

Safety Data Sheet

according to GHS

Trade name : Automat XR Fixer concentrate
Revision : 05.08.2019
Print date : 05.08.2019

Version : 1.0.0

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

1.1 Product identifier

Automat XR Fixer concentrate

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

Relevant identified uses

Special X-ray set for Dürr developers.

Product Categories [PC]

PC30 - PC 30 - Photo-chemicals

Uses advised against

None, if handled according to order.

Remark

The product is intended for professional use.

1.3 Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor)

orochemie GmbH + Co. KG

Street : Max-Planck-Straße 27

Postal code/city : 70806 Kornwestheim

Telephone : +49 7154 1308-0

Telefax : +49 7154 1308-40

Information contact : DÜRR DENTAL SE, Höpfigheimer Str. 17, 74321 Bietigheim-Bissingen, Germany

Tel: +49 7142 705-0, Fax: +49 7142 705-500, info@duerrdental.com

in Australia:

DÜRR DENTAL SE, PO Box 2067, Woonona East New South Wales 2517, Australia,

Louis Manera +61 (0)412 95 95 25

Importer/Distributor:

Ivoclar Vivadent Ltd, PO Box 303011, North Harbour, Auckland, 0751.

Phone +64 9 914 9999 Fax+64 9 914 9990

1.4 Emergency telephone number

NZ: National Poison Centre (New Zealand) 0800 764 766 Poisons Hotline (24 hours/7days)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Although there is no labelling required for this product, we nevertheless advise observation of the safety recommendations.

2.2 Label elements

Labelling according to GHS

Precautionary statements

P280 Wear protective gloves and eye/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P353 Rinse skin with water [or shower].

P501 Dispose of contents/container to hazardous or special waste collection point.

Special rules for supplemental label elements for certain mixtures

EUH210 Safety data sheet available on request.

2.3 Other hazards

None

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description

Automat XR Fixer concentrate contains ammonium thiosulfate, organic acids and auxiliary agents in aqueous solution.

Hazardous ingredients

ACETIC ACID ; REACH registration No. : 01-2119475328-30 ; EC No. : 200-580-7; CAS No. : 64-19-7

Weight fraction : $\geq 5 - < 8 \%$

Classification 1272/2008 [CLP] : Flam. Liq. 3 ; H226 Met. Corr. 1 ; H290 Skin Corr. 1A ; H314 Eye Dam. 1 ; H318

SODIUM SULPHITE ; REACH registration No. : 01-2119537420-49 ; EC No. : 231-821-4; CAS No. : 7757-83-7

Weight fraction : $\geq 1 - < 4 \%$

Classification 1272/2008 [CLP] : None

BORIC ACID ; REACH registration No. : 01-2119486683-25 ; EC No. : 233-139-2; CAS No. : 10043-35-3

Weight fraction : $\geq 1 - < 2 \%$

Classification 1272/2008 [CLP] : Repr. 1B ; H360FD

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH

BORIC ACID ; REACH registration No. : 01-2119486683-25 ; EC No. : 233-139-2; CAS No. : 10043-35-3

Additional information

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Remove contaminated, saturated clothing immediately. When in doubt or if symptoms are observed, get medical advice.

Following inhalation

Provide fresh air. In case of respiratory tract irritation, consult a physician.

In case of skin contact

Wash with plenty of water. When in doubt or if symptoms are observed, get medical advice.

After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

If swallowed, immediately drink: Water Never give anything by mouth to an unconscious person or a person with cramps. Do NOT induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂) Extinguishing powder Water spray Water mist The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Full water jet

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5.2 Special hazards arising from the substance or mixture

None known.

Hazardous combustion products

None known.

5.3 Advice for firefighters

Adapt protective equipment to surrounding fire.

Special protective equipment for firefighters

Adapt protective equipment to surrounding fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protection equipment. See protective measures under point 7 and 8.

For non-emergency personnel

Use personal protection equipment. See protective measures under point 7 and 8.

For emergency responders

Personal protection equipment

See protective measures under point 7 and 8.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

6.3 Methods and material for containment and cleaning up

For cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

Other information

Treat the recovered material as prescribed in the section on waste disposal.

6.4 Reference to other sections

None

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep/Store only in original container. Please note safety instructions and directions for use on the drum. Handle and open container with care. Provide adequate ventilation. Do not breathe vapour/aerosol.

Protective measures

Measures to prevent fire

Usual measures for fire prevention. When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep/Store only in original container. Keep container tightly closed. Keep in a cool, well-ventilated place. Do not store in temperatures below 5 °C.

