

05/03/2018

**Kit Components**

| Product code | Description |
|--------------|-------------|
|--------------|-------------|

|              |                              |
|--------------|------------------------------|
| <b>39226</b> | <b>SingleQuant Assay Kit</b> |
|--------------|------------------------------|

Components:

|        |                  |
|--------|------------------|
| 400530 | Elution solution |
|--------|------------------|

|        |               |
|--------|---------------|
| 400529 | Wash solution |
|--------|---------------|

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

## 1 Identification

- **Product identifier**
- **Trade name:** Elution solution
- **Article number:** 400530
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SERVA Electrophoresis GmbH  
Carl-Benz-Str. 7  
D-69115 Heidelberg  
Tel.: +49 6221 13840-0  
FAX: +49 6221 13840-10  
msds.info@serva.de
- **Information department:** Product Safety department Tel.: +49 6221 13840-35
- **Emergency telephone number:**  
Medical Emergency Information in case of poisoning:  
Poison Information Center Mainz - Phone: +49 (0) 6131 19240  
(advisory service in German or English language)

**SERVA**  
■ serving scientists ■

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05

Skin Corr. 1A H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.

- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS05
- **Signal word** Danger

- **Hazard-determining components of labeling:**

sodium hydroxide

- **Hazard statements**

Causes severe skin burns and eye damage.

- **Precautionary statements**

Do not breathe dusts or mists.

Wash thoroughly after handling.

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

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

Store locked up.

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

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

Trade name: Elution solution

(Contd. of page 1)

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



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

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

|           |                  |        |
|-----------|------------------|--------|
| 1310-73-2 | sodium hydroxide | 2.5-7% |
|-----------|------------------|--------|

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air and to be sure call for a doctor.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

**Trade name: Elution solution**

(Contd. of page 2)

- Use neutralizing agent.
- Dispose contaminated material as waste according to item 13.
- Ensure adequate ventilation.
- **Reference to other sections**
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **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 creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
Short term filter device:  
Filter P2
- **Protection of hands:**  
Protective gloves  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
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.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

**Trade name:** Elution solution

(Contd. of page 3)

- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
  - Natural rubber, NR
  - Chloroprene rubber, CR
  - Nitrile rubber, NBR
- **Eye protection:** Tightly sealed goggles
- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

|               |           |
|---------------|-----------|
| <b>Form:</b>  | Fluid     |
| <b>Color:</b> | Colorless |
| <b>Odor:</b>  | Odorless  |

· **pH-value at 20 °C (68 °F):** 13.5

#### · Change in condition

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** > 100 °C (> 212 °F)

· **Flash point:** Not applicable.

· **Auto igniting:** Product is not selfigniting.

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

· **Density:** Not determined.

#### · Solubility in / Miscibility with

**Water:** Fully miscible.

#### · Solvent content:

**Organic solvents:** 0.0 %

**Solids content:** 4.0 %

· **Other information** There are no more data available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

### · Information on toxicological effects

#### · Acute toxicity:

#### · LD/LC50 values that are relevant for classification:

1310-73-2 sodium hydroxide

|      |      |                  |
|------|------|------------------|
| Oral | LD50 | 2000 mg/kg (rat) |
|------|------|------------------|

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

**Trade name: Elution solution**

(Contd. of page 4)

- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Corrosive  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1824

(Contd. on page 6)

# Safety Data Sheet



acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

Trade name: *Elution solution*

(Contd. of page 5)

|   |  |
|---|--|
| · <b>UN proper shipping name</b>  |  |
| · <b>ADR</b>  | 1824 SODIUM HYDROXIDE SOLUTION           |
| · <b>IMDG</b>   | SODIUM HYDROXIDE SOLUTION                |
| · <b>IATA</b>   | Sodium hydroxide solution                |
| · <b>Transport hazard class(es)</b>   |  |
| · <b>DOT</b>  |  |
|  |  |
| · <b>Class</b>  | 8 Corrosive substances                   |
| · <b>Label</b>  | 8  |
| · <b>ADR, IMDG, IATA</b>  |  |
|  |  |
| · <b>Class</b>  | 8 Corrosive substances                   |
| · <b>Label</b>  | 8  |
| · <b>Packing group</b>  |  |
| · <b>DOT, ADR, IMDG, IATA</b>   | II                                       |
| · <b>Environmental hazards:</b>   |  |
| · <b>Marine pollutant:</b>  | No                                       |
| · <b>Special precautions for user</b>   | Warning: Corrosive substances            |
| · <b>Danger code (Kemler):</b>  | 80                                       |
| · <b>EMS Number:</b>  | F-A,S-B                                  |
| · <b>Segregation groups</b>   | Alkalis                                  |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>  | Not applicable.                          |
| · <b>UN "Model Regulation":</b>   | UN1824, SODIUM HYDROXIDE SOLUTION, 8, II |

## 15 Regulatory information

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

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

None of the ingredients is listed.

