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METTLER TOLEDO SAFETY DATA SHEET

according to the Globally Harmonized System

Buffer solution pH 4.01

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

1.1. Product identifier

Product name	Buffer solution pH 4.01
Product code	52118020, 51302069, 51302083, 51350004, 51350018, 51350032, 51350042

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

Use of the Substance/Mixture	Laboratory chemicals
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1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification	Mettler-Toledo GmbH Im Langacher 44 CH-8606 Greifensee Switzerland Tel: +41 22 567 53 22 Fax: +41 22 567 53 23 Email: ph.lab.support@mt.com
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1.4. Emergency telephone number	(24-Hour-Number): GBK GmbH +49 6132 84463
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Issuing date	29.11.2017
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Version	GHS 2
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008	The substance or mixture is not classified.
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In accordance with Regulation (EC) No. 1272/2008, the product does not need to be classified nor labelled.

Additional information	For the full text of the phrases mentioned in this Section, see Section 16.
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2.2. Label elements

Signal Word	-
Hazard Statements	None.
Precautionary statements	None.
Supplemental information	None.
Product identifier	None.
2.3. Other hazards	No hazards to be specially mentioned.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Buffer solution.

Components		CLP Classification	Product identifier
Deionised water	95% - 99%		CAS-No.: 7732-18-5 EC-No.: 231-791-2
Potassium hydrogen phthalate	1% - 2.5%		CAS-No.: 877-24-7 EC-No.: 212-889-4

For the full text of the phrases mentioned in this Section, see Section 16.

Hazardous impurities None known.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move to fresh air in case of accidental inhalation of vapours or decomposition products. Consult a physician for severe cases.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
Ingestion	Rinse mouth. Consult a physician for severe cases.

4.2. Most important symptoms and effects, both acute and delayed If you feel unwell, seek medical advice (show the label where possible).



4.3. Indication of any immediate medical attention and special treatment needed	None known.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry extinguishing agent or carbon dioxide.
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Extinguishing media which must not be used for safety reasons	None.
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5.2. Special hazards arising from the substance or mixture	The product is not flammable. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
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5.3. Advice for firefighters

Special protective equipment for firefighters	Standard procedure for chemical fires. In the event of fire, wear self-contained breathing apparatus. Wear protective suit.
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Specific methods	Water mist may be used to cool closed containers.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	Ensure adequate ventilation. Use personal protective equipment. Sweep up to prevent slipping hazard. Avoid contact with skin and eyes. Do not breathe vapours/dust.
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Advice for emergency responders	Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment. Sweep up to prevent slipping hazard.
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6.2. Environmental precautions	Do not flush into surface water or sanitary sewer system.
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6.3. Methods and material for containment and cleaning up	Soak up with inert absorbent material. Keep in suitable and closed containers for disposal.
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6.4. Reference to other sections	See chapter 8 and 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling	Wear personal protective equipment. Avoid contact with skin and eyes.
7.2. Conditions for safe storage, including any incompatibilities	Store at room temperature in the original container.
7.3. Specific end use(s)	No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit(s)	No data is available on the product itself.
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8.2. Exposure controls

Appropriate engineering controls	Avoid contact with skin, eyes and clothing.
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Personal protection equipment

Respiratory protection	In case of good ventilation no personal respiratory protective equipment required.
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Hand protection	Gloves made of latex. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
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Eye protection	Safety glasses with side-shields conforming to EN166.
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Skin and body protection	Long sleeved clothing.
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Thermal hazards	No special measures required.
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Environmental exposure controls	Prevent product from entering surface water or sewage.
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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Red.
Odour	None.
Odour Threshold	Not determined.
pH:	4

Melting point/range:	Not determined.
Boiling point/range:	Not determined.
Flash point:	Not determined.
Evaporation Rate:	Not determined.
Flammability:	Not determined.
Explosion limits:	Not determined.
Vapour pressure:	Not determined.
Vapor density:	Not determined.
Relative density:	Not determined.
Water solubility:	completely miscible
Partition coefficient (n-octanol/water):	Not determined.
Autoignition temperature:	Not determined.
Decomposition temperature:	Not determined.
Viscosity:	Not determined.
Explosive properties:	not hazardous
Oxidising properties:	None

