

**WTW Safety Data Sheet**  
According to EC Directives 91/155/EEC

**1. Identification of the substance/preparation and of the company/undertaking**

*Product name:*

**Reagent R/A111; NaOH for 10 l of reagent**

**Ord.-No: 821 075**  
**Model: R/A111**

*Manufacturer:*

WTW Wissenschaftlich-Technische Werkstätten GmbH, Dr.-Karl-Slevogt-Straße 1, D-82362 Weilheim, Germany, Tel.: +49(0)881 183-0, Fax.: +49(0)881 183-420

Emergency telephone:  
(001)-703-527-3887

**2. Composition/information on ingredients**

*Chemical characterization:* Sodium hydroxide pellets

*Hazardous ingredients:* Sodium hydroxide

*Hazard symbols:* Corrosive (C)  
*R-phrases:* 35  
*Content:* 100 %  
*CAS-No.:* 1310-73-2  
*EINECS-No.:* 215-185-5

**3. Hazards identification**

Causes severe burns.

**4. First aid measures**

*After inhalation:* Fresh air. Summon doctor.  
*After skin contact:* Wash off with plenty of water.  
Immediately remove contaminated clothing.  
*After eye contact:* Rinse out with plenty of water with the eyelid held wide open. Immediately summon eye specialist.  
*After ingestion:* Make injured person drink plenty of water.  
(if necessary several litres)  
Avoid vomiting. (risk of perforation)  
Immediately summon doctor.  
Do not attempt to neutralize.

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### 5. Fire-fighting measures

<i>Suitable extinguishing media:</i>	To suit environment. CO <sub>2</sub> , powder. Cover with sand or cement.
<i>Unsuitable extinguishing media:</i>	Do not use water. Water causes formation of strong corrosive caustic soda solution.
<i>Special risks:</i>	Hydrogen may form upon contact with light metals. Danger of explosion. Development of hazardous vapours possible in the event of fire. Use chemical protection clothing and self-contained breathing apparatus in dangerous zone.
<i>Other information:</i>	Non combustible

### 6. Accidental release measures

<i>Personal-related precautionary measures:</i>	Avoid generation of dusts. Do not inhale dusts.
<i>Environmental-protection measures:</i>	Do not allow to enter sewerage system.
<i>Procedures for cleaning/absorption:</i>	Carefully take up dry. Forward for disposal. Clean up affected area with water. Use protective glasses and gloves.

### 7. Handling and storage

<i>Handling:</i>	No further requirements
<i>Storage:</i>	Store tightly closed. No aluminium, tin, or zinc containers.

### 8. Exposure control/personal protection

<i>Specific control parameters:</i>	MAK-value (Germany): 2 mg/m <sup>3</sup> total dust.
Personal protective equipment	
<i>Respiratory protection:</i>	Required when dusts are generated.
<i>Eye protection:</i>	Protective glasses
<i>Hand protection:</i>	Gloves (nitrile rubber)
<i>Industrial hygiene:</i>	Wash hands and face after working with substance. Immediately change contaminated clothing.

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### 9. Physical and chemical properties

<i>Form:</i> Solid	<i>Colour:</i> White	<i>Odour:</i> Odourless
<i>pH-value:</i>	near 14 at 20°C and 50 g/l water	
<i>Melting temperature:</i>	324°C	
<i>Boiling temperature:</i>	1390°C	
<i>Ignition temperature:</i>	°C	
<i>Flash point:</i>	°C	
<i>Explosion limite lower:</i>	/	
<i>                          upper:</i>	/	
<i>Density:</i>	2.13 g/cm <sup>3</sup>	
<i>Solubility in water:</i>	1090 g/l at 20°C	
<i>Thermal decomposition:</i>	/	

### 10. Stability and reactivity

<i>Conditions to be avoided:</i>	No information available
<i>Substances to be avoided:</i>	Metals, light metals: Formation of hydrogen Risk of explosion Ammonium compounds: Formation of ammonia, acids, nitriles, cyanides, organic nitro compounds.
<i>Hazardous decomposition products:</i>	None
<i>Further information:</i>	Hygroscopic

### 11. Toxicological information

<i>Acute toxicity:</i>	Toxicologic values are not available due to other dangerous properties of the substance.
<i>Further toxicological information:</i>	After skin contact: burns and necrosis. After eye contact: burns, necrosis, risk of blindness! After ingestion: burns of mouth, mucous membrane, Oesophagus and stomach. Risk of perforation in the oesophagus and stomach. Systemic effect: collapse, death.

### 12. Ecological information

<i>Ecotoxic effects:</i>	Toxic effect on fish and plankton. Harmful effect due to pH-shift. Death of fish possible. Neutralization possible in waste water treatment plants.
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### 13. Disposal considerations

*Products:* There are no uniform regulations for the disposal of chemicals or residues. The disposal is regulated through corresponding regional laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.

*Packaging:* Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, noncontaminated packaging may be treated like household waste or recycled.

### 14. Transport information

*ADR/GGVSE:* UN 1823 Natriumhydroxid, fest, 8 II  
*IMDG/GGVSee:* UN 1823 Sodium hydroxide, solid, 8 II  
EmS-No.: F-A, S-B  
*ICAO/IATA:* UN 1823 Sodium hydroxide, solid, 8 II  
*Further information:* None

### 15. Regulatory information

Labelling according to EC directives

*Symbol:* Corrosive (C)  
*R-phrases:* 35 Causes severe burns.  
*S-phrases:* 26-37/39-45 In case of contact with eyes rinse out immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/ face protection. In case of accident or if *you* feel unwell, seek medical advice immediately. (Show the label where possible.)