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

**Trade name: Elution solution**

(Contd. of page 6)

**· Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**· Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**· Cancerogenity categories**

**· EPA (Environmental Protection Agency)**

None of the ingredients is listed.

**· TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

**· NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

**· GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

**· Hazard pictograms GHS05**

**· Signal word Danger**

**· Hazard-determining components of labeling:**

sodium hydroxide

**· Hazard statements**

Causes severe skin burns and eye damage.

**· Precautionary statements**

Do not breathe dusts or mists.

Wash thoroughly after handling.

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

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

Store locked up.

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

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

## 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.

**· Department issuing SDS: Product safety department**

**· Contact: +49 6221 13840-35**

**· Date of preparation / last revision 05/03/2018 / 2**

**· Abbreviations and acronyms:**

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

ICAO: International Civil Aviation Organisation

PBT: persistent, bioaccumulative, toxic substance (REACH)

vPvB: very persistent, very bioaccumulative substance (REACH)

REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

CLP: Regulation on classification, labelling and packaging of substances and mixtures

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

ACGIH: American Conference of Governmental Industrial Hygienists

(Contd. on page 8)



**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 05/03/2018

Reviewed on 10/23/2008

**Trade name: Elution solution**

(Contd. of page 7)

*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)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*NIOSH: National Institute for Occupational Safety*  
*OSHA: Occupational Safety & Health*  
*TLV: Threshold Limit Value*  
*PEL: Permissible Exposure Limit*  
*REL: Recommended Exposure Limit*  
*Skin Corr. 1A: Skin corrosion/irritation – Category 1A*  
*Eye Dam. 1: Serious eye damage/eye irritation – Category 1*

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

## 1 Identification

- **Product identifier**
- **Trade name:** Wash solution
- **Article number:** 400529
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SERVA Electrophoresis GmbH  
Carl-Benz-Str. 7  
D-69115 Heidelberg  
Tel.: +49 6221 13840-0  
FAX: +49 6221 13840-10  
msds.info@serva.de
- **Information department:** Product Safety department Tel.: +49 6221 13840-35
- **Emergency telephone number:**  
Medical Emergency Information in case of poisoning:  
Poison Information Center Mainz - Phone: +49 (0) 6131 19240  
(advisory service in German or English language)



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02

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



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms** GHS02, GHS07

- **Signal word** Danger

- **Hazard statements**

Highly flammable liquid and vapor.

Causes skin irritation.

Causes serious eye irritation.

- **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wash thoroughly after handling.

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

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

**Trade name: Wash solution**

(Contd. of page 1)

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

*Specific treatment (see on this label).*

*If skin irritation occurs: Get medical advice/attention.*

*If eye irritation persists: Get medical advice/attention.*

*Take off contaminated clothing and wash it before reuse.*

*In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.*

*Store in a well-ventilated place. Keep cool.*

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 3

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

|         |             |         |
|---------|-------------|---------|
| 64-17-5 | ethanol     | 80-100% |
| 64-19-7 | acetic acid | 5-15%   |

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First-aid measures

· **Description of first aid measures**

· **After inhalation:** Supply fresh air and to be sure call for a doctor.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:**

*Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.*

· **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

*No further relevant information available.*

### 5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

*CO<sub>2</sub> extinguishing powder or water spray. Fight larger fire with alcohol resistant foam.*

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

**Trade name: Wash solution**

(Contd. of page 2)

- **Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Hydrogen chloride (HCl)  
Carbon monoxide (CO)
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Keep away from ignition sources
- **Environmental precautions:**  
Prevent seepage into sewage system, workpits and cellars.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

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

### 64-17-5 ethanol (80-100%)

|     |   |
|-----|---|
| PEL | Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm  |
| REL | Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm  |
| TLV | Short-term value: 1880 mg/m <sup>3</sup> , 1000 ppm |

### 64-19-7 acetic acid (5-15%)

|     |   |
|-----|---|
| PEL | Long-term value: 25 mg/m <sup>3</sup> , 10 ppm  |
| REL | Short-term value: 37 mg/m <sup>3</sup> , 15 ppm<br>Long-term value: 25 mg/m <sup>3</sup> , 10 ppm |
| TLV | Short-term value: 37 mg/m <sup>3</sup> , 15 ppm<br>Long-term value: 25 mg/m <sup>3</sup> , 10 ppm |

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

Trade name: Wash solution

(Contd. of page 3)

