

# XR D-6 NDT/XR D-1.5 NDT Developer concentrate (NEW FORMULA)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 02/09/2021

Supersedes: 06/30/2016

Version: 2.0

SDS No: 0448-0002

## SECTION 1: Identification

### 1.1. Identification

Product form : Mixture  
Product name : XR D-6 NDT/XR D-1.5 NDT Developer concentrate (NEW FORMULA)

### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Hydroquinone and aldehyde-free special x-ray chemical set for NDT x-ray film processors.

### 1.3. Supplier

#### Manufacturer

orochemie GmbH + Co. KG  
Max-Planck-Str. 27  
Kornwestheim, 70806  
T +49 7154 1308-0 - F +49 7154 1308-43

#### Supplier

Dürr NDT GmbH & Co KG  
Höpfigheimer Straße 22  
Bietigheim-Bissingen, 74321  
T +49 (0) 7142 993810 - F +49 (0) 7142 99381 299  
[info@duerr-ndt.de](mailto:info@duerr-ndt.de)

### 1.4. Emergency telephone number

Emergency number : INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)

## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

#### GHS US classification

Specific target organ toxicity (repeated exposure) Category 2 H373 May cause damage to organs through prolonged or repeated exposure

Full text of H statements : see section 16

### 2.2. GHS Label elements, including precautionary statements

#### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning  
Hazard statements (GHS US) : H373 - May cause damage to organs through prolonged or repeated exposure  
Precautionary statements (GHS US) : P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
P280 - Wear protective gloves/protective clothing/eye protection/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.  
P302+P352 - If on skin: Wash with plenty of water.

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

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### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Comments : XR D-6 NDT / XR D-1.5 NDT Developer concentrate contains potassium carbonate, complexing agents, stabilizers and auxiliary agents in aqueous solution.

| Name                                   | Product identifier | %           | GHS US classification  |
|--|--------------------|-------------|--|
| Potassium carbonate                    | CAS-No.: 584-08-7  | ≥ 15 - < 20 | Acute Tox. 4 (Oral), H302<br>Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>STOT SE 3, H335 |
| 2,2' -oxybisethanol; diethylene glycol | CAS-No.: 111-46-6  | ≥ 1 - < 5   | Acute Tox. 4 (Oral), H302<br>STOT RE 2, H373   |
| POTASSIUM BROMIDE                      | CAS-No.: 7758-02-3 | ≥ 1 - < 5   | Eye Irrit. 2, H319   |

Full text of hazard classes and H-statements : see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

First-aid measures general : Take off immediately all contaminated clothing. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. In the event of persistent symptoms receive medical treatment.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist if irritation persists.

First-aid measures after ingestion : Give water to drink if victim completely conscious/alert. Do NOT induce vomiting. Call a doctor.

#### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : May cause sensitization of susceptible persons.

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Product does not burn, fire-extinguishing activities according to surrounding. Water spray. Dry powder.

Unsuitable extinguishing media : high volume water jet.

#### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

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### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

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

Methods for cleaning up : Take up liquid spill into absorbent material.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep cool. Store in a well-ventilated place. Keep container tightly closed.  
Storage temperature :  $\geq 5\text{ }^{\circ}\text{C}$   
Information on mixed storage : Keep away from food, drink and animal feeding stuffs.  
Packaging materials : Product must only be kept in the original packaging.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### XR D-6 NDT/XR D-1.5 NDT Developer concentrate (NEW FORMULA)

No additional information available

#### Potassium carbonate (584-08-7)

No additional information available

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### 2,2' -oxybisethanol; diethylene glycol (111-46-6)

No additional information available

### POTASSIUM BROMIDE (7758-02-3)

No additional information available

## 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

## 8.3. Individual protection measures/Personal protective equipment

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

### Eye protection:

Protective goggles (EN 166)