9.2. Other information

General Product Characteristics	No information available.
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SECTION 10: Stability and reactivity

10.1. Reactivity	No information available.
10.2. Chemical stability	Stable at normal conditions.
10.3. Possibility of hazardous reactions	No information available.
10.4. Conditions to avoid	Not required.
10.5. Incompatible materials	None.
10.6. Hazardous decomposition products	None reasonably foreseeable.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	No data is available on the product itself. Deionised water (CAS 7732-18-5) Oral LD50 Rat > 90 mL/kg (FOOD_JOURN) Potassium hydrogen phthalate (CAS 877-24-7) Oral LD50 Rat > 3200 mg/kg (NLM_CIP)
Skin corrosion/irritation	No skin irritation.
Serious eye damage/eye irritation	No eye irritation.



Respiratory / Skin Sensitisation	None.
Carcinogenicity	No data available.
Germ cell mutagenicity	No data available.
Reproductive toxicity	No data available.
Specific target organ toxicity (single exposure)	No data available.
Specific target organ toxicity (repeated exposure)	No data available.
Aspiration hazard	No data available.
Human experience	No data available.
Information on likely routes of exposure	dermal
Other information	The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 12: Ecological information

12.1. Toxicity	No data is available on the product itself.
12.2. Persistence and degradability	Expected to be biodegradable.
12.3. Bioaccumulative potential	Bioaccumulation is unlikely.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
12.6. 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.
Contaminated packaging	Dispose of as unused product.



SECTION 14: Transport information

ADR/RID	Not regulated.
IMDG	Not regulated.
IATA	Not regulated.
Further Information	Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

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

Regulatory Information	In accordance with Regulation (EC) No. 1272/2008, the product does not need to be classified nor labelled.
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Deionised water (CAS 7732-18-5)	
Inventory - United States - Section 8(b) Inventory (TSCA)	Present (ACTIVE)
U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical Data Reporting Rule - Fully Exempt Substances	Present (listed under Certain forms of natural gas and water)
Potassium hydrogen phthalate (CAS 877-24-7)	
EU - REACH (1907/2006) - List of Registered Substances	Present
Inventory - United States - Section 8(b) Inventory (TSCA)	Present

15.2. Chemical safety assessment	Not required.
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SECTION 16: Other information

Key or legend to abbreviations and acronyms	CLP: Classification according to Regulation (EC) No. 1272/2008 (GHS)
Key literature references and sources for data	Information taken from reference works and the literature.
Classification procedure	Calculation method.
Full text of phrases referred to under sections 2 and 3	None.
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. It is not to be considered a warranty or quality specification.

METTLER TOLEDO SAFETY DATA SHEET

according to the Globally Harmonized System

Buffer solution pH 7.00

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

1.1. Product identifier

Product name	Buffer solution pH 7.00
Product code	52118023, 51350006, 51350020, 51302047, 51302084, 51350034, 51350044

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

Use of the Substance/Mixture	Laboratory chemicals
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1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification	Mettler-Toledo GmbH Im Langacher 44 CH-8606 Greifensee Switzerland Tel: +41 22 567 53 22 Fax: +41 22 567 53 23 Email: ph.lab.support@mt.com
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1.4. Emergency telephone number	(24-Hour-Number): GBK GmbH +49 6132 84463
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008	The substance or mixture is not classified.
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In accordance with Regulation (EC) No. 1272/2008, the product does not need to be classified nor labelled.

Additional information	For the full text of the phrases mentioned in this Section, see Section 16.
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2.2. Label elements

Signal Word	-
Hazard Statements	None.
Precautionary statements	None.
Supplemental information	None.
Product identifier	None.
2.3. Other hazards	No hazards to be specially mentioned.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Buffer solution.

Components		CLP Classification	Product identifier
Deionised water	99% - 100%		CAS-No.: 7732-18-5 EC-No.: 231-791-2
Disodium hydrogen phosphate dihydrate	0.1% - 1%	Eye Irrit. 2 H319	CAS-No.: 10028-24-7 EC-No.: 231-448-7
Potassium dihydrogenorthophosphate	0.1% - 1%		CAS-No.: 7778-77-0 EC-No.: 231-913-4 REACH No.: 01-2119490224-41

For the full text of the phrases mentioned in this Section, see Section 16.