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Do not inhale gases / fumes / aerosols.
  - Avoid contact with the eyes and skin.
- **Breathing equipment:**
  - Short term filter device:
  - Filter A/P2
- **Protection of hands:**
  - Protective gloves
  - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  - 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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
  - Nitrile rubber, NBR
  - Chloroprene rubber, CR
- **Eye protection:** Tightly sealed goggles
- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

|               |              |
|---------------|--------------|
| <b>Form:</b>  | Fluid        |
| <b>Color:</b> | Colorless    |
| <b>Odor:</b>  | Alcohol-like |
- **pH-value at 20 °C (68 °F):** 4
- **Change in condition**

|                                     |                |
|-------------------------------------|----------------|
| <b>Melting point/Melting range:</b> | Undetermined.  |
| <b>Boiling point/Boiling range:</b> | 78 °C (172 °F) |
- **Flash point:** 12 °C (54 °F)
- **Ignition temperature:** 425 °C (797 °F)
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

(Contd. on page 5)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

**Trade name: Wash solution**

(Contd. of page 4)

- |  |                 |
|--|-----------------|
| <b>· Explosion limits:</b>   |                 |
| <b>Lower:</b>  | 3.4 Vol %       |
| <b>Upper:</b>  | 17.0 Vol %      |
| <b>· Vapor pressure at 20 °C (68 °F):</b> 59 hPa (44 mm Hg)                |                 |
| <b>· Density at 20 °C (68 °F):</b> 0.818 g/cm <sup>3</sup> (6.826 lbs/gal) |                 |
| <b>· Solubility in / Miscibility with</b>                                  |                 |
| <b>Water:</b>  | Fully miscible. |
| <b>· Solvent content:</b>  |                 |
| <b>Organic solvents:</b>   | 100.0 %         |
| <b>VOC content:</b>  | 100.0 %         |
| <b>· Other information</b> There are no more data available.               |                 |

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant
- **Carcinogenic categories**

|   |
|---|
| <b>· IARC (International Agency for Research on Cancer)</b> |
|---|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|  |
|--|
| <b>· NTP (National Toxicology Program)</b> |
|--|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

|  |
|--|
| <b>· OSHA-Ca (Occupational Safety &amp; Health Administration)</b> |
|--|

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

**Trade name: Wash solution**



(Contd. of page 5)

- **Additional ecological information:**
- **General notes:**  
*Water hazard class 1 (Self-assessment): slightly hazardous for water*  
*Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |   |  |
|---|--|
| <b>· UN-Number</b>  | UN2924   |
| <b>· DOT, ADR, IMDG, IATA</b>   |  |
| <b>· UN proper shipping name</b>  | 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID SOLUTION) |
| <b>· ADR</b>  | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID SOLUTION)      |
| <b>· IMDG</b>   | Flammable liquid, corrosive, n.o.s. (Ethanol, Acetic acid, solution)                     |
| <b>· IATA</b>   |  |
| <b>· Transport hazard class(es)</b>   |  |
| <b>· DOT</b>  |  |
|  |  |
| <b>· Class</b>  | 3 Flammable liquids  |
| <b>· Label</b>  | 3+8  |
| <b>· ADR, IMDG, IATA</b>  |  |
|  |  |
| <b>· Class</b>  | 3 Flammable liquids  |
| <b>· Label</b>  | 3+8  |
| <b>· Packing group</b>  | II   |
| <b>· DOT, ADR, IMDG, IATA</b>   |  |
| <b>· Environmental hazards:</b>   |  |
| <b>· Marine pollutant:</b>  | No   |
| <b>· Special precautions for user</b>   |  |
| <b>· Danger code (Kemler):</b>  | Warning: Flammable liquids<br>338  |

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

**Trade name: Wash solution**

(Contd. of page 6)

|  |  |
|--|--|
| · <b>EMS Number:</b>   | F-E,S-C  |
| · <b>Segregation groups</b>  | Acids  |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.  |
| · <b>UN "Model Regulation":</b>  | UN2924, FLAMMABLE LIQUID, CORROSIVE, N.O.S., 3 (8), II |

## 15 Regulatory information

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

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

None of the ingredients is listed.

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

64-17-5 ethanol

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

64-17-5 ethanol

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms** GHS02, GHS07

· **Signal word** Danger

· **Hazard statements**

Highly flammable liquid and vapor.

Causes skin irritation.

Causes serious eye irritation.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

(Contd. on page 8)



# Safety Data Sheet

## acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 10/23/2008

**Trade name: Wash solution**

(Contd. of page 7)

Wash thoroughly after handling.

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

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific treatment (see on this label).

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

Store in a well-ventilated place. Keep cool.

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

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

### 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.

· **Department issuing SDS:** Product safety department

· **Contact:** +49 6221 13840-35

· **Date of preparation / last revision** 05/03/2018 / 2

· **Abbreviations and acronyms:**

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

ICAO: International Civil Aviation Organisation

PBT: persistent, bioaccumulative, toxic substance (REACH)

vPvB: very persistent, very bioaccumulative substance (REACH)

REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

CLP: Regulation on classification, labelling and packaging of substances and mixtures

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

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)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2

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