

# Safety Data Sheet

## according to GHS

**Trade name :** Dürr-Automat XR/C+ Developer concentrate  
**Revision date :** 20.09.2019  
**Print date :** 21.07.2020

**Version :** 1.0.0

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

#### 1.1 Product identifier

Dürr-Automat XR/C+ Developer 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.

##### Products Category [PC]

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

##### Classification according to GHS

Acute Tox. 4 ; H302 - Acute toxicity (oral) : Category 4 ; Harmful if swallowed.

Skin Irrit. 2 ; H315 - Skin corrosion/irritation : Category 2 ; Causes skin irritation.

Eye Irrit. 2 ; H319 - Serious eye damage/eye irritation : Category 2 ; Causes serious eye irritation.

STOT SE 3 ; H335 - STOT-single exposure : Category 3 ; May cause respiratory irritation.

##### Classification procedure

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

#### 2.2 Label elements

##### Labelling according to GHS

##### Hazard pictograms



Exclamation mark (GHS07)

# Safety Data Sheet

## according to GHS

**Trade name :** Dürr-Automat XR/C+ Developer concentrate  
**Revision date :** 20.09.2019  
**Print date :** 21.07.2020

**Version :** 1.0.0

### Signal word

Warning

### Hazard components for labelling

POTASSIUM CARBONATE ; CAS No. : 584-08-7

### Hazard statements

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

### Precautionary statements

P280 Wear protective gloves and eye/face protection.  
P312 Call a POISON CENTER/doctor/... if you feel unwell.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P501 Dispose of contents/container to hazardous or special waste collection point.

### Special rules for supplemental label elements for certain mixtures

EUH208 Contains 4-(HYDROXYMETHYL)-4-METHYL-1-PHENYL-PYRAZOLIDIN-3-ON. May produce an allergic reaction.

## 2.3 Other hazards

None

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Description

Automat XR/C+ Developer concentrate contains potassium carbonate, potassium sulphite, complexing agents, stabilizers and auxiliary agents in aqueous solution.

#### Hazardous ingredients

POTASSIUM CARBONATE ; REACH No. : 01-2119532646-36 ; EC No. : 209-529-3; CAS No. : 584-08-7

Weight fraction :  $\geq 20 - < 25$  %  
Classification 1272/2008 [CLP] : Acute Tox. 4 ; H302 Skin Irrit. 2 ; H315 Eye Irrit. 2 ; H319 STOT SE 3 ; H335

2,2'-OXYBISETHANOL ; REACH No. : 01-2119457857-21 ; EC No. : 203-872-2; CAS No. : 111-46-6

Weight fraction :  $\geq 1 - < 5$  %  
Classification 1272/2008 [CLP] : STOT RE 2 ; H373 Acute Tox. 4 ; H302

4-(HYDROXYMETHYL)-4-METHYL-1-PHENYL-PYRAZOLIDIN-3-ON ; REACH No. : - ; EC No. : 235-920-3; CAS No. : 13047-13-7

Weight fraction :  $\geq 0,1 - < 0,5$  %  
Classification 1272/2008 [CLP] : Acute Tox. 4 ; H302 Skin Sens. 1 ; H317 Aquatic Chronic 2 ; H411

#### 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. In case of skin irritation, consult a physician.

#### After eye contact

# Safety Data Sheet

## according to GHS

**Trade name :** Dürr-Automat XR/C+ Developer concentrate  
**Revision date :** 20.09.2019  
**Print date :** 21.07.2020

**Version :** 1.0.0

Remove contact lenses, keep eyelids open. 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

Causes skin irritation. Causes serious eye irritation. May cause sensitisation especially in sensitive humans.

#### 4.3 Indication of any immediate medical attention and special treatment needed

None

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Extinguishing powder Water spray jet Water mist The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

##### Unsuitable extinguishing media

Full water jet

#### 5.2 Special hazards arising from the substance or mixture

None known.

#### 5.3 Advice for firefighters

Adapt protective equipment to surrounding fire. Do not allow run-off from fire-fighting to enter drains or water courses.

##### 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

# Safety Data Sheet

## according to GHS

**Trade name :** Dürr-Automat XR/C+ Developer concentrate  
**Revision date :** 20.09.2019  
**Print date :** 21.07.2020

**Version :** 1.0.0

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)

Observe instructions for use.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limit values

2,2'-OXYBISETHANOL ; CAS No. : 111-46-6

Limit value type (country of origin) : TLV/TWA ( NZ )

Limit value : 23 ppm / 101 mg/m<sup>3</sup>

#### DNEL-/PNEC-values

There are no data available on the preparation itself.