Hints on joint storage

Store the foodstuffs separately.

7.3 Specific end use(s)

None

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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Occupational exposure limit values

ACETIC ACID ; CAS No. : 64-19-7

Limit value type (country of origin) : STEL (EC)
Limit value : 20 ppm / 50 mg/m³
Version : 31.01.2018

Limit value type (country of origin) : STEL (EC)
Limit value : 50 mg/m³ / 20 ppm

Limit value type (country of origin) : TWA (EC)
Limit value : 10 ppm / 25 mg/m³
Version : 31.01.2018

Limit value type (country of origin) : TWA (EC)
Limit value : 25 mg/m³ / 10 ppm

Limit value type (country of origin) : TLV/STEL (NZ)
Limit value : 15 ppm / 37 mg/m³

Limit value type (country of origin) : TLV/TWA (NZ)
Limit value : 10 ppm / 25 mg/m³

DNEL/DMEL and PNEC values

There are no data available on the preparation itself.

DNEL/DMEL

Limit value type : DNEL Consumer (local) (ACETIC ACID ; CAS No. : 64-19-7)
Exposure route : Inhalation
Exposure frequency : Long-term (repeated)
Limit value : 25 mg/m³

Limit value type : DNEL Consumer (local) (ACETIC ACID ; CAS No. : 64-19-7)
Exposure route : Inhalation
Exposure frequency : Short-term (acute)
Limit value : 25 mg/m³

Limit value type : DNEL worker (local) (ACETIC ACID ; CAS No. : 64-19-7)
Exposure route : Inhalation
Exposure frequency : Long-term (repeated)
Limit value : 25 mg/m³

Limit value type : DNEL worker (local) (ACETIC ACID ; CAS No. : 64-19-7)
Exposure route : Inhalation
Exposure frequency : Short-term (acute)
Limit value : 25 mg/m³

Limit value type : DNEL Consumer (systemic) (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Exposure route : Oral
Exposure frequency : Long-term (repeated)
Limit value : 11 mg/kg

Limit value type : DNEL Consumer (systemic) (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Exposure route : Inhalation
Exposure frequency : Long-term (repeated)
Limit value : 88 mg/m³

Limit value type : DNEL worker (systemic) (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Exposure route : Inhalation
Exposure frequency : Long-term (repeated)
Limit value : 298 mg/m³

Limit value type : DNEL Consumer (systemic) (BORIC ACID ; CAS No. : 10043-35-3)
Exposure route : Oral
Exposure frequency : Short-term (acute)
Limit value : 0,98 mg/kg
Safety factor : 24 h

Limit value type : DNEL Consumer (systemic) (BORIC ACID ; CAS No. : 10043-35-3)
Exposure route : Oral

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Exposure frequency : Long-term (repeated)
Limit value : 0,98 mg/kg
Safety factor : 24 h
Limit value type : DNEL Consumer (systemic) (BORIC ACID ; CAS No. : 10043-35-3)
Exposure route : Dermal
Exposure frequency : Long-term (repeated)
Limit value : 0,98 mg/kg
Limit value type : DNEL Consumer (systemic) (BORIC ACID ; CAS No. : 10043-35-3)
Exposure route : Inhalation
Exposure frequency : Long-term (repeated)
Limit value : 4,15 mg/m³
Limit value type : DNEL worker (systemic) (BORIC ACID ; CAS No. : 10043-35-3)
Exposure route : Dermal
Exposure frequency : Long-term (repeated)
Limit value : 3924800 mg/kg
Limit value type : DNEL worker (systemic) (BORIC ACID ; CAS No. : 10043-35-3)
Exposure route : Inhalation
Exposure frequency : Long-term (repeated)
Limit value : 8,3 mg/m³