Hazardous impurities None known.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move to fresh air in case of accidental inhalation of vapours or decomposition products. Consult a physician for severe cases.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
Ingestion	Rinse mouth. Consult a physician for severe cases.

4.2. Most important symptoms and effects, both acute and delayed If you feel unwell, seek medical advice (show the label where possible).

4.3. Indication of any immediate medical attention and special treatment needed None known.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry extinguishing agent or carbon dioxide.

Extinguishing media which must not be used for safety reasons None.

5.2. Special hazards arising from the substance or mixture The product is not flammable. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

5.3. Advice for firefighters

Special protective equipment for firefighters Standard procedure for chemical fires. In the event of fire, wear self-contained breathing apparatus. Wear protective suit.

Specific methods Water mist may be used to cool closed containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel Ensure adequate ventilation. Use personal protective equipment. Sweep up to prevent slipping hazard. Avoid contact with skin and eyes. Do not breathe vapours/dust.

Advice for emergency responders Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment. Sweep up to prevent slipping hazard.

6.2. Environmental precautions Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up Soak up with inert absorbent material. Keep in suitable and closed containers for disposal.

6.4. Reference to other sections See chapter 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Wear personal protective equipment. Avoid contact with skin and eyes.
7.2. Conditions for safe storage, including any incompatibilities	Store at room temperature in the original container.
7.3. Specific end use(s)	No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit(s)	No data is available on the product itself.
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8.2. Exposure controls

Appropriate engineering controls	Avoid contact with skin, eyes and clothing.
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Personal protection equipment

Respiratory protection	In case of good ventilation no personal respiratory protective equipment required.
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Hand protection	Gloves made of latex. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
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Eye protection	Safety glasses with side-shields conforming to EN166.
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Skin and body protection	Long sleeved clothing.
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Thermal hazards	No special measures required.
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Environmental exposure controls	Prevent product from entering surface water or sewage.
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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Green.
Odour	None.
Odour Threshold	Not determined.
pH:	7

Melting point/range:	Not determined.
Boiling point/range:	Not determined.
Flash point:	Not determined.
Evaporation Rate:	Not determined.
Flammability:	Not determined.
Explosion limits:	Not determined.
Vapour pressure:	Not determined.
Vapor density:	Not determined.
Relative density:	Not determined.
Water solubility:	completely miscible
Partition coefficient (n-octanol/water):	Not determined.
Autoignition temperature:	Not determined.
Decomposition temperature:	Not determined.
Viscosity:	Not determined.
Explosive properties:	not hazardous
Oxidising properties:	None

9.2. Other information

Suitable solvents

General Product Characteristics No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity	No information available.
10.2. Chemical stability	Stable at normal conditions.
10.3. Possibility of hazardous reactions	No information available.
10.4. Conditions to avoid	Not required.
10.5. Incompatible materials	None.
10.6. Hazardous decomposition products	None reasonably foreseeable.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	No data is available on the product itself. Deionised water (CAS 7732-18-5) Oral LD50 Rat > 90 mL/kg (FOOD_JOURN) Potassium dihydrogenorthophosphate (CAS 7778-77-0) Oral LD50 Mouse = 1700 mg/kg (IUCALID)
Skin corrosion/irritation	No skin irritation.



Serious eye damage/eye irritation	No eye irritation.
Respiratory / Skin Sensitisation	None.
Carcinogenicity	No data available.
Germ cell mutagenicity	No data available.
Reproductive toxicity	No data available.
Specific target organ toxicity (single exposure)	No data available.
Specific target organ toxicity (repeated exposure)	No data available.
Aspiration hazard	No data available.
Human experience	No data available.
Information on likely routes of exposure	dermal
Other information	The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 12: Ecological information

12.1. Toxicity	No data is available on the product itself.
12.2. Persistence and degradability	Expected to be biodegradable.
12.3. Bioaccumulative potential	Bioaccumulation is unlikely.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
12.6. 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.
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Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

ADR/RID	Not regulated.
IMDG	Not regulated.
IATA	Not regulated.
Further Information	Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

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

Regulatory Information In accordance with Regulation (EC) No. 1272/2008, the product does not need to be classified nor labelled.