##### DNEL/DMEL

POTASSIUM CARBONATE ; CAS No. : 584-08-7

Limit value type : DNEL Consumer (local)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 10 mg/m<sup>3</sup>

Limit value type : DNEL Consumer (local)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 8 mg/cm<sup>2</sup>

Limit value type : DNEL worker (local)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 10 mg/m<sup>3</sup>

Limit value type : DNEL worker (local)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 16 mg/cm<sup>2</sup>

2,2'-OXYBISETHANOL ; CAS No. : 111-46-6

Limit value type : DNEL Consumer (local)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 12 mg/m<sup>3</sup>

Limit value type : DNEL Consumer (local)

Exposure route : Inhalation

Exposure frequency : Short-term

Limit value : 12 mg/m<sup>3</sup>

Limit value type : DNEL Consumer (systemic)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 53 mg/kg

# Safety Data Sheet

## according to GHS

**Trade name :** Dürr-Automat XR/C+ Developer concentrate  
**Revision date :** 20.09.2019  
**Print date :** 21.07.2020

**Version :** 1.0.0

---

Limit value type :	DNEL Consumer (systemic)
Exposure route :	Dermal
Exposure frequency :	Long-term
Limit value :	21 mg/kg
Safety factor :	24 h
Limit value type :	DNEL Consumer (systemic)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	12 mg/m <sup>3</sup>
Limit value type :	DNEL worker (local)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	60 mg/m <sup>3</sup>
Limit value type :	DNEL worker (systemic)
Exposure route :	Dermal
Exposure frequency :	Long-term
Limit value :	106 mg/kg
Limit value type :	DNEL worker (systemic)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	60 mg/m <sup>3</sup>
Limit value type :	DNEL worker (systemic)
Exposure route :	Dermal
Exposure frequency :	Long-term
Limit value :	43 mg/kg
Safety factor :	24 h
Limit value type :	DNEL worker (systemic)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	44 mg/m <sup>3</sup>

### PNEC

2,2'-OXYBISETHANOL ; CAS No. : 111-46-6

Limit value type :	PNEC (Aquatic, freshwater)
Limit value :	10 mg/l
Limit value type :	PNEC (Aquatic, marine water)
Limit value :	1 mg/l
Limit value type :	PNEC (Industrial)
Exposure route :	Soil
Limit value :	1,53 mg/kg
Limit value type :	PNEC (Sediment, freshwater)
Limit value :	20,9 mg/kg
Limit value type :	PNEC (Sediment, marine water)
Limit value :	2,09 mg/kg
Limit value type :	PNEC (Sewage treatment plant)
Limit value :	199,5 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

#### 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.

# Safety Data Sheet

## according to GHS

**Trade name :** Dürr-Automat XR/C+ Developer concentrate  
**Revision date :** 20.09.2019  
**Print date :** 21.07.2020

**Version :** 1.0.0

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. AUS/NZ: Wear impervious rubber gloves (AS2161).

### Body protection

Body protection: not required.

### Respiratory protection

Usually no personal respiratory protection necessary.

### General information

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.

### Other protection measures

No particular measures required.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Appearance :** Liquid

**Colour :** clear

**Odour :** characteristic

#### Safety characteristics

**Melting point/freezing point :** ( 1013 hPa ) not determined

**Initial boiling point and boiling range :** ( 1013 hPa ) not determined

**Decomposition temperature :** ( 1013 hPa ) not determined

**Flash point :** not applicable

**Auto-ignition temperature :** not applicable

**Lower explosion limit :** not applicable

**Upper explosion limit :** not applicable

**Vapour pressure :** ( 50 °C ) not determined

**Density :** ( 20 °C ) 1,304 - 1,318 g/cm<sup>3</sup>

**Solvent separation test :** ( 20 °C ) < 3 %

**Water solubility :** ( 20 °C ) 100 Wt %

**pH :** 10,83 - 11,1

**log P O/W :** not determined

**Flow time :** ( 20 °C ) < 20 s DIN-cup 4 mm

**Odour threshold :** not determined

**Maximum VOC content (EC) :** 5 Wt %

**Oxidising liquids :** Not applicable.

**Explosive properties :** 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.

### 10.2 Chemical stability

Stable under recommended storage and handling conditions (see section 7).

### 10.3 Possibility of hazardous reactions

No information available.

# Safety Data Sheet

## according to GHS

**Trade name :** Dürr-Automat XR/C+ Developer concentrate  
**Revision date :** 20.09.2019  
**Print date :** 21.07.2020

**Version :** 1.0.0

### 10.4 Conditions to avoid

No information available.

### 10.5 Incompatible materials

No information available.

