

# SHELL IRUS FLUID C

HFC TYPE FIRE-RESISTANT HYDRAULIC FLUID

DESIGNED TO MEET CHALLENGES

Shell Irus Fluid C is an advanced water-glycol fire resistant hydraulic fluid containing powerful additives to enhance its anti-wear, anti-corrosion and anti-oxidation properties. The water content is approximately 40% by weight.

## PERFORMANCE FEATURES

### FIRE RESISTANT FOR HIGH RISK INSTALLATIONS

- As demonstrated in the 7<sup>th</sup> Luxembourg Report fire resistance tests the product contributes significantly to reduce the fire risk both in presence of flame and hot surfaces due to fire resistance properties.

### EXCELLENT COMPONENTS AND FLUID DURATION

- Reliable operation especially compared with fluids of older technologies.

### IMPROVED WEAR PERFORMANCES AGAINST MINIMUM INDUSTRY STANDARD

- As demonstrated in the vane pump testing required by the 7<sup>th</sup> Luxembourg Report the product offers significantly better anti-wear performances than the minimum required by the standard.

## APPLICATIONS

Shell Irus Fluid C is particularly suitable for demanding hydraulic applications where there is a high fire risk, such as those found in the Mining and Metal Processing industries.

In order to reduce the water evaporation Shell Irus Fluid C, as for all the ISO HFC type of fluids, should be used below 55°C with a suggested maximum temperature of 45°C.

## COMPATIBILITY AND MISCIBILITY

### LUBRICATION AND COMPONENT LIFE

In general, water-glycol fluids are less effective bearing lubricants than petroleum mineral hydraulic oils, but are entirely satisfactory in systems containing pumps with plain bearings or lightly loaded ball and roller bearings. However, in common with other water-based fluids a reduction in bearing life can be expected. This will normally be included in the 'derating' made by the pump manufacturer.

In order to increase as much as possible the reliability of the system and reduce its maintenance costs it is important that all components are checked with their manufacturer on whether they are suitable/compatible with water glycol products.

## ADDITIONAL INFORMATION

### CONTROL OF WATER CONTENT

Water content should be controlled within 35% to 45% by weight. Condensate or de-ionized water should be used for any additions, which should be made slowly while the fluid is circulating.

### CONVERSION FROM OTHER TYPES OF FLUIDS

Specific attention should be given in case of converting to Shell Irus Fluid C systems that were previously using lubricants of different types than ISO HFC (e.g. mineral oils or ISO HFDU type of products). In such a case it is suggested you seek advice from your Shell representative about the change over procedure you should follow.

## TYPICAL PHYSICAL CHARACTERISTICS

CHARACTERISTICS	
ISO Fluid Type	HFC
Appearance	Transparent Red
Kinematic Viscosity (ASTM D 445)	
@ -20°C mm <sup>2</sup> /s	1875
@ 0°C mm <sup>2</sup> /s	358
@ 20°C mm <sup>2</sup> /s	112
@ 40°C mm <sup>2</sup> /s	47
Density @ 15°C kg/m <sup>3</sup> (ISO 12185)	1059
Pour Point °C (ISO 3016)	-57