

# Shell IRUS® Fluids DU-NA

## Fire resistant hydraulic fluid

Shell IRUS® Fluids DU-NA 46 and 68 are fully synthetic ester type hydraulic fluids. They do not contain mineral oil, phosphate esters, chlorinated hydrocarbons or water. They are designed to be chemically stable when operating conditions are such that severe physical demands are placed on the fluid.

### Performance Features and Benefits

Shell IRUS® Fluids DU-NA 46 and 68, because of their low specific gravity, will float on water allowing them to be skimmed from ponds and collection tanks by standard methods – a feature that is desirable in the event of accidental spills. Phosphate esters, being heavier than water, do not offer this feature.

- Demulsibility - rapidly separates water contamination
- High flash point and autoignition temperatures
- Biodegradable

Shell IRUS® Fluids DU-NA 46 and 68 do not produce the obnoxious odor and dense black smoke associated with phosphate esters when it strikes a heat source, whether it burns or not.

NOTE: All fire resistant fluids will burn when the heat source is extreme but will not propagate the flame.

These fluids are compatible with most seals used in hydraulic systems; specifically Buna-N, Viton, Teflon, Urethane and Silicon Rubber.

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

### Specifications, Approvals, and Recommendations

They are non-corrosive to ferrous and non-ferrous metals and have been tested by the Factory Mutual Engineering and Research Corporation and are classified as Specification Tested by Factory Mutual.

### Elastomer Compatibility

Viton	Compatible
Teflon	Compatible
Urethane	Compatible
Silicone Rubber	Compatible
Medium to high nitrile Buna-N	Compatible
Nylon	Compatible
Neoprene	Marginal
Butyl	Marginal
EPR	Marginal
Low nitrile Buna-N	Marginal

### Handling and Safety Information

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

Shell IRUS® Fluids DU-NA	Test Method	46	68
Appearance		Clear, Amber Fluid	Clear, Amber Fluid
Bulk Density, lbs./gal.		7.6	7.6
Viscosity Index	D 2270	185	181
Viscosity @ 40°C, cSt @ 100°C, cSt	D 445	46 9.5	67 11.6
Flash Point, °C, (°F)	D 92	304 (580)	302 (575)
Pour Point, °C, (°F)	D 97	-51(-59)	-48(-54)
Biodegradability	OECD 301B	Readily Biodegradable	Readily Biodegradable

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