### 10.6 Hazardous decomposition products

No information available.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Acute oral toxicity

Parameter :	ATEmix calculated
Exposure route :	Oral
Effective dose :	1926 mg/kg
Parameter :	LD50 ( POTASSIUM CARBONATE ; CAS No. : 584-08-7 )
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )
Exposure route :	Oral
Species :	Practical experience/human evidence
Effective dose :	1120 mg/kg
Parameter :	LD50 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )
Exposure route :	Oral
Species :	Rat
Effective dose :	12565 mg/kg
Parameter :	LD50 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )
Exposure route :	Oral
Species :	Rabbit
Effective dose :	4400 mg/kg
Parameter :	LD50 ( 4-(HYDROXYMETHYL)-4-METHYL-1-PHENYL-PYRAZOLIDIN-3-ON ; CAS No. : 13047-13-7 )
Exposure route :	Oral
Species :	Rat
Effective dose :	1300 mg/kg
Parameter :	LD50 ( 4-(HYDROXYMETHYL)-4-METHYL-1-PHENYL-PYRAZOLIDIN-3-ON ; CAS No. : 13047-13-7 )
Exposure route :	Oral
Species :	Rat
Effective dose :	566 mg/kg
Parameter :	ATE ( POTASSIUM CARBONATE ; CAS No. : 584-08-7 )
Exposure route :	Oral
Effective dose :	500 mg/kg
Parameter :	ATE ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )
Exposure route :	Oral
Effective dose :	500 mg/kg
Parameter :	ATE ( 4-(HYDROXYMETHYL)-4-METHYL-1-PHENYL-PYRAZOLIDIN-3-ON ; CAS No. : 13047-13-7 )
Exposure route :	Oral
Effective dose :	500 mg/kg

##### Practical experience/human evidence

May cause sensitisation especially in sensitive humans.

##### Acute dermal toxicity

# Safety Data Sheet

## according to GHS

**Trade name :** Dürr-Automat XR/C+ Developer concentrate  
**Revision date :** 20.09.2019  
**Print date :** 21.07.2020

**Version :** 1.0.0

Parameter : ATEmix calculated  
Exposure route : Dermal  
Effective dose : not relevant  
Parameter : LD50 ( POTASSIUM CARBONATE ; CAS No. : 584-08-7 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : > 2000 mg/kg  
Parameter : LD50 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 13300 mg/kg

### Acute inhalation toxicity

Parameter : ATEmix calculated  
Exposure route : Inhalation (vapour)  
Effective dose : not relevant  
Parameter : LC50 ( POTASSIUM CARBONATE ; CAS No. : 584-08-7 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : > 4,96 mg/kg  
Exposure time : 4 h  
Parameter : LC0 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : > 4,6 mg/l  
Exposure time : 4 h

### Corrosion

Causes serious eye irritation.

### Respiratory or skin sensitisation

May cause sensitization by skin contact.

### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Based on available data, the classification criteria are not met.

### 11.5 Additional information

The classification was carried out according to the calculation method ofRGHS.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity

##### Acute (short-term) fish toxicity

Parameter : LC50 ( POTASSIUM CARBONATE ; CAS No. : 584-08-7 )  
Species : Oncorhynchus mykiss (Rainbow trout)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 68 mg/l  
Exposure time : 96 h  
Parameter : LC50 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Species : Pimephales promelas (fathead minnow)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 75200 mg/l  
Exposure time : 96 h  
Parameter : LC50 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Species : Carassius auratus (goldfish)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : > 5000 mg/l  
Exposure time : 24 h



# Safety Data Sheet

## according to GHS

**Trade name :** Dürr-Automat XR/C+ Developer concentrate  
**Revision date :** 20.09.2019  
**Print date :** 21.07.2020

**Version :** 1.0.0

---

Parameter : LC50 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Species : Gambusia affinis (Mosquito fish)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : > 100 mg/l  
Exposure time : 96 h

Parameter : LC50 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Species : Leuciscus idus (golden orfe)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : > 10000 mg/l  
Exposure time : 96 h

Parameter : LC50 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Species : Oncorhynchus mykiss (Rainbow trout)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : > 1000 mg/l  
Exposure time : 96 h

Parameter : LC50 ( 4-(HYDROXYMETHYL)-4-METHYL-1-PHENYL-PYRAZOLIDIN-3-ON ; CAS No. : 13047-13-7 )  
Species : Pimephales promelas (fathead minnow)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 1 - 10 mg/l

Parameter : LC50 ( 4-(HYDROXYMETHYL)-4-METHYL-1-PHENYL-PYRAZOLIDIN-3-ON ; CAS No. : 13047-13-7 )  
Species : Leuciscus idus (golden orfe)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 35 mg/l  
Exposure time : 48 h

### Chronic (long-term) fish toxicity

Parameter : NOEC ( POTASSIUM CARBONATE ; CAS No. : 584-08-7 )  
Species : Oncorhynchus mykiss (Rainbow trout)  
Evaluation parameter : Chronic (long-term) fish toxicity  
Effective dose : 33 mg/l  
Exposure time : 96 h

