



Shell Sitala D 3403

Water extendible metalworking fluid

Shell Sitala D 3403 is a high quality, general purpose metalworking fluid for medium to severe duty machining of ferrous metals and aluminum alloys.

Applications

Shell Sitala D 3403 is a high quality, emulsifiable coolant for machining operations of ferrous metals and aluminum alloys. The formulation contains a high amount of lubricity additives, which make the product suitable for medium to severe cutting operations. Shell Sitala D 3403 has good anti-foam properties in soft water and is developed for high-pressure cooling and lubricating systems (deep drilling, multi-cutting tools, boring, and Mapal, etc.).

- General turning and machining : 4 – 5 %
- Grinding : 4 %
- Severe cutting operations : 5 – 8 %
- Heavy duty / difficult materials, or where exceptional finish is required : 6 – 12 %

Storage

The product should be stored inside (41-104°F) for no more than one year. Freezing should be avoided.

Health & Safety

Please note that mixed coolants work over long periods of time, therefore chemical contamination (hydraulic oils, greases, metal solutions, paints, rust inhibitors, etc.) or bacterial contamination (from dirty hands, work pieces, industrial grade water, sundry waste, etc.) can often occur. Contamination with the above materials should be minimized/eliminated. Regular monitoring of the in-use product is recommended to maintain optimum product condition and for determination of its useful working life.

Performance Features and Benefits

Shell Sitala D 3403 is an odorless micro-emulsion with:

- **High detergency** for clean parts and machine tools
- **Good corrosion protection**
- **Extremely high resistance to bacterial degradation**
- **Chlorine free**
- **DEA free**
- **Hexahydrotriazine free**

Recommended Concentrations

The concentration varies depending on the type of machining operation, the water hardness, and the required corrosion protection. The typical recommended concentrations for use in medium water hardness are:

Protect the environment

Waste must be disposed of in accordance with EC Directive 91/156, 91/689 and 94/62 or in line with local legislation.

Typical Physical Characteristics

	Unit	Method	Shell Sitala D 3403	
Product Codes			Drum	5072605
			Pail	5073353
Mineral Oil content	%		35	
Density @ 20°C	g/mL	ASTM D 1298	0.96	
pH of the emulsion at 3%		DIN 51369	9.1	
Min Anti-Cor. Protection Limit (0-0)	%	DIN 51360/2	4.0	
Refractometer Factor			1.08	
Acid Split Factor			1.43	

These characteristics are typical of current production. While future production will conform to Shell's specification, variations in these characteristics may occur.