

(Cont'd. from page 1)

- · 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 GHS07 GHS08** 

- · Signal word Danger
- · Hazard-determining components of labelling:

sulphuric acid formaldehyde

P310

· Hazard statements

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H412.

H290 May be corrosive to metals.

H314 Causes severe skin burns and eve damage.

H317 May cause an allergic skin reaction.

H341 Suspected of causing genetic defects.

H350 May cause cancer. Route of exposure: Inhalation.

H412 Harmful to aquatic life with long lasting effects.

· Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe mist.

P264 Wash thoroughly after handling.

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

P273 Avoid release to the environment. P234 Keep only in original container.

P272 Contaminated work clothing should not be allowed out of the workplace.

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

water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses,

if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P390 Absorb spillage to prevent material damage.

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P406 Store in corrosive resistant container with a resistant inner liner.

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

regulations.

(Cont'd. on page 3)

## according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 7, 2015 Revision: August 7, 2015

Trade name: ODV Mecke's Reagent 1st Ampoule

(Cont'd. from page 2)

· Additional information:

Restricted to professional users.

· NFPA ratings (scale 0 - 4)



Health = 3Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = \*4
Fire = 0
Reactivity = 0

REACTIVITY | Reactivity = 0

- \* Indicates a long term health hazard from repeated or prolonged exposures.
- · 2.3 Other hazards
- · 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: 7664-93-9<br>EINECS: 231-639-5<br>Index number: 016-020-00-8 | sulphuric acid  Met. Corr.1, H290; Skin Corr. 1A, H314   | 50-100% |
| CAS: 50-00-0<br>EINECS: 200-001-8<br>Index number: 605-001-00-5   | formaldehyde  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331  Muta. 2, H341; Carc. 1B, H350  Skin Corr. 1B, H314  Skin Sens. 1, H317 | ≤ 2,5%  |
| CAS: 7783-00-8<br>EINECS: 231-974-7<br>Index number: 034-002-00-8 | selenious acid Acute Tox. 3, H301; Acute Tox. 3, H331 STOT RE 2, H373 Aquatic Acute 1, H400; Aquatic Chronic 1, H410                             | ≤ 2,5%  |

· Additional information:

For the wording of the listed Hazard Statements refer to section 16.

For the listed ingredient(s), the identity and exact percentages are being withheld as a trade secret.

#### **SECTION 4: First aid measures**

- · 4.1 Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

(Cont'd. on page 4)

Printing date August 7, 2015 Revision: August 7, 2015

Trade name: ODV Mecke's Reagent 1st Ampoule

(Cont'd. from page 3)

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation: Supply fresh air; consult doctor in case of complaints.

· After skin contact:

Immediately rinse with water.

If skin irritation is experienced, consult a doctor.

Seek immediate medical help for blistering or open wounds.

· After eye contact:

Protect unharmed eye.

Remove contact lenses if worn, if possible.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

· 4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions

Strong caustic effect on skin and mucous membranes.

Dizziness

Coughing

Breathing difficulty

Nausea

· Hazards

Danger of gastric perforation.

Causes serious eye damage.

Limited evidence of a carcinogenic effect.

4.3 Indication of any immediate medical attention and special treatment needed

Contains formaldehyde. May produce an allergic reaction.

Medical supervision for at least 48 hours.

#### **SECTION 5: Firefighting measures**

- · 5.1 Extinguishing media
- · Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- · For safety reasons unsuitable extinguishing agents: None.
- $\cdot$  5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

- · 5.3 Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

· Additional information No further relevant information available.

#### **SECTION 6: Accidental release measures**

· 6.1 Personal precautions, protective equipment and emergency procedures

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

(Cont'd. on page 5)

Printing date August 7, 2015 Revision: August 7, 2015

Trade name: ODV Mecke's Reagent 1st Ampoule

(Cont'd. from page 4)

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

- · 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · 6.3 Methods and material for containment and cleaning up:

Use limestone to neutralize and absorb spill.

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to section 13.

Clean the affected area carefully; suitable cleaners are:

Warm water

#### · 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

Prevent formation of aerosols.