Deionised water (CAS 7732-18-5)	
Inventory - United States - Section 8(b) Inventory (TSCA)	Present (ACTIVE)
U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical Data Reporting Rule - Fully Exempt Substances	Present (listed under Certain forms of natural gas and water)
Potassium dihydrogenorthophosphate (CAS 7778-77-0)	
EU - REACH (1907/2006) - List of Registered Substances	Present
Inventory - United States - Section 8(b) Inventory (TSCA)	Present (ACTIVE)
U.S. - FIFRA - Listing of Pesticide Chemicals (40 CFR 180)	Section number 180.920 Section number 180.1193

15.2. Chemical safety assessment Not required.

SECTION 16: Other information

Key or legend to abbreviations and acronyms	CLP: Classification according to Regulation (EC) No. 1272/2008 (GHS)
Key literature references and sources for data	Information taken from reference works and the literature.
Classification procedure	Calculation method.
Full text of phrases referred to under sections 2 and 3	H319: Causes serious eye irritation.

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. It is not to be considered a warranty or quality specification.



METTLER TOLEDO SAFETY DATA SHEET

according to the Globally Harmonized System

Buffer solution pH 9.21

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

1.1. Product identifier

Product name	Buffer solution pH 9.21
Product code	52118025, 51350008, 51350022, 51350036, 51350046, 51302070, 51302085

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

Use of the Substance/Mixture	Laboratory chemicals
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1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification	Mettler-Toledo GmbH Im Langacher 44 CH-8606 Greifensee Switzerland Tel: +41 22 567 53 22 Fax: +41 22 567 53 23 Email: ph.lab.support@mt.com
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1.4. Emergency telephone number	(24-Hour-Number): GBK GmbH +49 6132 84463
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Issuing date	29.11.2017
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008	The substance or mixture is not classified.
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In accordance with Regulation (EC) No. 1272/2008, the product does not need to be classified nor labelled.

Additional information	For the full text of the phrases mentioned in this Section, see Section 16.
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2.2. Label elements

Signal Word	-
Hazard Statements	None.
Precautionary statements	None.
Supplemental information	None.
Product identifier	None.
2.3. Other hazards	No hazards to be specially mentioned.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Buffer solution.

Components		CLP Classification	Product identifier
Deionised water	95% - 99%		CAS-No.: 7732-18-5 EC-No.: 231-791-2
disodium tetraborate decahydrate; borax decahydrate	1% - 2.5%	Repr. 1B H360 (FD) [Repr1B_FFDD: C ≥ 8,5 %]	CAS-No.: 1303-96-4 EC-No.: 215-540-4 Index-No: 005-011-01-1

For the full text of the phrases mentioned in this Section, see Section 16.

Hazardous impurities None known.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move to fresh air in case of accidental inhalation of vapours or decomposition products. Consult a physician for severe cases.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
Ingestion	Rinse mouth. Consult a physician for severe cases.

4.2. Most important symptoms and effects, both acute and delayed If you feel unwell, seek medical advice (show the label where possible).



4.3. Indication of any immediate medical attention and special treatment needed	None known.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry extinguishing agent or carbon dioxide.
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Extinguishing media which must not be used for safety reasons	None.
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5.2. Special hazards arising from the substance or mixture	The product is not flammable. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
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5.3. Advice for firefighters

Special protective equipment for firefighters	Standard procedure for chemical fires. In the event of fire, wear self-contained breathing apparatus. Wear protective suit.
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Specific methods	Water mist may be used to cool closed containers.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	Ensure adequate ventilation. Use personal protective equipment. Sweep up to prevent slipping hazard. Avoid contact with skin and eyes. Do not breathe vapours/dust.
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Advice for emergency responders	Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment. Sweep up to prevent slipping hazard.
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6.2. Environmental precautions	Do not flush into surface water or sanitary sewer system.
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6.3. Methods and material for containment and cleaning up	Soak up with inert absorbent material. Keep in suitable and closed containers for disposal.
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6.4. Reference to other sections	See chapter 8 and 13.
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SECTION 7: Handling and storage

- 7.1. Precautions for safe handling** Wear personal protective equipment. Avoid contact with skin and eyes.
- 7.2. Conditions for safe storage, including any incompatibilities** Store at room temperature in the original container.
- 7.3. Specific end use(s)** No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit(s) No data is available on the product itself.

disodium tetraborate decahydrate; borax decahydrate (CAS 1303-96-4)	
United Kingdom - Workplace Exposure Limits (WELs) - STELs	15 mg/m ³ STEL (calculated)
United Kingdom - Workplace Exposure Limits (WELs) - TWAs	5 mg/m ³ TWA
U.S. - OSHA - Vacated PELs - TWAs	10 mg/m ³ TWA

8.2. Exposure controls

Appropriate engineering controls Avoid contact with skin, eyes and clothing.

