



# Shell Sitala D 201.03

## Water extendible metalworking fluid

Shell Sitala D 201.03 is a high quality metalworking fluid recommended for light to medium duty operations on ferrous metals and aluminum. It is free of chlorine, hexahydrotriazine and secondary amines.

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### Applications

Shell Sitala D 201.03 is an excellent, problem free, general purpose product to be recommended (over a broad water hardness range) for all type of light to medium duty operations (including grinding) on cast iron, steel, and aluminum alloys.

### Performance Features and Benefits

- **Good foaming behaviour**
- **Odorless**
- **Good biostability** - encouraging longer service life
- **Good corrosion protection**
- **Good detergency** offering low drag out, clean parts and machine tools, and a better working environment
- **Operator friendly**

### 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 machining : 5 – 7 %
- Grinding : 4 – 5 %
- Severe cutting operations : 8 – 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.

### 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**

	<b>Unit</b>	<b>Method</b>	<b>Shell Sitala D 201.03</b>	
Product Codes			Drum	5072694
			Pail	5073350
Mineral Oil content	%		35	
Kinematic Viscosity @ 20°C	mm <sup>2</sup> /s	ASTM D 445	200 - 300	
Density @ 20°C	g/mL	ASTM D 1298	0.97	
pH of the emulsion at 5%		DIN 51369	9.3	
Min Anti-Cor. Protection Limit (0-0)	%	DIN 51360/2	4.0	
Refractometer Factor			1.2	
Acid Split Factor			1.5	

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