PNEC

Limit value type : PNEC (Aquatic, freshwater) (ACETIC ACID ; CAS No. : 64-19-7)
Limit value : 3,058 mg/l
Limit value type : PNEC (Aquatic, marine water) (ACETIC ACID ; CAS No. : 64-19-7)
Limit value : 0,3058 mg/l
Limit value type : PNEC (Industrial) (ACETIC ACID ; CAS No. : 64-19-7)
Exposure route : Soil
Limit value : 0,478 mg/kg
Limit value type : PNEC (Sediment, freshwater) (ACETIC ACID ; CAS No. : 64-19-7)
Limit value : 11,36 mg/kg
Limit value type : PNEC (Sediment, marine water) (ACETIC ACID ; CAS No. : 64-19-7)
Limit value : 1,136 mg/kg
Limit value type : PNEC (Sewage treatment plant) (ACETIC ACID ; CAS No. : 64-19-7)
Limit value : 85 mg/l
Limit value type : PNEC (Aquatic, freshwater) (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Limit value : 1,33 mg/l
Limit value type : PNEC (Aquatic, marine water) (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Limit value : 0,13 mg/l
Limit value type : PNEC (Sewage treatment plant) (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Limit value : 99,9 mg/l
Limit value type : PNEC (Aquatic, freshwater) (BORIC ACID ; CAS No. : 10043-35-3)
Limit value : 1,35 mg/l
Limit value type : PNEC (Aquatic, marine water) (BORIC ACID ; CAS No. : 10043-35-3)
Limit value : 1,35 mg/l
Limit value type : PNEC (Sediment, freshwater) (BORIC ACID ; CAS No. : 10043-35-3)
Limit value : 1,8 mg/kg
Limit value type : PNEC (Sediment, marine water) (BORIC ACID ; CAS No. : 10043-35-3)
Limit value : 1,8 mg/kg
Limit value type : PNEC (Sewage treatment plant) (BORIC ACID ; CAS No. : 10043-35-3)
Limit value : 1,75 mg/l

8.2 Exposure controls

Personal protection equipment

Eye/face protection

Eye glasses with side protection DIN EN 166

Use tightly fitting safety glasses as per Australian Standard AS 1336 and AS/NZS 1337. Safety glasses with side shields

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Skin protection

Hand protection

Short-term exposure (Level 2: < 30 min): disposable gloves to EN374 category III, e.g. nitrile rubber, material thickness 0.1 mm.

Long-term exposure (Level 6: < 480 min): protective gloves to EN374 category III, e.g. nitrile rubber, material thickness 0.7 mm.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Wear impervious rubber gloves (AS2161).

Body protection

Body protection: not required.

Respiratory protection

Usually no personal respiratory protection necessary.

General health and safety measures

Keep away from food, drink and animal feedingstuffs. Avoid contact with skin, eyes and clothes. Remove contaminated, saturated clothing. Wash hands before breaks and after work. Separate storage of work clothes. When using do not eat, drink, smoke, sniff.

Occupational exposure controls

Technical measures to prevent exposure

Provide adequate ventilation.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : Liquid

Colour : colourless

Odour : Acetic acid

Safety relevant basis data

Melting point/melting range :	(1013 hPa)		No data available	
Initial boiling point and boiling range :	(1013 hPa)	approx.	100	°C
Decomposition temperature :	(1013 hPa)		No data available	
Flash point :			not applicable	
Ignition temperature :			not applicable	
Lower explosion limit :			not applicable	
Upper explosion limit :			not applicable	
Vapour pressure :	(50 °C)		No data available	
Density :	(20 °C)		1,1 - 1,3	g/cm ³
Solvent separation test :	(20 °C)	<	3	%
Water solubility :	(20 °C)		100	Wt %
pH value :			4 - 5	
log P O/W :			No data available	
Flow time :	(20 °C)	<	12	s
Odour threshold :			No data available	
Maximum VOC content (EC) :			5,6	Wt %
Oxidising liquids :			Not applicable.	
Corrosive to metals :			Not corrosive to metals.	

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

None, if handled according to order.

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10.2 Chemical stability

Stable under recommended storage and handling conditions (see section 7). Exothermic reaction with alkalis.

10.3 Possibility of hazardous reactions

Exothermic reaction with alkalis.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

There are no data available on the mixture itself.

Acute effects

Acute oral toxicity

Parameter :	ATEmix calculated
Exposure route :	Oral
Effective dose :	not relevant
Parameter :	LD50 (ACETIC ACID ; CAS No. : 64-19-7)
Exposure route :	Oral
Species :	Rat
Effective dose :	3310 mg/kg
Parameter :	LD50 (BORIC ACID ; CAS No. : 10043-35-3)
Exposure route :	Oral
Species :	Rat
Effective dose :	3500 - 4100 mg/kg
Parameter :	LD50 (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Exposure route :	Oral
Species :	Rat
Effective dose :	2610 mg/kg
Method :	OECD 401
Parameter :	LD50 (BORIC ACID ; CAS No. : 10043-35-3)
Exposure route :	Oral
Species :	Mouse
Effective dose :	3450 mg/kg

Practical experience/human evidence

Avoid contact with skin and eyes.