Use only in well ventilated areas.

When diluting always pour product into water and not vice versa.

- · 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:

Avoid storage near extreme heat, ignition sources or open flame.

· Information about storage in one common storage facility:

Store away from foodstuffs.

Store away from metals.

Do not store together with alkalis (caustic solutions).

Protect from humidity and water.

- Further information about storage conditions: Keep container tightly sealed.
- 7.3 Specific end use(s) No further relevant information available.

#### **SECTION 8: Exposure controls/personal protection**

- · Additional information about design of technical facilities: No further data; see section 7.
- · 8.1 Control parameters

| <ul> <li>Ingredients with</li> </ul> | limit values th | at require monitoring | g at the workplace: |
|--------------------------------------|-----------------|-----------------------|---------------------|
|--------------------------------------|-----------------|-----------------------|---------------------|

# 7664-93-9 sulphuric acid IOELV (EU) Long-term value: 0,05 mg/m³ PEL (USA) Long-term value: 1 mg/m³ REL (USA) Long-term value: 1 mg/m³

(Cont'd. on page 6)

Printing date August 7, 2015 Revision: August 7, 2015

Trade name: ODV Mecke's Reagent 1st Ampoule

|               |   | (Cont'd. from page 5) |
|---------------|---|-----------------------|
| TLV (USA)     | Long-term value: 0,2* mg/m³ *as thoracic fraction   |                       |
| EL (Canada)   | Long-term value: 0,2 mg/m³<br>ACGIH A2; IARC 1  |                       |
| EV (Canada)   | Long-term value: 0,2 mg/m³  |                       |
| 50-00-0 form  | aldehyde  |                       |
| PEL (USA)     | Short-term value: 2 ppm<br>Long-term value: 0,75 ppm<br>see 29 CFR 1910,1048(c)           |                       |
| REL (USA)     | Long-term value: 0,016 ppm<br>Ceiling limit: 0,1* ppm<br>*15-min; See Pocket Guide App. A |                       |
| TLV (USA)     | Ceiling limit: 0,37 mg/m³, 0,3 ppm (SEN) NIC-DSEN; RSEN                                   |                       |
| EL (Canada)   | Long-term value: 0,3 ppm<br>Ceiling limit: 1 ppm<br>ACGIH A2; IARC 1; S                   |                       |
| EV (Canada)   | Short-term value: 1,0 ppm   |                       |
| Ceiling limit | 1,5 ppm   |                       |

- · **DNELs** No further relevant information available.
- · PNECs No further relevant information available.
- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:

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

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

#### Respiratory protection:

Not required under normal conditions of use.

For spills, respiratory protection may be advisable.

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

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

#### · 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

(Cont'd. on page 7)

## according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 7, 2015 Revision: August 7, 2015

Trade name: ODV Mecke's Reagent 1st Ampoule

(Cont'd. from page 6)

substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

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

· Eye protection:

Contact lenses should not be worn.



Safety glasses

· Body protection: Protective work clothing

· Limitation and supervision of exposure into the environment

No further relevant information available.

· Risk management measures

See Section 7 for additional information. No further relevant information available.

#### **SECTION 9: Physical and chemical properties**

- · 9.1 Information on basic physical and chemical properties
- · General Information

· Appearance:

Form: Liquid Colourless
• Odour: Acrid

· Odour threshold: Not determined.

· pH-value at 20 °C (68 °F): < 1

· Change in condition

Melting point/Melting range: Not Determined.

Boiling point/Boiling range: 212 °F / 100 °C (414 °F / 212 °F)

Flash point: Not applicable.
 Flammability (solid, gaseous): Not applicable.
 Auto/Self-ignition temperature: Not determined.
 Decomposition temperature: Not determined.

• **Self-igniting:** Product is not self-igniting.

• **Danger of explosion:** Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined.
Upper: Not determined.

• Vapour pressure: Not determined.

