

OD

PRESERVATIVE FOR TECHNICAL PRODUCTS

- ▣ Bactericidal and fungicidal effect
- ▣ Broad, balanced spectrum of effect (incl. sulphate-reducing bacteria)
- ▣ Good immediate effect
- ▣ Good anticorrosion properties
- ▣ Contains no nitrate, nitrosing agents or organically bound chlorine (has no effect on the AOX value)

Technical data

		CAS-Nr.
Actives	3,3'-Methylenebis (5-methyloxazolidine) 2-Octyl-2H-isothiazol-3-one	66204-44-2 26530-20-1
Appearance	Yellow-brown liquid	
Density (20 °C)	1.052 – 1.065 g/ml	
Viscosity (DIN 53 211)	Flow time < 15 sec (20 °C)	
Odour	Amine-like	
Refractive index (20 °C)	1.470 – 1.477	
Boiling point	> 150 °C	
Flashpoint (ISO 2719)	> 100 °C	

Use concentration

		Recommended dosage
Watermiscable metalworking fluids	0.10 – 0.15 %	The optimum use level should be evaluated by means of a repeated challenge test (e.g. BOKO-Test by S&M – Technical and Microbiological dept). Use biocides safely. Always read the label and product information before use.
Technical emulsions	0.10 – 0.15 %	

Instructions on application

Grotan® OD is suitable for use in water-mixed metalworking fluids and other technical emulsions. **Grotan® OD** can be used in the pH ranges from 8 to 11. **Grotan® OD** is temperature-stable and can be used at high temperatures up to 80 °C. In order to avoid microbial growth and the resultant consumption of preservative from the outset, it is advisable to add the **Grotan® OD** to the fresh mix of metalworking fluid. More can be added at weekly to fortnightly intervals depending on the discharge of the metalworking fluid. **Grotan® OD** should be added at a point with good turbulence in order to ensure good distribution in the system. Before refilling the plant, system cleaning is recommended (e.g. with **Grotanol®**).

Microbiological efficacy

The efficacy of the product has been tested against the following microorganisms according to DGHM (German Society for Hygiene and Microbiology) – MIC in % of the product.

Bacteria	MIC	Yeasts	MIC
Alcaligenes spec.	0.015	Candida albicans	0.010
Enterobacter colacae	0.030	Rhodotorula mucilaginosa	0.020
Escherichia coli	0.030	Sacchrosomyces cerevisiae	0.010
Proteus vulgaris	0.030	"Practice yeast" isolated from water-mixed metalworking fluid (VW)	0.025
Pseudomonas aeruginosa	0.030		
Pseudomonas fluoescens	0.015		
Pseudomonas putida	0.125		
Staphylococcus aureus	0.030		
Legionella pneumophila (prEN 13623)	0.1 (in 60 min)		
Sulphate-reducing bacteria	MIC	Fungi	MIC
Desulfovibrio desulfuricans	0.050	Aspergillus niger	0.010
		Fusarium oxysporum	0.020
		Penicillium funiculosum	0.010

Compatibility

Aqueous dilution (0.15 %)	No significant difference to tap-water.
Material compatibility	When metalworking fluids without a protective additive for non-ferrous metals are used, copper or copper-containing alloys may show discolouration of surfaces contacted with Grotan® OD . From the available test results, it can be concluded that the addition of Grotan® OD has virtually no influence on the material compatibility of the medium to be preserved.
Plastics	Polyethylene (PE) and Polypropylene (PP) are not affected by Grotan® OD . Contact with other plastics should be avoided when handling the concentrate. In particular, the marked swelling of hard PVC as a result of Grotan® OD should be noted.
Sealants	For sealants that have contact with Grotan® OD concentrate we recommend the use of PTFE or PTFE-coated materials. In particular, it must be borne in mind that chloroprene rubber (e.g. neoprene) swells to a very marked degree. Sealants made of FKM (e.g. Viton) or EPDM should be used when PTFE cannot be used.

Safety & Labelling

R- and S-Phrases	R 21/22, 34, 43, 52/53 S 26, 36/37/39, 45, 61
Labelling	C (Corrosive)
For further hazard instructions and safety advice please refer to the actual material safety data sheet.	

Environmental information

At a sufficient degree of dilution, all components of **Grotan® OD** are completely biodegradable. Experience has shown that dilutions of **Grotan® OD** do not interfere with the operation of municipal sewage treatment plants. **Grotan® OD** contains no organic chlorine compounds, so that there is no effect on the AOX value in waste water as a result of **Grotan® OD**. **Grotan® OD** contains no organic solvents. The canisters and drums used by Schülke & Mayr are made of polyethylene (HDPE) and are labelled accordingly. The 1000 kg - containers are covered by a return scheme that in Europe ensures collection of the used containers free of charge and appropriate re-use. The labels are made of PE. S&M packaging materials contain no PVC and can be recycled. For further information please ask for our detailed environmental report.

Listings and approvals of active ingredients

EINECS / ELINCS (Europe)
TSCA (USA)
AICS (Australia)
Fullfills the requirements of the TRGS 611 (Germany)

Shelf life / Transport / Storage

Shelf life	36 months from date of production
Dangerous good	UN 2735
Package sizes	10 kg, 200 kg, 1000 kg
Storage	Protect from heat and direct sunlight. Store at room temperature in the original container.

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Our recommendations regarding our products are based on in-depth scientific testing in our Research Department, they are given in good faith, but no liability can be derived from them. In other respects our Conditions of Sale and Supply apply.

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