Personal protection equipment

Respiratory protection In case of good ventilation no personal respiratory protective equipment required.

Hand protection Gloves made of latex. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection Safety glasses with side-shields conforming to EN166.

Skin and body protection Long sleeved clothing.

Thermal hazards No special measures required.

Environmental exposure controls Prevent product from entering surface water or sewage.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Blue.
Odour	None.
Odour Threshold	Not determined.
pH:	9.2
Melting point/range:	Not determined.
Boiling point/range:	Not determined.
Flash point:	Not determined.
Evaporation Rate:	Not determined.
Flammability:	Not determined.
Explosion limits:	Not determined.
Vapour pressure:	Not determined.
Vapor density:	Not determined.
Relative density:	Not determined.
Water solubility:	completely miscible
Partition coefficient (n-octanol/water):	Not determined.
Autoignition temperature:	Not determined.
Decomposition temperature:	Not determined.
Viscosity:	Not determined.
Explosive properties:	not hazardous
Oxidising properties:	None

9.2. Other information

General Product Characteristics	No information available.
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SECTION 10: Stability and reactivity

10.1. Reactivity	No information available.
10.2. Chemical stability	Stable at normal conditions.
10.3. Possibility of hazardous reactions	No information available.
10.4. Conditions to avoid	Not required.
10.5. Incompatible materials	None.
10.6. Hazardous decomposition products	None reasonably foreseeable.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	No data is available on the product itself. Deionised water (CAS 7732-18-5) Oral LD50 Rat > 90 mL/kg (FOOD_JOURN) disodium tetraborate decahydrate; borax decahydrate (CAS 1303-96-4) Dermal LD50 Rabbit > 10000 mg/kg (JAPAN_GHS) Oral LD50 Rat = 3493 mg/kg (NZ_CCID)
Skin corrosion/irritation	No skin irritation.
Serious eye damage/eye irritation	No eye irritation.
Respiratory / Skin Sensitisation	None.
Carcinogenicity	No data available.
Germ cell mutagenicity	No data available.
Reproductive toxicity	No data available.
Specific target organ toxicity (single exposure)	No data available.
Specific target organ toxicity (repeated exposure)	No data available.
Aspiration hazard	No data available.
Human experience	No data available.
Information on likely routes of exposure	dermal
Other information	The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 12: Ecological information

12.1. Toxicity	No data is available on the product itself.
12.2. Persistence and degradability	Expected to be biodegradable.
12.3. Bioaccumulative potential	Bioaccumulation is unlikely.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
12.6. 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.

Contaminated packaging Dispose of as unused product.

SECTION 14: Transport information

ADR/RID Not regulated.

IMDG Not regulated.

IATA Not regulated.

Further Information Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

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

Regulatory Information In accordance with Regulation (EC) No. 1272/2008, the product does not need to be classified nor labelled.

Deionised water (CAS 7732-18-5)	
Inventory - United States - Section 8(b) Inventory (TSCA)	Present (ACTIVE)
U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical Data Reporting Rule - Fully Exempt Substances	Present (listed under Certain forms of natural gas and water)
disodium tetraborate decahydrate; borax decahydrate (CAS 1303-96-4)	
EU - Biocides (98/8/EC) - Annex I - Active Substances - Expiry Dates	Expiration date: August 31, 2021 Product type 8
EU - Biocides (528/2012/EU) - Active Substances	8 - Wood preservatives (Commission Directive 2009/91/EC)
EU - Biocides (98/8/EC) - Annex I - Active Substances - Minimum Purity	990 g/kg 8

