



Formerly Known As: FR WG 46-HP

Shell Water-Glycol S3 CX

High Performance Water Glycol Hydraulic Fluid

Shell Water Glycol S3 CX 46 is a fire-resistant hydraulic fluid and is recognized by FM Global as a less flammable industrial fluid. Shell Water Glycol S3 CX is suitable for use in higher pressure and high-speed hydraulic systems.

- Fire Resistant
- High Pressure Performance
- Antiwear Performance

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

• Excellent High-Pressure Performance

Shell Water Glycol S3 CX 46 has been tested to provide excellent performance in applications of 350 bar (5000 psi) by providing excellent antiwear for pump parts or motor components.

• Fire Resistant

Recognized by FM Global as a less flammable industrial fluid Shell Water Glycol S3 CX 46 reduces fire hazards related to personal safety in storage, handling, and use which could help lower insurance premiums.

• All Season Usage

A high viscosity index (VI) and a low pour point provided a wide temperature operating window meaning Shell Water Glycol S3 CX can be used year round.

• Low Pump Wear

Excellent anti-wear protection helps promote lower maintenance costs and less downtime by protecting critical hydraulic components.

• Water Soluble – Easy Cleanup

Shell Water Glycol S3 CX 46 is 100 percent soluble in water making equipment and shop cleanups easier than with conventional hydraulic fluids.

• Readily Biodegradable

Formulated with 35-40% water and specially selected additives, Shell Water Glycol S3 CX 46 is readily biodegradable thus helps minimize disposal problems.

Main Applications



- Die Casting Equipment
- Welding machines
- Molten metal handling devices
- Continuous casters
- Hot strip mills
- Slag granulators
- Hot metal presses

Specifications, Approvals & Recommendations

• FM Global

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

• Fluid Maintenance

Shell Water Glycol S3 X 46 will retain its optimum fire protection, impart excellent rust and corrosion protection and prolong the hydraulic system component life only with good maintenance. Maintaining the alkaline reserve gives maximum corrosion protection and proper filtration of dirt and sludge is essential for a well maintained fire resistant fluid.

It is essential to maintain the correct amount of water in the Shell Water Glycol S3 X 46. Viscosity measurements at 40°C will provide information if water make up is required. If the viscosity is high, then water should be added to the system. Contact your Shell representative for guidance on water addition for viscosity correction and for assistance with specific maintenance practices.

Compatibility & Miscibility

- Care should be taken when converting from a mineral oil to a water-based or synthetic anhydrous fluid. Prior to converting, it is important to review the equipment OEM requirements to confirm compatibility of the fluid with system components (seals, hoses, filter materials, paints) and also on the need to derate pumps when using different fluids. Even when using compatible fluids, a small quantity of mineral oil can impair the fire resistance and stability of the new fluid. Advice on applications not covered here may be obtained from your Shell representative.

Typical Physical Characteristics

Properties			Method	Shell Water-Glycol S3 CX
ISO Viscosity Grade				46
Kinematic Viscosity	@40°C	mm ² /s	ASTM D445	46.0
Kinematic Viscosity	@80°C	mm ² /s	ASTM D445	14.6
Viscosity Index			ISO 2909	200
Density	@15°C	kg/m ³	ASTM D4052	1 074
Pour Point		°C	ASTM D97	-48
pH			ASTM D1287	9.5
Reserve Alkalinity		mL	ASTM D1121	19.0 - 23.0

These characteristics are typical of current production, variations in these characteristics in future production may occur.

Health, Safety & Environment

• Health and Safety

This product is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from <https://www.epc.shell.com>

• Protect the Environment

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

Additional Information

- Advice on applications not covered here may be obtained from your Shell Representative.