Acute dermal toxicity

Parameter :	ATEmix calculated
Exposure route :	Dermal
Effective dose :	not relevant
Parameter :	LD50 (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 2000 mg/kg
Method :	OECD 402
Parameter :	LD50 (BORIC ACID ; CAS No. : 10043-35-3)
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (ACETIC ACID ; CAS No. : 64-19-7)

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Exposure route : Dermal
Species : Rabbit
Effective dose : 1060 mg/kg

Acute inhalation toxicity

Parameter : ATEmix calculated
Exposure route : Inhalation (vapour)
Effective dose : not relevant
Parameter : LC50 (ACETIC ACID ; CAS No. : 64-19-7)
Exposure route : Inhalation
Species : Mouse
Effective dose : 5620 mg/l
Parameter : LC50 (BORIC ACID ; CAS No. : 10043-35-3)
Exposure route : Inhalation
Species : Rat
Effective dose : > 2 mg/l
Exposure time : 4 h
Parameter : LC50 (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Exposure route : Inhalation
Species : Rat
Effective dose : > 5,5 mg/l
Exposure time : 4 h
Method : OECD 403
Parameter : LC0 (BORIC ACID ; CAS No. : 10043-35-3)
Exposure route : Inhalation
Species : Rat
Effective dose : 28 mg/l
Exposure time : 4 h
Parameter : LD50 (ACETIC ACID ; CAS No. : 64-19-7)
Exposure route : Inhalation
Species : Rat
Effective dose : 4000 mg/l

Irritant and corrosive effects

No data available.

Sensitisation

No data available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Evidence for reproductive toxicity in experimental animals.

11.5 Additional information

The classification was carried out according to the calculation method of GHS.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

There are no data available on the preparation itself.

Acute (short-term) fish toxicity

Parameter : LC50 (ACETIC ACID ; CAS No. : 64-19-7)
Species : Leuciscus idus (golden orfe)
Evaluation parameter : Acute (short-term) fish toxicity
Effective dose : 400 - 500 mg/l
Exposure time : 48 h
Parameter : LC50 (BORIC ACID ; CAS No. : 10043-35-3)
Species : Oncorhynchus mykiss (Rainbow trout)
Effective dose : 150 mg/l

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Exposure time : 576 h
Parameter : LC50 (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Species : Leuciscus idus (golden orfe)
Evaluation parameter : Acute (short-term) fish toxicity
Effective dose : 315 mg/l
Exposure time : 96 h
Method : DIN 38412 / part 15
Parameter : LC50 (BORIC ACID ; CAS No. : 10043-35-3)
Species : Oncorhynchus mykiss (Rainbow trout)
Effective dose : 100 mg/l
Exposure time : 768 h
Parameter : LC50 (ACETIC ACID ; CAS No. : 64-19-7)
Species : Lepomis macrochirus (Bluegill)
Evaluation parameter : Acute (short-term) fish toxicity
Effective dose : 75 mg/l
Exposure time : 96 h
Parameter : LC50 (ACETIC ACID ; CAS No. : 64-19-7)
Species : Pimephales promelas (fathead minnow)
Evaluation parameter : Acute (short-term) fish toxicity
Effective dose : 79 mg/l
Exposure time : 96 h
Parameter : LC50 (BORIC ACID ; CAS No. : 10043-35-3)
Species : Pimephales promelas (fathead minnow)
Evaluation parameter : Acute (short-term) fish toxicity
Effective dose : 456 mg/l
Exposure time : 96 h

Chronic (long-term) fish toxicity

Parameter : NOEC (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Species : Brachydanio rerio (zebra-fish)
Evaluation parameter : Chronic (long-term) fish toxicity
Effective dose : > 316 mg/l
Exposure time : 816 h
Method : OECD 210

Acute (short-term) daphnia toxicity

Parameter : EC50 (ACETIC ACID ; CAS No. : 64-19-7)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) daphnia toxicity
Effective dose : 95 mg/l
Exposure time : 24 h
Parameter : EC50 (BORIC ACID ; CAS No. : 10043-35-3)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) daphnia toxicity
Effective dose : 133 mg/l
Exposure time : 48 h
Parameter : EC50 (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) daphnia toxicity
Effective dose : 89 mg/l
Exposure time : 48 h
Parameter : EC50 (BORIC ACID ; CAS No. : 10043-35-3)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) daphnia toxicity
Effective dose : 760 mg/l
Exposure time : 48 h

Chronic (long-term) daphnia toxicity

Parameter : NOEC (SODIUM SULPHITE ; CAS No. : 7757-83-7)

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Species : Daphnia magna (Big water flea)
Evaluation parameter : Chronic (long-term) daphnia toxicity
Effective dose : > 10 mg/l
Exposure time : 504 h
Method : OECD 211

