Grotan® OF

TECHNICAL LEAFLET

Schülke & Mayr

OF

PRESERVATIVE FOR TECHNICAL PRODUCTS

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

Technical data

		CAS-Nr.
Active	3,3'-Methylenebis(5-methyloxazolidine)	66204-44-2
Appearance	Light yellow	
Density (20 °C)	1.08 –1.09 g/ml	
Viscosity (DIN 53 211)	< 15 sec (20 °C)	
Odour	Characteristic (amine-like)	
Refractive index (20 °C)	approx. 1.480	
Boiling point	> 100 °C	
Flashpoint (ISO 2719)	> 100 °C	
pH-value (1% in water)	approx. 10	

Use concentration

	Recommended dosage	
Metalworking fluid concentrates (0.10 – 0.15 % in the end dilution)	2 – 4 %	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.***
Aqueous systems	0.10 – 0.15 %	
Technical emulsions	0.10 – 0.15 %	
System cleaners (0.10 – 0.15 % in the end dilution)	10 – 15 %	

Use

Grotan® OF is fully soluble in water and in most organic solvents. **Grotan® OF** can be used at pH-values from 8 to 11. **Grotan® OF** is temperature-stable and can be used at high temperatures up to 80 °C. **Grotan® OF** is suitable for metalworking fluid concentrates, water-mixed coolants and other technical emulsions. In order to avoid microbial growth and the associated consumption from the outset it is recommended that **Grotan® OF** is added to the fresh coolant preparation. Post dosaging should be done weekly to fortnightly intervals in central systems (depending on the coolant discharge). Before refilling the plant, system cleaning is recommended (e.g. with **Grotanol®**).
In centralised plants with heavy fungal contamination, a combination of **Grotan® OF** with **Grotan® F 10** or **Grotan® F 15** is recommended.

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	Fungi	MIC
Escherichia coli	0.030	Candida albicans	0.125	Aspergillus niger	0.040
Pseudomonas aeruginosa	0.030	Rhodotorula mucilaginosa	0.050	Fusarium oxysporum	0.050
Staphylococcus aureus	0.025			Penicillium funicolosum	0.025
Proteus mirabilis	0.040				
Klebsiella pneumoniae	0.040				

Compatibility

Aqueous dilution (0.15 %)	Foaming
No significant difference to tap-water	Not foaming (DIN 53 902 ; 0.15 %)

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Safety & Labelling

R- and S-Phrases	R 21/22, 34, 52 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® OF** are completely biodegradable. Dilutions of **Grotan® OF** do normally not interfere with the operation of municipal sewage treatment plants. **Grotan® OF** contains no organic chlorine compounds. There is no effect on the AOX value of **Grotan® OF** in waste water. 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 ensures collection of the used containers free of charge and appropriate re-use all over Europe. The labels are made of PE. Schülke & Mayr 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)
AICS (Australia)
TSCA (USA)
Fullfills the requirements of the TRGS 611 (Germany)

Shelf life/ Transport/ Storage

Shelf life	12 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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United Arab Emirates · USA · Vietnam · Yemen · Yugoslavia

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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