German regulations

*Water pollution class;* WGK: 1 Slightly polluting substance  
*Storage class VCI:* 8 B  
*Regulation on combustible liquids;* VbF: Non combustible  
*Other regulations:* None

### 16. Other information

Date of issue: 15.07.2006  
Supersedes edition of 18.02.2004  
Reason for alteration: General update

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

**WTW Safety Data Sheet**  
According to EC Directives 91/155/EEC

**1. Identification of the substance/preparation and of the company/undertaking**

*Product name:*

**Reagent R/A111; Na<sub>2</sub>EDTA for 10 l of reagent**

**Ord. No.: 821 075**

**Model: R/A111**

*Manufacturer:*

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Emergency telephone:  
(001)-703-527-3887

**2. Composition/information on ingredients**

*Chemical characterization:* Salt of organic acid - white powder.

*Hazardous ingredients:* Ethylendiaminetetraacetic acid disodium salt

*Hazard symbols:* No hazardous product

*R-phrases:* /

*Content:* 100 %

*CAS-No.:* 6381-92-6

*EINECS-No.* 205-358-3

**3. Hazards identification**

No hazardous product.

**4. First aid measures**

*After inhalation:* Fresh air

*After skin contact:* Wash off with plenty of water  
Remove contaminated clothing.

*After eye contact:* Rinse out with plenty of water with the eyelid held wide open.

*After ingestion:* Wash out the mouth. Drink plenty of water.  
Immediately consult doctor.

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### 5. Fire-fighting measures

<i>Suitable extinguishing media:</i>	Water, foam, powder.
<i>Unsuitable extinguishing media:</i>	Carbon dioxide (CO <sub>2</sub> )
<i>Special risks:</i>	Generation of dusts possible. Danger of dust explosion. Use selfcontained breathing apparatus.
<i>Other information:</i>	Combustible

### 6. Accidental release measures

<i>Personal-related precautionary measures:</i>	Avoid substance contact. Do not inhale dusts.
<i>Environmental-protection measures:</i>	Avoid generation of dusts. Do not allow to enter sewerage system.
<i>Procedures for cleaning/absorption:</i>	Take up dry. Forward for disposal. Clean up affected area with water.

### 7. Handling and storage

<i>Handling:</i>	No further requirements.
<i>Storage:</i>	Tightly closed. Dry at room temperature.

### 8. Exposure control/personal protection

<i>Specific control parameters:</i>	None
Personal protective equipment	
<i>Respiratory protection:</i>	Required when dusts are generated.
<i>Eye protection:</i>	Protective glasses
<i>Hand protection:</i>	Gloves (nitrile rubber)
<i>Industrial hygiene:</i>	Wash hands and face after working with substance.

# WTW Safety Data Sheet

## Identification of the substance/preparation

Reagent R/A111; Na2EDTA for 10 l of reagent

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### 9. Physical and chemical properties

<i>Form:</i> Solid	<i>Colour:</i> White	<i>Odour:</i> Odourless
<i>pH-value</i>	4-5 at 100 g/l water, 20°C	
<i>Melting temperature:</i>	244-246°C	
<i>Boiling temperature:</i>	°C	
<i>Ignition temperature:</i>	°C	
<i>Flash point:</i>	°C	
<i>Explosion limite lower:</i>	Dust explosion possible	
<i>                          upper:</i>	/	
<i>Density:</i>	/	
<i>Solubility in water:</i>	100 g/l at 20°C	
<i>Thermal decomposition:</i>	> 246°C	

### 10. Stability and reactivity

<i>Conditions to be avoided:</i>	Strong heating
<i>Substances to be avoided:</i>	No information available
<i>Hazardous decomposition products:</i>	No information available
<i>Further information:</i>	Release water of crystallization when heated.

### 11. Toxicological information

<i>Acute toxicity:</i>	LD50 (oral, rat): 2000 mg/kg
<i>Further toxicological information:</i>	After ingestion: harmful, slow absorption, disturbed electrolyte balance. Further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.

### 12. Ecological information

<i>Ecotoxic effects:</i> Biological effects:	Fish L. macrochirus LD50: 159 mg/l/96 h. Degradability: BOD5: 0,01 g/g. Do not allow to enter drinking water supplies, waste water, or soil.
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### 13. Disposal considerations

*Products:* There are no uniform regulations for the disposal of chemicals or residues. The disposal is regulated through corresponding regional laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.

*Packaging:* Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, noncontaminated packaging may be treated like household waste or recycled.

### 14. Transport information

Not subject to transport regulations.

### 15. Regulatory information

Labelling according to EC directives

*Symbol:* No hazardous product

*R-phrases: /*

*S-phrases: /*

German regulations

*Water pollution class;* WGK: 2 Polluting substance

*Storage class VCI:* 11

*Regulation on combustible liquids;* VbF: /

*Other regulations:* None

### 16. Other information

Date of issue: 15.07.2006

Supersedes edition of 18.02.2004

Reason for alteration: General update

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.