Acute (short-term) algae toxicity

Parameter : EC50 (BORIC ACID ; CAS No. : 10043-35-3)
Species : Pseudokirchneriella subcapitata
Evaluation parameter : Acute (short-term) algae toxicity
Effective dose : 229 mg/l
Exposure time : 72 h

Parameter : EC50 (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Species : Scenedesmus subspicatus
Evaluation parameter : Acute (short-term) algae toxicity
Effective dose : 43,8 mg/l
Exposure time : 72 h
Method : OECD 201

Parameter : EC0 (ACETIC ACID ; CAS No. : 64-19-7)
Evaluation parameter : Acute (short-term) algae toxicity
Effective dose : 65 mg/l
Exposure time : 85 h

Bacteria toxicity

Parameter : EC50 (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Species : Pseudomonas putida
Evaluation parameter : Bacteria toxicity
Effective dose : 770 mg/l
Exposure time : 17 h

Parameter : EC50 (SODIUM SULPHITE ; CAS No. : 7757-83-7)
Evaluation parameter : Bacteria toxicity
Effective dose : > 1000 mg/l
Exposure time : 3 h
Method : OECD 209

Parameter : EC0 (ACETIC ACID ; CAS No. : 64-19-7)
Species : Pseudomonas putida
Evaluation parameter : Bacteria toxicity
Effective dose : 2850 mg/l
Exposure time : 16 h

12.2 Persistence and degradability

Biodegradation

No data available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

Known or predicted distribution to environmental compartments

There are no data available on the preparation itself.

Adsorption/Desorption

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

No information available.

12.7 Additional ecotoxicological information

Do not allow to enter into surface water or drains.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product

Concentrate/larger quantities: 09 01 04* fixer solutions.

Waste treatment options

Appropriate disposal / Product

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself. Contact a specialist disposal company or the local waste regulator for advice. This should be done in accordance with 'The Hazardous Waste Act'. Can be eliminated with domestic garbage on condition it complies with local regulations.

SECTION 14: Transport information

14.1 UN number

No dangerous good in sense of these transport regulations.

14.2 UN proper shipping name

No dangerous good in sense of these transport regulations.

14.3 Transport hazard class(es)

No dangerous good in sense of these transport regulations.

14.4 Packing group

No dangerous good in sense of these transport regulations.

14.5 Environmental hazards

No dangerous good in sense of these transport regulations.

14.6 Special precautions for user

None

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

National regulations

EPA NZ Classes of hazardous properties none

NZ HSNO Approval: HSR006698: Ammonium thiosulfate, HSNO Approval: HSR003212: Sodium sulfite, HSNO Approval:

HSR002995: Boric acid

Restrictions of occupation

None

15.2 Chemical safety assessment

For this mixture a chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1 Indication of changes

None

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16.2 Abbreviations and acronyms

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimates
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CMR = Carcinogen, Mutagen or Reproductive toxicant
CO₂ = Carbon dioxide
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EC = European Commission
EC50 = Half maximal effective concentration
EN = European Standard (Norm)
EU = European Union
EUH statement = CLP-specific Hazard statement
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
H statement = GHS Hazard statement
IATA = International Air Transport Association ICAO-TI = International Civil Aviation Organization-Technical Instructions
IMDG = International Maritime Dangerous Goods
LC50 = Median lethal concentration
LD50 = Median lethal dose
LogPow = Logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NOEC/NOEL = No observed effect concentration/level
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RMM = Risk Management Measure
RRN = REACH Registration Number
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
SVHC = Substances of Very High Concern
TLV/STEL = Threshold limit value/short-term exposure limit
TLV/TWA = Threshold limit value/time weighted average
UN = United Nations
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

16.3 Key literature references and sources for data

Standard EN420:2003 General requirements for protective gloves: disposable gloves, e.g. nitrile rubber, material thickness 0.1 mm (Australian Standard 2161).
Long-term exposure (Level 6: < 480 min): protective gloves, e.g. nitrile rubber, material thickness 0.7 mm (Australian Standard 2161).
Personal eye protection - Eye and face protectors for occupational applications: safety glasses (Australian Standard AS 1336 and AS/NZS 1337.1:2010).

16.4 Classification for mixtures and used evaluation method according to GHS

The classification was carried out according to the calculation method of GHS.

16.5 Relevant H- and EUH-phrases (Number and full text)

H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H360FD	May damage fertility. May damage the unborn child.

16.6 Training advice

None

Safety Data Sheet

according to GHS

Trade name : Automat XR Fixer concentrate
Revision : 05.08.2019
Print date : 05.08.2019

Version : 1.0.0

16.7 Additional information

Notice the directions for use on the label.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.
