

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

- **1.1 Product identifier**
- **Trade name: Dinitrol 977**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Anticorrosion additive
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
DINOL GmbH  
Pyrmonter Str. 76  
D-32676 Lügde  
Tel: +49 5281 9829 80  
Fax: +49 5281 9829 860  
E-mail: msds@dinol.com
- **Further information obtainable from:** Research & Development
- **1.4 Emergency telephone number:**  
Giftnotruf Berlin +49(0)30 30686 790 Beratung in Deutsch und Englisch.

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



- Skin Irrit. 2 H315 Causes skin irritation.
- Eye Irrit. 2 H319 Causes serious eye irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



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- **Signal word** Warning
- **Hazard statements**  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.
- **Precautionary statements**  
P280 Wear protective gloves/protective clothing/eye protection.  
P264 Wash thoroughly after handling.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P362 Take off contaminated clothing and wash before reuse.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.
- **Additional information:**  
EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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· **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with additions.

· **Dangerous components:**

CAS: 108-01-0 EINECS: 203-542-8 Reg.nr.: 01-2119492298-24	2-dimethylaminoethanol ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 3, H331; ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; STOT SE 3, H335	1-<3%
CAS: 29911-28-2 EINECS: 249-951-5	1-(2-Butoxy-1-methylethoxy)-2-propanol ⚠ Acute Tox. 3, H331	1-<3%
CAS: 2634-33-5 EINECS: 220-120-9	1,2-benzisothiazol-3(2H)-one ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317	<1%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
 Immediately wash with water and soap and rinse thoroughly.  
 Immediately rinse with water.  
 If skin irritation continues, consult a doctor.
- **After eye contact:**  
 Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
 No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
 CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
 Avoid contact with skin, eyes and clothes.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**  
 See Section 7 for information on safe handling.  
 See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Use only in well ventilated areas.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

**CAS: 108-01-0 2-dimethylaminoethanol**

WEL	Short-term value: 22 mg/m <sup>3</sup> , 6 ppm
	Long-term value: 7.4 mg/m <sup>3</sup> , 2 ppm

- **Regulatory information** WEL: EH40/2011

· **DNELs**

**CAS: 108-01-0 2-dimethylaminoethanol**

Dermal	Long-term - systemic effects, worker	1.04 mg/kg bw/day (Worker)
Inhalative	Long-term - systemic effects, worker	7.4 mg/m <sup>3</sup> (Worker)

· **PNECs**

**CAS: 108-01-0 2-dimethylaminoethanol**

Aquatic compartment - freshwater	0.0661 mg/L (not specified)
Aquatic compartment - marine water	0.00661 mg/L (not specified)
Aquatic compartment - water, intermittent releases	0.0661 mg/L (not specified)
Aquatic compartment - sediment in freshwater	0.0529 mg/kg sed dw (not specified)
Terrestrial compartment - soil	0.0177 mg/kg dw (not specified)
Sewage treatment plant	10 mg/L (not specified)

- **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the

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resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Recommended thickness of the material:  $\geq 0,12$  mm

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

### SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Beige

· **Odour:** Characteristic

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 100 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapour pressure At 20 °C:** 23 hPa

· **Density At 20 °C:** 1 g/cm<sup>3</sup> (DIN 51757)

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic At 20 °C: 300 mPas

Kinematic: Not determined.

· **Solvent content:**

Organic solvents: 3.6 %

Water: 53.0 %

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<b>Solids content:</b>	42.5 % (DIN 53216)
· <b>9.2 Other information</b>	No further relevant information available.
· <b>VOC (EU):</b>	3.57 %
· <b>VOC (EU):</b>	35.7 g/l
· <b>VOCV:</b>	1.21 %

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Carbon monoxide

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

**ATE (Acute Toxicity Estimates)**

Oral	LD50	84746 mg/kg (rat)
Dermal	LD50	58051 mg/kg (rbt)
Inhalative	LC50/4 h	105 mg/l

**CAS: 108-01-0 2-dimethylaminoethanol**

Oral	LD50	2000 mg/kg (rat)
Dermal	LD50	1370 mg/kg (rbt)
Inhalative	LC50/4 h	3.25 mg/l (mus)

**CAS: 29911-28-2 1-(2-Butoxy-1-methylethoxy)-2-propanol**

Oral	LD50	3700 mg/kg (RAT)
Dermal	LD50	>2000 mg/kg (RAT) 5330 mg/kg (RABBIT)
Inhalative	LC50/4 h	>5.4 mg/l (RAT)

**CAS: 2634-33-5 1,2-benzisothiazol-3(2H)-one**

Oral	LD50	597 mg/kg (RAT) 1150 mg/kg (Mouse)
Dermal	LD50	>2000 mg/kg (RAT)
	LC50/96 h	0.74 mg/l (Fish)

- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:** No further relevant information available.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.

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**· Transport/Additional information:**

· **ADR/RID/ADN**

· **Remarks:** PROTECT AGAINST FROST!

· **IMDG**

· **Remarks:** PROTECT AGAINST FROST !

· **IATA**

· **Remarks:** PROTECT AGAINST FROST

· **UN "Model Regulation":**

Void

**SECTION 15: Regulatory information**

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

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



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· **Signal word** Warning

· **Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

· **Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection.

P264 Wash thoroughly after handling.

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

P362 Take off contaminated clothing and wash before reuse.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
Wasser	53.0
NK	3.6

· **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

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H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H331 Toxic if inhaled.  
H335 May cause respiratory irritation.  
H400 Very toxic to aquatic life.

**· Department issuing MSDS: Research & Development**

· **Contact:** Kontakt: [msds@dinol.com](mailto:msds@dinol.com) oder Tel.: 0049 (0)5281 982 980

**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 3: Flammable liquids, Hazard Category 3  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Acute Tox. 3: Acute toxicity, Hazard Category 3  
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2  
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3  
Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1