

## SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

### Ammonia No.2

Revision date 11-18-2024

Revision Number 1

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

### 1.1. Product identifier

**Product Code(s)** PPPAM2

**Product Name** Ammonia No.2

**Unique Formula Identifier (UFI)** W1KD-UM44-J11F-0CYU

**Pure substance/mixture** Mixture  
Contains Lithium hydroxide monohydrate

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

**Recommended use** Reagent for water analysis

**Uses advised against** Others

### 1.3. Details of the supplier of the safety data sheet

#### Manufacturer

Water-i.d. GmbH  
Daimlerstr. 20  
76344 Eggenstein, Germany  
Tel.: +49 (0) 721 78 20 29 0, Fax: +49 (0) 721 78 20 29 11  
Website: [www.water-id.com](http://www.water-id.com)  
EHS / Compliance: [lab@water-id.com](mailto:lab@water-id.com)

### 1.4. Emergency telephone number

Emergency Telephone

United Kingdom	+44 1235 239670 English
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## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin corrosion/irritation	Category 1 - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Hazardous to the aquatic environment - chronic	Category 3 - (H412)

### 2.2. Label elements

Contains Lithium hydroxide monohydrate



**Signal word**  
Danger

#### **Hazard statements**

H302 - Harmful if swallowed  
H314 - Causes severe skin burns and eye damage  
H332 - Harmful if inhaled  
H412 - Harmful to aquatic life with long lasting effects

#### **Precautionary Statements - EU (§28, 1272/2008)**

P260 - Do not breathe dust, fume, gas, mist, vapors and spray  
P280 - Wear protective gloves/protective clothing and eye/face protection  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or 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 or doctor

#### **Additional information**

This product requires tactile warnings if supplied to the general public. This product requires child resistant fastenings if supplied to the general public.

#### **2.3. Other hazards**

Harmful to aquatic life.

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

#### **3.1 Substances**

Not applicable

#### **3.2 Mixtures**

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Lithium hydroxide monohydrate 1310-66-3	10-20	No data available	-	Acute Tox. 4 (H302) Skin Corr. 1B (H314) Eye Dam. 1 (H318)			
Dichloroisocyanuric acid, sodium salt 2893-78-9	0-1	No data available	220-767-7	Acute Tox. 4 (H302) Eye Irrit. 2 (H319) (EUH031) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Ox. Sol. 2 (H272)			

**Full text of H- and EUH-phrases: see section 16**

#### Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture

based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Lithium hydroxide monohydrate 1310-66-3	363		>6.15		
Dichloroisocyanuric acid, sodium salt 2893-78-9	1823	5000	0.27		

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Inhalation</b>	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical attention.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid breathing dust/fume/gas/mist/vapours/spray. Use personal protective equipment as required. See section 8 for more information.

### 4.2. Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.
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### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Note to doctors</b>	Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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**Large Fire**

CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media**

Do not scatter spilled material with high pressure water streams.

**5.2. Special hazards arising from the substance or mixture****Specific hazards arising from the chemical**

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.

**5.3. Advice for firefighters****Special protective equipment and precautions for fire-fighters**

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****Personal precautions**

Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid generation of dust. Do not breathe dust.

**Other information**

Refer to protective measures listed in Sections 7 and 8.

**For emergency responders**

Use personal protection recommended in Section 8.

**6.2. Environmental precautions****Environmental precautions**

Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

**6.3. Methods and material for containment and cleaning up****Methods for containment**

Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**

Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections****Reference to other sections**

See section 8 for more information. See section 13 for more information.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid generation of dust.

**General hygiene considerations**

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapours/spray.

**7.2. Conditions for safe storage, including any incompatibilities****Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Protect from moisture. Store locked up. Store away from other materials.

**7.3. Specific end use(s)**

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure Limits**

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Lithium hydroxide monohydrate 1310-66-3	-	-	-	-	STEL: 1 mg/m <sup>3</sup>
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Lithium hydroxide monohydrate 1310-66-3	STEL: 1 mg/m <sup>3</sup>	-	-	-	-

**Biological occupational exposure limits**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

**Derived No Effect Level (DNEL)** No information available.  
**Predicted No Effect Concentration (PNEC)**

**8.2. Exposure controls****Personal protective equipment****Eye/face protection**

Tight sealing safety goggles. Face protection shield.

**Hand protection**

Wear suitable gloves. Impervious gloves.

**Skin and body protection**

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

**Respiratory protection**

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations**

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapours/spray.

**Environmental exposure controls**

No information available.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Powder
Colour	white
Odour	Pungent.
Odour threshold	

Property	Values	Remarks • Method
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
pH	12.9	None known
pH (as aqueous solution)	No data available	No information available
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapour pressure	No data available	None known
Relative density	No data available	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapour density	No data available	None known
Particle characteristics		
Particle Size		
Particle Size Distribution		

### 9.2. Other information

9.2.1. Information with regards to physical hazard classes  
Not applicable

9.2.2. Other safety characteristics

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity No information available.