• Density at 20 °C (68 °F): 1,76 g/cm³ (14,687 lbs/gal)

(Cont'd. on page 8)

## according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 7, 2015 Revision: August 7, 2015

Trade name: ODV Mecke's Reagent 1st Ampoule

(Cont'd. from page 7)

Relative density
 Vapour density
 Evaporation rate
 Not determined.
 Not determined.

· Solubility in / Miscibility with

water: Soluble.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

**Dynamic:** Not determined. **Kinematic:** Not determined.

• 9.2 Other information No further relevant information available.

#### **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 and stored according to specifications.

· 10.3 Possibility of hazardous reactions

Reacts with alkali (lyes).

Corrosive action on metals.

Reacts with metals forming hydrogen.

Toxic fumes may be released if heated above the decomposition point.

Heating occurs when water is added.

- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: Sulphur oxides (SOx)

#### **SECTION 11: Toxicological information**

- · 11.1 Information on toxicological effects
- · Acute toxicity
- · LD/LC50 values relevant for classification:

#### 50-00-0 formaldehyde

Oral LD50 >200 mg/kg (rat)

- · Primary irritant effect:
- · Skin corrosion/irritation

Causes severe skin burns and eye damage.

· Serious eye damage/irritation

Causes serious eye damage.

· Respiratory or skin sensitisation

May cause an allergic skin reaction.

- · Additional toxicological information: May cause cancer. Route of exposure: Inhalation.
- · Sensitisation: May cause an allergic skin reaction.

(Cont'd. on page 9)

Printing date August 7, 2015 Revision: August 7, 2015

Trade name: ODV Mecke's Reagent 1st Ampoule

(Cont'd. from page 8)

#### · Repeated dose toxicity:

May cause damage to organs through prolonged or repeated exposure. Repeated exposures may result in skin and/or respiratory sensitivity.

- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):
- · Germ cell mutagenicity

Suspected of causing genetic defects.

· Carcinogenicity

May cause cancer. Route of exposure: Inhalation.

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.

#### **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.
- · Ecotoxical effects:
- · Remark: After neutralisation a reduction of the harming action may be recognised
- · Additional ecological information:
- · General notes:

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water Danger to drinking water if even small quantities leak into the ground.

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

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

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

- · 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

#### **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. Dilute concentrate with water and neutralise afterwards with suitable alkali material (sodium hydroxide solution, lime). The formed neutral salts are relatively environment-friendly.

(Cont'd. on page 10)

## according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 7, 2015 Revision: August 7, 2015

Trade name: ODV Mecke's Reagent 1st Ampoule

(Cont'd. from page 9)

Can be disposed of with household garbage with prior chemical-physical or biological treatment following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

- · Uncleaned packaging:
- · Recommendation: Disposal must be made according to local official regulations.

#### **SECTION 14: Transport information**

· 14.1 UN-Number

· DOT, ADR, IMDG, IATA UN1830

· 14.2 UN proper shipping name

· **DOT** Sulfuric acid

· ADR· IMDG, IATA1830 SULPHURIC ACIDSULPHURIC ACID

· 14.3 Transport hazard class(es)

· DOT



· Class 8 Corrosive substances.

· Label

· ADR



· Class 8 (C1) Corrosive substances.

· Label

· IMDG, IATA



· Class 8 Corrosive substances.

· Label 8

· 14.4 Packing group

· DOT, ADR, IMDG, IATA

· 14.5 Environmental hazards:

· Marine pollutant: No

• 14.6 Special precautions for user Warning: Corrosive substances.

· Danger code (Kemler): 80

(Cont'd. on page 11)

\_\_\_\_\_\_

### according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 7, 2015 Revision: August 7, 2015

Trade name: ODV Mecke's Reagent 1st Ampoule

(Cont'd. from page 10)

• EMS Number: F-A,S-B• Segregation groups Acids

· 14.7 Transport in bulk according to Annex II of

Marpol and the IBC Code Not applicable.