### Acute (short-term) toxicity to crustacea

Parameter : EC50 ( POTASSIUM CARBONATE ; CAS No. : 584-08-7 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 200 mg/l  
Exposure time : 48 h

Parameter : EC50 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 10000 mg/l  
Exposure time : 24 h

Parameter : EC50 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Species : Daphnia magna (Big water flea)  
Effective dose : 48900 mg/l  
Exposure time : 48 h

Parameter : EC50 ( 4-(HYDROXYMETHYL)-4-METHYL-1-PHENYL-PYRAZOLIDIN-3-ON ; CAS No. : 13047-13-7 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 7,1 mg/l  
Exposure time : 24 h

### Acute (short-term) toxicity to aquatic algae and cyanobacteria

Parameter : EC50 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Species : Selenastrum capricornutum

# Safety Data Sheet

## according to GHS

**Trade name :** Dürr-Automat XR/C+ Developer concentrate  
**Revision date :** 20.09.2019  
**Print date :** 21.07.2020

**Version :** 1.0.0

Evaluation parameter : Inhibition of growth rate  
Effective dose : > 100 mg/l

### Chronic (long-term) algae toxicity

Parameter : NOEC ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Species : Scenedesmus quadricauda  
Evaluation parameter : Chronic (long-term) algae toxicity  
Effective dose : 2700 mg/l  
Exposure time : 192 h

### Toxicity to microorganisms

Parameter : EC50 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Evaluation parameter : Bacteria toxicity  
Effective dose : > 1000 mg/l  
Exposure time : 3 h

Parameter : EC10 ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Species : Pseudomonas putida  
Evaluation parameter : Bacteria toxicity  
Effective dose : 8000 mg/l  
Exposure time : 16 h

Parameter : EC50 ( 4-(HYDROXYMETHYL)-4-METHYL-1-PHENYL-PYRAZOLIDIN-3-ON ; CAS No. : 13047-13-7 )  
Species : Pseudomonas putida  
Evaluation parameter : Bacteria toxicity  
Effective dose : 480 mg/l  
Exposure time : 16 h

## 12.2 Persistence and degradability

### Biodegradation

Parameter : DOC reduction ( 2,2` -OXYBISETHANOL ; CAS No. : 111-46-6 )  
Inoculum : Degree of elimination  
Evaluation parameter : Biodegradation  
Degradation rate : > 70 %  
Test duration : 672 h

## 12.3 Bioaccumulative potential

No information available.

## 12.4 Mobility in soil

### Distribution

There are no data available on the preparation itself.

## 12.5 Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

## 12.6 Other adverse effects

No information available.

## 12.7 Additional ecotoxicological information

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Directive 2008/98/EC (Waste Framework Directive)

##### After intended use

##### Disposal operations

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

##### Recovery operations

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance

# Safety Data Sheet

## according to GHS

**Trade name :** Dürr-Automat XR/C+ Developer concentrate  
**Revision date :** 20.09.2019  
**Print date :** 21.07.2020

**Version :** 1.0.0

itself. Waste codes 15 01 10\*. 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.

### **Waste codes/waste designations according to EWC/AVV**

Concentrate/larger quantities: 09 01 01\* water based developer baths.

## **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**

#### **EU legislation**

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

##### **Restrictions on use**

Use restriction according to REACH annex XVII, no. : 3

#### **National regulations**

EPA NZ Classes of hazardous properties class 8—corrosive substance, class 6 – substances toxic to people

NZ HSNO Approval: HSR003645: Ascorbic acid, HSNO Approval: HSR003274: Potassium carbonate, HSNO Approval:

HSR002709: Diethylenglykol, HSNO Approval: HSR003789: Potassium bromide, HSNO Approval: HSR001586:

Potassium hydroxide

#### **Restrictions of occupation**

According to directive 94/33/EC, juveniles are only allowed to handle this product as long as all effects of dangerous substances are prevented.

### **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**

03. Hazardous ingredients · 08. Occupational exposure limit values

### **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

# Safety Data Sheet

## according to GHS

**Trade name :** Dürr-Automat XR/C+ Developer concentrate  
**Revision date :** 20.09.2019  
**Print date :** 21.07.2020

**Version :** 1.0.0

CO<sub>2</sub> = 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)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

### 16.6 Training advice

Do not handle until all safety precautions have been read and understood.

### 16.7 Additional information

Notice the directions for use on the label.

# Safety Data Sheet

## according to GHS

**Trade name :** Dürr-Automat XR/C+ Developer concentrate  
**Revision date :** 20.09.2019  
**Print date :** 21.07.2020

**Version :** 1.0.0

---

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.

---