### Skin and body protection:

Wear suitable protective clothing

### Type

### Respiratory protection:

Not required for normal conditions of use

## SECTION 9: Physical and chemical properties

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

|   |                                      |
|---|--------------------------------------|
| Physical state                              | : Liquid                             |
| Color                                       | : light yellow                       |
| Odor  | : characteristic                     |
| Odor threshold                              | : No data available                  |
| pH  | : No data available                  |
| pH solution                                 | : 10.5 – 10.9                        |
| Melting point                               | : No data available                  |
| Freezing point                              | : No data available                  |
| Boiling point                               | : No data available                  |
| Flash point                                 | : Not specifically applicable        |
| Relative evaporation rate (butyl acetate=1) | : No data available                  |
| Flammability (solid, gas)                   | : Flammable solid.                   |
| Vapor pressure                              | : No data available                  |
| Relative vapor density at 20 °C             | : No data available                  |
| Relative density                            | : No data available                  |
| Density                                     | : 1.2 – 1.4 g/cm <sup>3</sup> @ 20°C |
| Solubility                                  | : Water: 100 % @ 20°C                |

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|                           |  |
|---------------------------|--|
| Log Pow                   | : No data available  |
| Auto-ignition temperature | : Not specifically applicable  |
| Decomposition temperature | : No data available  |
| Viscosity, kinematic      | : No data available  |
| Viscosity, dynamic        | : No data available  |
| Explosion limits          | : Lower explosive limit (LEL): Not specifically applicable<br>Upper explosive limit (UEL): Not specifically applicable |
| Explosive properties      | : No data available  |
| Oxidizing properties      | : No data available  |

### 9.2. Other information

|             |               |
|-------------|---------------|
| VOC content | : ≤ 5 %       |
| Flow time   | : < 20s @20°C |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reactions known. The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

No information available.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|                             |                  |
|-----------------------------|------------------|
| Acute toxicity (oral)       | : Not classified |
| Acute toxicity (dermal)     | : Not classified |
| Acute toxicity (inhalation) | : Not classified |

#### Potassium carbonate (584-08-7)

|               |                        |
|---------------|------------------------|
| LD50 oral rat | 1870 mg/kg             |
| ATE US (oral) | 1870 mg/kg body weight |

#### 2,2'-oxybisethanol; diethylene glycol (111-46-6)

|               |                       |
|---------------|-----------------------|
| ATE US (oral) | 500 mg/kg body weight |
|---------------|-----------------------|

Skin corrosion/irritation : Not classified (In vitro skin corrosion: non-irritant. Method : Human Skin Model (HSM) test)

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|                                   |   |
|-----------------------------------|---|
| Serious eye damage/irritation     | : Not classified (On basis of test data. (OECD 437 method)) |
| Respiratory or skin sensitization | : Not classified  |
| Germ cell mutagenicity            | : Not classified  |
| Carcinogenicity                   | : Not classified  |
| Reproductive toxicity             | : Not classified  |
| STOT-single exposure              | : Not classified  |

### Potassium carbonate (584-08-7)

|                      |                                   |
|----------------------|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |
|----------------------|-----------------------------------|

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

### 2,2'-oxybisethanol; diethylene glycol (111-46-6)

|                        |  |
|------------------------|--|
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. |
|------------------------|--|

|                      |   |
|----------------------|---|
| Aspiration hazard    | : Not classified                                  |
| Viscosity, kinematic | : No data available                               |
| Symptoms/effects     | : May cause sensitization of susceptible persons. |

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

|  |   |
|--|---|
| Waste treatment methods                    | : Dispose of contents/container in accordance with licensed collector's sorting instructions.   |
| Product/Packaging disposal recommendations | : Contaminated packaging should be emptied as far as possible and after appropriate cleaning may be taken for reuse. Packaging that cannot be cleaned should be disposed of like the product. |