· Transport/Additional information:

· ADR

Limited quantities (LQ)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

• UN "Model Regulation": UN1830, SULPHURIC ACID, 8, II

#### **SECTION 15: Regulatory information**

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · United States (USA)
- · SARA

| · Section 355 (extremely hazar | rdous substances): |
|--------------------------------|--------------------|
|--------------------------------|--------------------|

7664-93-9 sulphuric acid 50-00-0 formaldehyde 7783-00-8 selenious acid

· Section 313 (Specific toxic chemical listings):

7664-93-9 sulphuric acid 50-00-0 formaldehyde

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

- · Proposition 65 (California):
- · Chemicals known to cause cancer:

50-00-0 formaldehyde

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

- · Carcinogenic Categories
- · EPA (Environmental Protection Agency)

50-00-0 formaldehyde

B1

(Cont'd. on page 12)

### according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 7, 2015 Revision: August 7, 2015

Trade name: ODV Mecke's Reagent 1st Ampoule

|  | (Cont'd. from page 11) |
|--|------------------------|
| 7783-00-8 selenious acid   | D                      |
| · IARC (International Agency for Research on Cancer)               |                        |
| 50-00-0 formaldehyde   | 1                      |
| 7783-00-8 selenious acid   | 3                      |
| · TLV (Threshold Limit Value established by ACGIH)                 |                        |
| 7664-93-9 sulphuric acid   | A2                     |
| 50-00-0 formaldehyde   | A2                     |
| · NIOSH-Ca (National Institute for Occupational Safety and Health) |                        |
| 50-00-0 formaldehyde   |                        |
| · Canada   |                        |
| · Canadian Domestic Substances List (DSL)                          |                        |
| All ingredients are listed.  |                        |
| · Canadian Ingredient Disclosure list (limit 0.1%)                 |                        |
| 50-00-0 formaldehyde   |                        |
| Canadian Ingredient Disclosure list (limit 1%)                     |                        |
| 7664-93-9 sulphuric acid   |                        |
| · Directive 2012/18/EU   |                        |
|  |                        |

· Named dangerous substances - ANNEX I

None of the ingredients are listed.

· Other regulations, limitations and prohibitive regulations

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

- · Substances of very high concern (SVHC) according to REACH, Article 57
- None of the ingredients are listed.
- 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.

· Relevant phrases

H290 May be corrosive to metals.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H331 Toxic if inhaled.

H341 Suspected of causing genetic defects.

H350 May cause cancer. Route of exposure: Inhalation.

H373 May cause damage to organs through prolonged or repeated exposure.

(Cont'd. on page 13)

### according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 8, 2015 Revision: August 8, 2015

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

- · 1.1 Product identifier
- · Trade name: ODV Mecke's Reagent 2nd Ampoule
- Article number: 924 (1006343), 7624 (1006047)
- · CAS Number:

7664-93-9

· EC number:

231-639-5

- 1.2 Relevant identified uses of the substance or mixture and uses advised against Mecke's Reagent / Heroin Test Kit
- · 1.3 Details of the supplier of the Safety Data Sheet
- Manufacturer/Supplier:

Safariland, LLC 13386 International Parkway Jacksonville, FL 32218 Customer Care (800) 347-1200

· 1.4 Emergency telephone number:

ChemTel Inc. (800)255-3924, +1 (813)248-0585



#### **SECTION 2: Hazards identification**

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



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

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

Eye Dam. 1 H318 Causes serious eye damage.

· Additional information:

There are no other hazards not otherwise classified that have been identified.

0 % of the mixture consists of component(s) of unknown toxicity.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

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

· Hazard pictograms



GHS05

· Signal word Danger

(Cont'd. on page 2)

#### according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and **OSHA GHS**

Printing date August 8, 2015 Revision: August 8, 2015

Trade name: ODV Mecke's Reagent 2nd Ampoule

(Cont'd. from page 1)

· Hazard-determining components of labelling:

sulphuric acid

· Hazard statements

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

· Precautionary statements

P260 Do not breathe mist.

P264 Wash thoroughly after handling.

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

P234 Keep only in original container.

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

water/shower.

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 POISON CENTER/doctor.

Specific treatment (see on this label). P321

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P363 Wash contaminated clothing before reuse.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Absorb spillage to prevent material damage. P390

P405 Store locked up.