EU - Biocides (98/8/EC) - Annex I - Active Substances - Specific Provisions	When assessing the application for authorisation of a product in accordance with Article 5 and Annex VI, Member States shall assess, when relevant for the particular product, the populations that may be exposed to the product and the use or exposure scenarios that have not been representatively addressed at the Community level risk assessment. When granting product authorisation, Member States shall assess the risks and subsequently ensure that appropriate measures are taken or specific conditions imposed in order to mitigate the identified risks. Product authorisation can only be granted where the application demonstrates that risks can be reduced to acceptable levels. Member States shall ensure that authorisations are subject to the following conditions: 1. Products authorised for industrial and professional use must be used with appropriate personal protective equipment, unless it can be demonstrated in the application for product authorisation that risks to industrial and/or professional users can be reduced to an acceptable level by other means. 2. In view of the risks identified for the soil and aquatic compartments, products shall not be authorised for the in situ treatment of wood outdoors or for wood that will be exposed to weathering, unless data is submitted to demonstrate that the product will meet the requirements of Article 5 and Annex VI, if necessary by the application of appropriate risk mitigation measures. In particular, labels and/or safety-data sheets of products authorised for industrial use shall indicate that freshly treated timber must be stored after treatment under shelter and/or on impermeable hard standing to prevent direct losses to soil or water and that any losses must be collected for reuse or disposal
EU - Biocides (98/8/EC) - Annex I - Active Substances - Product Type	Product type 8 (details in Commission Directive 2012/40/EU)
EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation	Reason for inclusion Toxic for reproduction, Article 57c (603-411-9)
EU - REACH (1907/2006) - Submitted Annex XV Dossiers for Proposals for Substances of Very High Concern (SVHC)	Annex XV dossier submitted by Denmark (CMR)
EU - REACH (1907/2006) - Annex XIV (Authorization List) Recommendations by ECHA	Toxic to reproduction Category 1B, Article 57c (Sixth list of Annex XIV recommendations by ECHA)
EU - REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	Use restricted. See item 30.
EU - REACH (1907/2006) - Appendix 6 - Reproductive Toxicants: Category 1B (Table 3.1) / Category 2 (Table 3.2)	Present
Inventory - United States - Section 8(b) Inventory (TSCA)	Present (ACTIVE)
U.S. - FIFRA - Listing of Pesticide Chemicals (40 CFR 180)	Section number 180.1121
U.S. - California - Occupational Exposure Limits - PELs	5 mg/m ³ PEL (listed under Borates, tetra, sodium salts)

15.2. Chemical safety assessment

Not required.



SECTION 16: Other information

Key or legend to abbreviations and acronyms

CLP: Classification according to Regulation (EC) No. 1272/2008 (GHS)

Key literature references and sources for data

Information taken from reference works and the literature.

Classification procedure

Calculation method.

Full text of phrases referred to under sections 2 and 3

H360FD: May damage fertility. May damage the unborn child.

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. It is not to be considered a warranty or quality specification.

METTLER TOLEDO SAFETY DATA SHEET

according to the Globally Harmonized System

Buffer solution pH 10.00

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

1.1. Product identifier

Product name	Buffer solution pH 10.00
Product code	52118018, 51350010, 51350024, 51350038, 51350048

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

Use of the Substance/Mixture	Laboratory chemicals
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1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification	Mettler-Toledo GmbH Im Langacher 44 CH-8606 Greifensee Switzerland Tel: +41 22 567 53 22 Fax: +41 22 567 53 23 Email: ph.lab.support@mt.com
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1.4. Emergency telephone number	(24-Hour-Number): GBK GmbH +49 6132 84463
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Issuing date	05.12.2017
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Version	GHS 2
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008	The substance or mixture is not classified.
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In accordance with Regulation (EC) No. 1272/2008, the product does not need to be classified nor labelled.

Additional information	For the full text of the phrases mentioned in this Section, see Section 16.
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2.2. Label elements

Signal Word	-
Hazard Statements	None.
Precautionary statements	None.
Supplemental information	None.
Product identifier	None.
2.3. Other hazards	May cause eye/skin irritation.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Buffer solution.

