

**MATERIAL SAFETY DATA SHEET**according to Regulation (EC) No. 1907/2006  
Version 9.0 Revision Date 02.09.2024**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifiers**

Product name : Bitter Test Solution

Product Number : 050402

Company name : Moldex/Metric AG & Co KG

CAS-No. : 3734-33-6

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

Identified uses : Fit Test Solution (qualitative fit test of respiratory masks)

**1.3 Details of the supplier of the safety data sheet**

Company : Moldex/Metric AG & Co. KG  
Tübingerstr.50  
72141 Walddorfhäslach  
Germany

Telephone : +49 7127-8101-02

Fax : +49 7127-8101-48

E-mail address : info@moldex-europe.com

**1.4 Emergency telephone number**

Emergency Phone # : +49 7127-8101-02

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**2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

Classification according to EU Regulation 1272/2008

**2.2 Label elements**

Dangerous substances according to EU Regulation 1272/2008

**Symbols** - none

**Contains** - non hazardous ingredients

**Risk phrases** - none

**Safety phrases** - P271 use only in well ventilated areas

**2.3 Other hazards** - none known

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**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Synonyms : N,N-Diethyl-N-[(2,6-dimethylphenylcarbonyl)methyl]benzylammonium benzoate / Denatonium benzoate

Formula : C<sub>28</sub>H<sub>34</sub>N<sub>2</sub>O<sub>3</sub>

Molecular Weight : 446,58g/mol

Ingredients	CAS-No.	EC-No.	Concentration	Classification
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Water	7732-18-5	---	95,0 %	
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Sodium Chloride	7647-14-5	231-598-3	4,8 %	
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Benzoate	3734-33-6	223-095-2	0,2%	H332,H302,H318 (self classified)
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Please see Section 16 for full text of any H statements referred in this section

**4. FIRST AID MEASURES****4.1 Description of first aid measures****Inhalation**

No need for first aid is anticipated.

**Skin contact**

Wash off with soap and plenty of water. If signs/ symptoms develop, get medical attention.

**Eye contact**

Rinse thoroughly with plenty of water. If signs/ symptoms persists, get medical attention

**If swallowed**

No need for first aid is anticipated.

**Ingestion**

Profuse bad taste, no health effects are expected.

**4.2 Most important symptoms and effects, both acute and delayed**

See Section 11.1 Information on toxicological effects

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

Not applicable

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**5. FIREFIGHTING MEASURES****5.1 Extinguishing media**

Material will not burn

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

No fire hazard

**5.3 Advice for firefighters**

No unusual fire hazards are anticipated.

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**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Avoid breathing dust.

**6.2 Environmental precautions**

Avoid release to the environment

**6.3 Methods and materials for containment and cleaning up**

Clean up residue with detergent and water. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

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**7. HANDLING AND STORAGE****7.1 Precautions for safe handling**

For industrial or professional use only.

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

No special storage required

**7.3 Specific end uses**

The use by date of the manufactured solution is 5 years.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters****Occupational exposure limits**

No occupational exposure limit values exist for the components listed in Section 3.

## 8.2 Exposure controls

### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### Personal protective equipment

#### Eye/face protection

None required

#### Skin protection

None required

#### Respiratory Protection

None required

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |   |  |
|---|--|
| • Appearance                              | liquid                                     |
| • Odour                                   | clear odourless solution with bitter taste |
| • Odour threshold                         | no data available                          |
| • pH                                      | no data available                          |
| • Melting point/ freezing point           | no data available                          |
| • Initial boiling point and boiling range | no data available                          |
| • Flash point                             | no data available                          |
| • Evaporation rate                        | no data available                          |
| • Flammability                            | not applicable                             |
| • Explosive limits                        | not applicable                             |
| • Vapour pressure                         | not applicable                             |
| • Vapour density                          | not applicable                             |
| • Relative density                        | 1,034                                      |
| • Water solubility                        | complete                                   |
| • Partition coefficient: n-octanol/water  | no data available                          |
| • Autoignition temperature                | not applicable                             |
| • Decomposition temperature               | not applicable                             |
| • Viscosity                               | no data available                          |
| • Explosive properties                    | not applicable                             |
| • Oxidizing                               | not applicable                             |

### 9.2 Other safety information

None known

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Not applicable

### 10.2 Chemical stability

Stable

### 10.3 Possibility of hazardous reactions

None known

### 10.4 Conditions to avoid

None known

### 10.5 Incompatible materials

None known

**10.6 Hazardous decomposition products**  
Other decomposition products - not applicable

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**11. TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

**Acute toxicity**

Denatonium benzoate: LD50 Oral - rat - 584 mg/kg  
LD50 Dermal -rat- >2000mg/kg

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

Not mutagenic

**Carcinogenicity**

Not carcinogenic

**Reproductive toxicity**

No test data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

Not an aspiration hazard

**Signs and Symptoms of Exposure**

Potential health effects:

**Inhalation** no health effects are expected. Persons with Asthma or breathing difficulties should seek further medical advice

**Ingestion** no health effects are expected

**Skin** contact to the skin during product use is not expected to result in significant irritation

**Eyes** contact to the eyes during product use is not expected to result in significant irritation

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**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

Not acutely toxic to aquatic life by GHS criteria

**12.2 Persistence and degradability**

No test data available

**12.3 Bioaccumulative potential**

No test data available

**12.4 Mobility in soil**

No test data available

**12.5 Results of PBT and vPvB assessment**

No test data available

**12.6 Other adverse effects**

No test data available