P406 Store in corrosive resistant container with a resistant inner liner.

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

regulations.

· NFPA ratings (scale 0 - 4)



Health = 4Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



4 Health = 4 Fire = 0 REACTIVITY Reactivity = 0

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable. · vPvB: Not applicable.

#### **SECTION 3: Composition/information on ingredients**

- · 3.1 Substances
- · CAS No. Description 7664-93-9 sulphuric acid
- · Identification number(s)
- · EC number: 231-639-5

(Cont'd. on page 3)

## according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 8, 2015 Revision: August 8, 2015

Trade name: ODV Mecke's Reagent 2nd Ampoule

(Cont'd. from page 2)

· Index number: 016-020-00-8

• Dangerous components: None in reportable quantities.

· Additional information: For the wording of the listed Hazard Statements 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.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Immediately rinse with water.

If skin irritation is experienced, consult a doctor.

Seek immediate medical help for blistering or open wounds.

· After eye contact:

Protect unharmed eye.

Remove contact lenses if worn, if possible.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

 $\cdot$  4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions

Strong caustic effect on skin and mucous membranes.

Dizziness

Coughing

Breathing difficulty

Nausea

· Hazards

Danger of gastric perforation.

Causes serious eye damage.

Limited evidence of a carcinogenic effect.

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

Contains formaldehyde. May produce an allergic reaction.

Medical supervision for at least 48 hours.

#### **SECTION 5: Firefighting measures**

- 5.1 Extinguishing media
- · Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- · For safety reasons unsuitable extinguishing agents: None.
- · 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

(Cont'd. on page 4)

## according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 8, 2015 Revision: August 8, 2015

Trade name: ODV Mecke's Reagent 2nd Ampoule

(Cont'd. from page 3)

- · 5.3 Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

· Additional information No further relevant information available.

#### **SECTION 6: Accidental release measures**

· 6.1 Personal precautions, protective equipment and emergency procedures

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · 6.3 Methods and material for containment and cleaning up:

Use limestone to neutralize and absorb spill.

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to section 13.

Clean the affected area carefully; suitable cleaners are:

Warm water

· 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

Prevent formation of aerosols.

Use only in well ventilated areas.

When diluting always pour product into water and not vice versa.

- · 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:

Avoid storage near extreme heat, ignition sources or open flame.

· Information about storage in one common storage facility:

Store away from foodstuffs.

Store away from metals.

Do not store together with alkalis (caustic solutions).

Protect from humidity and water.

- Further information about storage conditions: Keep container tightly sealed.
- · 7.3 Specific end use(s) No further relevant information available.

(Cont'd. on page 5)

OSHA GHS

Trade name: ODV Mecke's Reagent 2nd Ampoule

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#### **SECTION 8: Exposure controls/personal protection**

- · Additional information about design of technical facilities: No further data; see section 7.
- · 8.1 Control parameters

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| · Ingredients v | Ingredients with limit values that require monitoring at the workplace:                   |  |  |
|-----------------|---|--|--|
| 7664-93-9 su    | 7664-93-9 sulphuric acid  |  |  |
| IOELV (EU)      | Long-term value: 0,05 mg/m³   |  |  |
| PEL (USA)       | Long-term value: 1 mg/m³  |  |  |
| REL (USA)       | Long-term value: 1 mg/m³  |  |  |
| TLV (USA)       | Long-term value: 0,2* mg/m³ *as thoracic fraction   |  |  |
| EL (Canada)     | Long-term value: 0,2 mg/m³<br>ACGIH A2; IARC 1  |  |  |
| EV (Canada)     | Long-term value: 0,2 mg/m³  |  |  |
| 50-00-0 form    | 50-00-0 formaldehyde  |  |  |
| PEL (USA)       | Short-term value: 2 ppm<br>Long-term value: 0,75 ppm<br>see 29 CFR 1910,1048(c)           |  |  |
| REL (USA)       | Long-term value: 0,016 ppm<br>Ceiling limit: 0,1* ppm<br>*15-min; See Pocket Guide App. A |  |  |
| TLV (USA)       | Ceiling limit: 0,37 mg/m³, 0,3 ppm<br>(SEN) NIC-DSEN; RSEN                                |  |  |
| EL (Canada)     | Long-term value: 0,3 ppm<br>Ceiling limit: 1 ppm<br>ACGIH A2; IARC 1; S                   |  |  |
| EV (Canada)     | Short-term value: 1,0 ppm   |  |  |
| Ceiling limit   | 1,5 ppm   |  |  |