Components		CLP Classification	Product identifier
Deionised water	95% - 99%		CAS-No.: 7732-18-5 EC-No.: 231-791-2
Sodium hydroxide; caustic soda	0.1% - 0.5%	Skin Corr. 1A H314 [CSk1A: $C \geq 5\%$; CSk1B: $2\% \leq C < 5\%$; CSk2: $0,5\% \leq C < 2\%$; CEy2: $0,5\% \leq C < 2\%$]	CAS-No.: 1310-73-2 EC-No.: 215-185-5 Index-No: 011-002-00-6

For the full text of the phrases mentioned in this Section, see Section 16.

Hazardous impurities None known.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move to fresh air in case of accidental inhalation of vapours or decomposition products. Consult a physician for severe cases.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
Ingestion	Rinse mouth. Consult a physician for severe cases.

4.2. Most important symptoms and effects, both acute and delayed If you feel unwell, seek medical advice (show the label where possible).



4.3. Indication of any immediate medical attention and special treatment needed	None known.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry extinguishing agent or carbon dioxide.
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Extinguishing media which must not be used for safety reasons	None.
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5.2. Special hazards arising from the substance or mixture	The product is not flammable. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
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5.3. Advice for firefighters

Special protective equipment for firefighters	Standard procedure for chemical fires. In the event of fire, wear self-contained breathing apparatus. Wear protective suit.
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Specific methods	Water mist may be used to cool closed containers.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	Ensure adequate ventilation. Use personal protective equipment. Sweep up to prevent slipping hazard. Avoid contact with skin and eyes. Do not breathe vapours/dust.
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Advice for emergency responders	Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment. Sweep up to prevent slipping hazard.
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6.2. Environmental precautions	Do not flush into surface water or sanitary sewer system.
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6.3. Methods and material for containment and cleaning up	Soak up with inert absorbent material. Keep in suitable and closed containers for disposal.
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6.4. Reference to other sections	See chapter 8 and 13.
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SECTION 7: Handling and storage

- 7.1. Precautions for safe handling** Wear personal protective equipment. Avoid contact with skin and eyes.
- 7.2. Conditions for safe storage, including any incompatibilities** Store at room temperature in the original container.
- 7.3. Specific end use(s)** No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit(s) No data is available on the product itself.

Sodium hydroxide; caustic soda (CAS 1310-73-2)	
United Kingdom - Workplace Exposure Limits (WELs) - STELs	2 mg/m ³ STEL
U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)	2 mg/m ³ TWA
U.S. - OSHA - Vacated PELs - Ceilings	2 mg/m ³ Ceiling

8.2. Exposure controls

Appropriate engineering controls Avoid contact with skin, eyes and clothing.

Personal protection equipment

Respiratory protection In case of good ventilation no personal respiratory protective equipment required.

Hand protection The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Solvent-resistant gloves (butyl-rubber)

Eye protection Safety glasses with side-shields conforming to EN166.

Skin and body protection Long sleeved clothing.

Thermal hazards No special measures required.

Environmental exposure controls No special measures required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Liquid.

Colour	Colourless.
Odour	None.
Odour Threshold	Not determined.
pH:	10
Melting point/range:	Not determined.
Boiling point/range:	Not determined.
Flash point:	Not determined.
Evaporation Rate:	Not determined.
Flammability:	Not determined.
Explosion limits:	Not determined.
Vapour pressure:	Not determined.
Vapor density:	Not determined.
Relative density:	Not determined.
Water solubility:	completely miscible
Partition coefficient (n-octanol/water):	Not determined.
Autoignition temperature:	Not determined.
Decomposition temperature:	Not determined.
Viscosity:	Not determined.
Explosive properties:	not hazardous
Oxidising properties:	None

9.2. Other information

General Product Characteristics No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity	No information available.
10.2. Chemical stability	Stable at normal conditions.
10.3. Possibility of hazardous reactions	No information available.
10.4. Conditions to avoid	Not required.
10.5. Incompatible materials	None.
10.6. Hazardous decomposition products	None reasonably foreseeable.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	No data is available on the product itself. Deionised water (CAS 7732-18-5) Oral LD50 Rat > 90 mL/kg (FOOD_JOURN) Sodium hydroxide; caustic soda (CAS 1310-73-2) Dermal LD50 Rabbit = 1350 mg/kg (IUCLID)
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Skin corrosion/irritation	Mild skin irritation.
Serious eye damage/eye irritation	Slight eye irritation.
Respiratory / Skin Sensitisation	None.
Carcinogenicity	No data available.
Germ cell mutagenicity	No data available.
Reproductive toxicity	No data available.
Specific target organ toxicity (single exposure)	No data available.
Specific target organ toxicity (repeated exposure)	No data available.
Aspiration hazard	No data available.
Human experience	No data available.
Information on likely routes of exposure	dermal
Other information	The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 12: Ecological information

