

# 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.

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### 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

### Main 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.).

Advice on applications not covered in this handbook may be obtained from your Shell representative.

### 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:

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 Requirements

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

### Handling and Safety Information

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.

For information on the safe handling, storage, or use of this product, refer to its Material Safety Data Sheet at <http://www.epc.shell.com/>. If you are a Shell Distributor, please call 1+800-332-6457 for all of your service needs. All other customers please call 1+800-237-8645 for all of your service needs.

### Protect the Environment

Do not discharge into drains, soil, or water.

## Typical Physical Characteristics

	Unit	Method	Shell SITALA™ D 3403
Mineral Oil content	%		35
Density @ 20°C	kg/L	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 specifications, variation in these characteristics may occur.*