- **DNELs** No further relevant information available.
- · PNECs No further relevant information available.
- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

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

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· Respiratory protection:

Not required under normal conditions of use.

For spills, respiratory protection may be advisable.

(Cont'd. on page 6)

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(Cont'd. from page 5)

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

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· 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 protection:

Contact lenses should not be worn.



Safety glasses

- · Body protection: Protective work clothing
- · Limitation and supervision of exposure into the environment

No further relevant information available.

· Risk management measures

See Section 7 for additional information. No further relevant information available.

#### **SECTION 9: Physical and chemical properties**

- · 9.1 Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid
Colour: Colourless
Odour: Acrid

· Odour threshold: Not determined.

· pH-value at 20 °C (68 °F): < 1

· Change in condition

Melting point/Melting range: Not Determined.

Boiling point/Boiling range: 212 °F / 100 °C (414 °F / 212 °F)

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

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### according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

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Trade name: ODV Mecke's Reagent 2nd Ampoule

(Cont'd. from page 6)

Auto/Self-ignition temperature: Not determined.
 Decomposition temperature: Not determined.

Self-igniting: Product is not self-igniting.

• **Danger of explosion:** Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Vapour pressure: Not determined.

• Density at 20 °C (68 °F): 1,76 g/cm³ (14,687 lbs/gal)

Relative density
Vapour density
Evaporation rate
Not determined.
Not determined.
Not determined.

· Solubility in / Miscibility with

water: Soluble.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

**Dynamic:** Not determined. **Kinematic:** Not determined.

• **9.2 Other information** No further relevant information available.

#### **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 and stored according to specifications.

· 10.3 Possibility of hazardous reactions

Reacts with alkali (lyes).

Corrosive action on metals.

Reacts with metals forming hydrogen.

Toxic fumes may be released if heated above the decomposition point.

Heating occurs when water is added.

- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: Sulphur oxides (SOx)

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## according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 8, 2015 Revision: August 8, 2015

Trade name: ODV Mecke's Reagent 2nd Ampoule

(Cont'd. from page 7)

#### **SECTION 11: Toxicological information**

- · 11.1 Information on toxicological effects
- · Acute toxicity
- · LD/LC50 values relevant for classification:

#### 50-00-0 formaldehyde

Oral LD50 > 200 mg/kg (rat)

- Primary irritant effect:
- · Skin corrosion/irritation

Causes severe skin burns and eye damage.

· Serious eye damage/irritation

Causes serious eye damage.

- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · Additional toxicological information: May cause cancer.
- · Sensitisation: May cause an allergic skin reaction.
- · Repeated dose toxicity:

May cause damage to organs through prolonged or repeated exposure.

Repeated exposures may result in skin and/or respiratory sensitivity.

- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):
- · 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.

#### **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.
- · Ecotoxical effects:
- · Remark: After neutralisation a reduction of the harming action may be recognised
- · Additional ecological information:
- · General notes:

Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water Danger to drinking water if even small quantities leak into the ground.

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

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

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

(Cont'd. on page 9)

## according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 8, 2015 Revision: August 8, 2015

Trade name: ODV Mecke's Reagent 2nd Ampoule

(Cont'd. from page 8)

- · 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · **vPvB**: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

#### **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. Dilute concentrate with water and neutralise afterwards with suitable alkali material (sodium hydroxide solution, lime). The formed neutral salts are relatively environment-friendly.

Can be disposed of with household garbage with prior chemical-physical or biological treatment following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

- · Uncleaned packaging:
- · Recommendation: Disposal must be made according to local official regulations.

