

Shell FENELLA® Fluid D 4470

Water miscible metalworking fluid

Shell FENELLA® Fluid D 4470 is highly chlorinated, heavy-duty, emulsifiable drawing oil for very severe drawing.

Performance Features and Benefits

Shell FENELLA® Fluid D 4470 can be used neat or diluted allowing it to be used in very severe operations or less severe operations. It contains ingredients, which help the product to be readily removed from parts with mild alkaline cleaners.

Due to the high level of extreme pressure additives and the resistance to wiping, Shell FENELLA® Fluid D 4470 is ideal for severe drawing operations and progressive dyes.

Main Applications

Shell FENELLA® Fluid D 4470 is highly chlorinated, heavy-duty, emulsifiable drawing oil for very severe drawing operations on heavy gauge carbon and stainless steels.

It contains film strength agents to impart heavy duty forming characteristics. It is inhibited to protect parts and press components from corrosion.

Shell FENELLA® Fluid D 4470 provides a strong, non-gumming organic lubricating film to carry through multiple die operations. It can be applied by spray, drip, swab or roller coat. Shell FENELLA® Fluid D 4470 can be used straight or diluted in water up to 10% concentration, depending upon difficulty of the operation.

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 inter-operational corrosion protection. Dilutions of 5% -100%, depending upon operation, can be applied by spray, roll or dip.

Storage Requirements

The product should be stored inside (41-104°F) for no more than 1 year and be protected from freezing.

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 or ideally eliminated. Regular monitoring of the in-use product is recommended to maintain optimum product condition and determine the end 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 FENELLA® Fluid D 4470
Concentrate Appearance		Visual	Slightly Hazy
Emulsion Appearance		Visual	Milky
Kinematic Viscosity @ 40 °C	cSt	ASTM D 445	335
Density @ 20 °C	kg/L	ASTM D 1298	1.065
pH value at 10%		DIN 51369	9.0

These characteristics are typical of current production. While future production will conform to Shell specifications, variation in these characteristics may occur.