12.1. Toxicity	No data is available on the product itself.
Sodium hydroxide; caustic soda (CAS 1310-73-2)	
Ecotoxicity - Freshwater Fish - Acute Toxicity Data	LC50 96 h Oncorhynchus mykiss 45.4 mg/L [static] (IUCLID)
12.2. Persistence and degradability	Expected to be biodegradable.
12.3. Bioaccumulative potential	Bioaccumulation is unlikely.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	No information available.
12.6. 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.

Contaminated packaging Dispose of as unused product.

SECTION 14: Transport information

ADR/RID Not regulated.

IMDG Not regulated.

IATA Not regulated.

Further Information Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

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

Regulatory Information In accordance with Regulation (EC) No. 1272/2008 (CLP), the product does not need to be classified nor labelled.

Deionised water (CAS 7732-18-5)	
Inventory - United States - Section 8(b) Inventory (TSCA)	Present (ACTIVE)
U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical Data Reporting Rule - Fully Exempt Substances	Present (listed under Certain forms of natural gas and water)
Sodium hydroxide; caustic soda (CAS 1310-73-2)	
EU - Cosmetics (1223/2009) - Annex III - Conditions of Use and Warnings	Contains alkali. Avoid contact with eyes. Can cause blindness. Keep out of reach of children. (Nail cuticle solvent) Contains alkali. Avoid contact with eyes. Can cause blindness. Keep out of reach of children. (Hair straightener, general use) For professional use only. Avoid contact with eyes. Can cause blindness. (Hair straightener, professional use) Keep out of reach of children. Avoid contact with eyes. (pH adjuster for depilatories)
EU - Cosmetics (1223/2009) - Annex III - Field of Application and/or Use	Nail cuticle solvent Hair straightener pH adjuster for depilatories Other uses as pH adjuster
EU - Cosmetics (1223/2009) - Annex III - Maximum Authorised Concentration	5 % MAC (Nail cuticle solvent) 2 % MAC (Hair straighteners, general use) 4.5 % MAC (Hair straighteners, professional use)

EU - Cosmetics (1223/2009) - Annex III - Other Limitations and Requirements	General use, professional use (Hair straighteners) <12.7 pH (pH adjuster for depilatories) <11 pH (Other uses as pH adjuster)
EU - REACH (1907/2006) - List of Registered Intermediates	Present ([215-185-5])
EU - REACH (1907/2006) - List of Registered Substances	Present
Inventory - United States - Section 8(b) Inventory (TSCA)	Present (ACTIVE)
U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities	1000 lb final RQ 454 kg final RQ
U.S. - CPSC (Consumer Product Safety Commission) - Specially Regulated Substances	Banned, 16 CFR 1500.17 ($\geq 10\%$ by weight in liquid drain cleaners) Add POISON to label, 16 CFR 1500.129 ($\geq 10\%$ free or chemically unneutralized)
U.S. - FIFRA - Listing of Pesticide Chemicals (40 CFR 180)	Section number 180.910 Section number 180.930
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)	Category IIb
U.S. - California - Occupational Exposure Limits - PELs	2 mg/m ³ PEL (caustic soda)
U.S. - California - Occupational Exposure Limits - Ceilings	2 mg/m ³ Ceiling

15.2. Chemical safety assessment

Not required.

SECTION 16: Other information

Revision Note	Safety datasheet sections which have been updated: 1-16.
Key or legend to abbreviations and acronyms	CLP: Classification according to Regulation (EC) No. 1272/2008 (GHS)
Key literature references and sources for data	Information taken from reference works and the literature.
Classification procedure	Calculation method.
Full text of phrases referred to under sections 2 and 3	H314: Causes severe skin burns and eye damage.
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. It is not to be considered a warranty or quality specification.