#### **SECTION 14: Transport information**

· 14.1 UN-Number

· DOT, ADR, IMDG, IATA UN1830

· 14.2 UN proper shipping name

• **DOT** Sulfuric acid

ADRIMDG, IATA1830 SULPHURIC ACIDSULPHURIC ACID

· 14.3 Transport hazard class(es)

· DOT



· Class 8 Corrosive substances.

· Label

· ADR



· Class 8 (C1) Corrosive substances.

(Cont'd. on page 10)

### according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 8, 2015 Revision: August 8, 2015

Trade name: ODV Mecke's Reagent 2nd Ampoule

Cont'd. from page 9)

• Label

8

· IMDG, IATA



· Class 8 Corrosive substances.

· Label 8

· 14.4 Packing group

· DOT, ADR, IMDG, IATA

· 14.5 Environmental hazards:

· Marine pollutant: No

• 14.6 Special precautions for user Warning: Corrosive substances.

Danger code (Kemler):
EMS Number:
Segregation groups

80
F-A,S-B
Acids

· 14.7 Transport in bulk according to Annex II of

Marpol and the IBC Code Not applicable.

· Transport/Additional information:

· ADR

Limited quantities (LQ)

• 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 E

· UN "Model Regulation": UN1830, SULPHURIC ACID, 8, II

#### **SECTION 15: Regulatory information**

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · United States (USA)
- ·SARA

| · Section 355 (extreme | ely hazard | lous subs | tances): |
|------------------------|------------|-----------|----------|
|------------------------|------------|-----------|----------|

7664-93-9 sulphuric acid 50-00-0 formaldehyde 7783-00-8 selenious acid

· Section 313 (Specific toxic chemical listings):

7664-93-9 sulphuric acid 50-00-0 formaldehyde

· TSCA (Toxic Substances Control Act):

Substance is listed.

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### according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date August 8, 2015 Revision: August 8, 2015

Trade name: ODV Mecke's Reagent 2nd Ampoule (Cont'd. from page 10) · Proposition 65 (California): · Chemicals known to cause cancer: 50-00-0 formaldehyde · Chemicals known to cause reproductive toxicity for females: Substance is not listed. · Chemicals known to cause reproductive toxicity for males: Substance is not listed. · Chemicals known to cause developmental toxicity: Substance is not listed. · Carcinogenic Categories EPA (Environmental Protection Agency) 50-00-0 formaldehyde B1 7783-00-8 selenious acid D · IARC (International Agency for Research on Cancer) 50-00-0 formaldehyde 1 7783-00-8 selenious acid 3 · TLV (Threshold Limit Value established by ACGIH) 7664-93-9 sulphuric acid A2 50-00-0 formaldehyde A2 · NIOSH-Ca (National Institute for Occupational Safety and Health) 50-00-0 formaldehyde · Canada · Canadian Domestic Substances List (DSL) Substance is listed. Canadian Ingredient Disclosure list (limit 0.1%) 50-00-0 formaldehyde · Canadian Ingredient Disclosure list (limit 1%) 7664-93-9 sulphuric acid · Directive 2012/18/EU · Named dangerous substances - ANNEX I Substance is not listed. · Other regulations, limitations and prohibitive regulations This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. · Substances of very high concern (SVHC) according to REACH, Article 57 Substance is not listed. (Cont'd. on page 12)

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Trade name: ODV Mecke's Reagent 2nd Ampoule

(Cont'd. from page 11)

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.

#### · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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, Hazard Category 1

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

#### Sources

SDS Prepared by:

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Website: www.chemtelinc.com

Printing date August 7, 2015 Revision: August 7, 2015

Trade name: ODV Mecke's Reagent 1st Ampoule

(Cont'd. from page 12)

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

#### · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

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ACGIH: American Conference of Governmental Industrial Hygienists

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vPvB: very Persistent and very Bioaccumulative

Met. Corr.1: Corrosive to metals, Hazard Category 1

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Muta. 2: Germ cell mutagenicity, Hazard Category 2

Carc. 1B: Carcinogenicity, Hazard Category 1B

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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