### 10.2. Chemical stability

Stability Stable under normal conditions.

#### Explosion data

Sensitivity to mechanical impact None.  
Sensitivity to static discharge None.

### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

**10.4. Conditions to avoid**

**Conditions to avoid** Exposure to air or moisture over prolonged periods. Excessive heat.

**10.5. Incompatible materials**

**Incompatible materials** Acids. Bases. Oxidising agent.

**10.6. Hazardous decomposition products**

**Hazardous decomposition products** None known based on information supplied.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Harmful by inhalation.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components). Corrosive to the eyes and may cause severe damage including blindness. May cause irreversible damage to eyes.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Redness. Burning. May cause blindness. Coughing and/ or wheezing.

**Numerical measures of toxicity****Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	363.00 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	1.01 mg/l

**Unknown acute toxicity**

49.83 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.  
84.17 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Lithium hydroxide monohydrate	= 120 mg/kg ( Rat )		= 0.96 mg/L ( Rat ) 4 h

Dichloroisocyanuric acid, sodium salt	= 1823 mg/kg ( Rat )	> 5000 mg/kg ( Rat )	0.27 - 1.17 mg/L ( Rat ) 4 h

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Causes burns.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Risk of serious damage to eyes. Causes burns.
<b>Respiratory or skin sensitisation</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

#### 11.2. Information on other hazards

##### 11.2.1. Endocrine disrupting properties

##### Endocrine disrupting properties

##### 11.2.2. Other information

##### Other adverse effects

### **SECTION 12: Ecological information**

#### 12.1. Toxicity

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

**Unknown aquatic toxicity** Contains 19.5 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Dichloroisocyanuric acid, sodium salt	-	LC50: 0.13 - 0.36mg/L (96h, Oncorhynchus mykiss) LC50: 0.176 - 0.267mg/L (96h, Oncorhynchus mykiss) LC50: 0.207 - 0.389mg/L (96h, Lepomis)	-	EC50: 0.00018 - 0.00021mg/L (48h, Daphnia magna) EC50: 0.093 - 0.16mg/L (48h, Daphnia magna)



		macrochirus) LC50: 0.25 - 1mg/L (96h, Lepomis macrochirus) LC50: =0.29mg/L (96h, Oncorhynchus mykiss)		
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**12.2. Persistence and degradability**

Persistence and degradability

**12.3. Bioaccumulative potential**

Bioaccumulation No information available.

**12.4. Mobility in soil**

Mobility in soil

**12.5. Results of PBT and vPvB assessment**

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
Lithium hydroxide monohydrate	The substance is not PBT / vPvB
Dichloroisocyanuric acid, sodium salt	The substance is not PBT / vPvB

**12.6. Endocrine disrupting properties**

Endocrine disrupting properties

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**SECTION 14: Transport information****IATA**

14.1 UN number or ID number	UN2680
14.2 UN proper shipping name	Lithium hydroxide
14.3 Transport hazard class(es)	8
14.4 Packing group	II
Description	UN2680, Lithium hydroxide, 8, II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
ERG Code	8L

**IMDG**

14.1 UN number or ID number	UN2680
14.2 UN proper shipping name	Lithium hydroxide

14.3 Transport hazard class(es)	8
14.4 Packing group	II
Description	UN2680, Lithium hydroxide, 8, II
14.5 Marine pollutant	NP
14.6 Special precautions for user	
Special Provisions	None
EmS-No	F-A, S-B
14.7 Maritime transport in bulk according to IMO instruments	

#### RID

14.1 UN number or ID number	UN2680
14.2 UN proper shipping name	Lithium hydroxide
14.3 Transport hazard class(es)	8
14.4 Packing group	II
Description	UN2680, Lithium hydroxide, 8, II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
Classification code	C6

#### ADR

14.1 UN number or ID number	UN2680
14.2 UN proper shipping name	Lithium hydroxide
14.3 Transport hazard class(es)	8
14.4 Packing group	II
Description	UN2680, Lithium hydroxide, 8, II, (E)
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
Classification code	C6
Tunnel restriction code	(E)

## SECTION 15: Regulatory information

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

#### **European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

#### **Authorisations and/or restrictions on use:**

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

#### **Persistent Organic Pollutants**

Not applicable

#### **Ozone-depleting substances (ODS) Regulation (EU) 2024/590**

Not applicable

#### International Inventories

TSCA Complies

DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Complies
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Complies

**Legend:**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

**15.2. Chemical safety assessment****Chemical Safety Report****SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of any hazard and/or precautionary statements referred to under Sections 2-15**

EUH031 - Contact with acids liberates toxic gas

H272 - May intensify fire; oxidiser

H302 - Harmful if swallowed

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: Exposure controls/personal protection**

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

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Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method

Aspiration hazard	Calculation method
Ozone	Calculation method

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
 Organisation for Economic Co-operation and Development Screening Information Data Set  
 World Health Organization

Revision date 11-18-2024

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**