## SECTION 14: Transport information

In accordance with Verkehrsministerium / Gefahrguttransporte / IMDG / IATA

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| DOT                                     | TDG            | IMDG           | IATA           |
|---|----------------|----------------|----------------|
| <b>14.1. UN number</b>                  |                |                |                |
| Not regulated for transport             |                |                |                |
| <b>14.2. Proper Shipping Name</b>       |                |                |                |
| Not applicable                          | Not applicable | Not applicable | Not applicable |
| <b>14.3. Transport hazard class(es)</b> |                |                |                |
| Not applicable                          | Not applicable | Not applicable | Not applicable |
| <b>14.4. Packing group</b>              |                |                |                |
| Not applicable                          | Not applicable | Not applicable | Not applicable |
| <b>14.5. Environmental hazards</b>      |                |                |                |
| Not applicable                          | Not applicable | Not applicable | Not applicable |
| No supplementary information available  |                |                |                |

### 14.6. Special precautions for user

#### DOT

No data available

#### TDG

No data available

#### IMDG

No data available

#### IATA

No data available

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

### 15.2. International regulations

#### CANADA

##### Potassium carbonate (584-08-7)

Listed on the Canadian DSL (Domestic Substances List)

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### 2,2' -oxybisethanol; diethylene glycol (111-46-6)

Listed on the Canadian DSL (Domestic Substances List)

### POTASSIUM BROMIDE (7758-02-3)

Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

#### Potassium carbonate (584-08-7)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### National regulations

#### Potassium carbonate (584-08-7)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican national Inventory of Chemical Substances)  
Listed on Turkish inventory of chemical

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

| Component  | State or local regulations                     |
|--|--|
| 2,2' -oxybisethanol; diethylene glycol(111-46-6) | U.S. - Pennsylvania - RTK (Right to Know) List |

## SECTION 16: Other information

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### Full text of H-phrases

|      |   |
|------|---|
| H302 | Harmful if swallowed  |
| H315 | Causes skin irritation  |
| H319 | Causes serious eye irritation.                                    |
| H335 | May cause respiratory irritation.                                 |
| H373 | May cause damage to organs through prolonged or repeated exposure |



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| <b>Abbreviations and acronyms</b> |   |
|-----------------------------------|---|
| ADN                               | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR                               | European Agreement concerning the International Carriage of Dangerous Goods by Road             |
| ATE                               | Acute Toxicity Estimate   |
| BCF                               | Bioconcentration factor   |
| BLV                               | Biological limit value  |
| BOD                               | Biochemical oxygen demand (BOD)   |
| COD                               | Chemical oxygen demand (COD)  |
| DMEL                              | Derived Minimal Effect level  |
| DNEL                              | Derived-No Effect Level   |
| EC-No.                            | European Community number   |
| EC50                              | Median effective concentration  |
| EN                                | European Standard   |
| IARC                              | International Agency for Research on Cancer   |
| IATA                              | International Air Transport Association   |
| IMDG                              | International Maritime Dangerous Goods  |
| LC50                              | Median lethal concentration   |
| LD50                              | Median lethal dose  |
| LOAEL                             | Lowest Observed Adverse Effect Level  |
| NOAEC                             | No-Observed Adverse Effect Concentration  |
| NOAEL                             | No-Observed Adverse Effect Level  |
| NOEC                              | No-Observed Effect Concentration  |
| OECD                              | Organisation for Economic Co-operation and Development  |
| OEL                               | Occupational Exposure Limit   |
| PBT                               | Persistent Bioaccumulative Toxic  |
| PNEC                              | Predicted No-Effect Concentration   |
| RID                               | Regulations concerning the International Carriage of Dangerous Goods by Rail                    |
| SDS                               | Safety Data Sheet   |
| STP                               | Sewage treatment plant  |
| ThOD                              | Theoretical oxygen demand (ThOD)  |
| TLM                               | Median Tolerance Limit  |
| VOC                               | Volatile Organic Compounds  |
| CAS-No.                           | Chemical Abstract Service number  |
| N.O.S.                            | Not Otherwise Specified   |
| vPvB                              | Very Persistent and Very Bioaccumulative  |

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| Abbreviations and acronyms |                                 |
|----------------------------|---------------------------------|
| ED                         | Endocrine disrupting properties |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.