Technical Data Sheet

- Long Oil Life
- Extra Protection
- Maintain System Efficiency
- Versatile Applications

Shell **Tellus** *S2 VX 22*

High Performance Hydraulic Fluid, Group II Base Oil Technology, Versatile Applications

Shell Tellus S2 VX fluids are high performance hydraulic fluids based on Group II base oils that provide outstanding protection and performance across a wide range of temperatures. They resist breakdown under heat or mechanical stress and are ideally suited to most mobile equipment and other applications subjected to a wider range of ambient or operating temperatures.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Long fluid life – maintenance saving**

  Shell Tellus S2 VX fluids help extend equipment maintenance intervals by resisting thermal and chemical breakdown. This minimizes any harmful sludge formation and provides better reliability and system cleanliness.

  Shell Tellus S2 VX fluids also have good stability in the presence of moisture, which ensures long fluid life and reduces the risk of corrosion and rusting, particularly in moist or humid environments.

  Highly shear stable viscosity modifiers help minimize variations in the fluid properties throughout the service life of the fluid

- **Outstanding wear protection**

  Tellus S2 VX is designed to meet the demands of hydraulic systems well in to the future, including enhanced extreme pressure performance in the FZG test (FLS 11 at ISO VG 32). It also demonstrates excellent performance in the tough Denison T6H20C (dry and wet versions) and the demanding Eaton Vickers 35VQ25. Shell Tellus S2 VX fluids can help system components last longer.

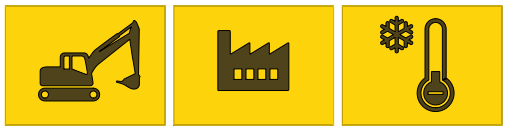
- **Maintaining system efficiency**

  Excellent filterability and high performance water separation, air release and antifoam characteristics all help contribute to maintaining or enhancing the efficiency of hydraulic systems. Optimization of friction characteristics also helps reduce harmful stick-slip effects.

  An oil cleanliness particle count of ISO 4406 20/18/15 or better (measured at the point of filling) helps reduce the impact of contaminants on filter blocking, allowing both extended filter life and enhancing equipment protection.

  Shell Tellus S2 VX fluids are formulated for exceptional foam control and excellent air release to facilitate efficient hydraulic power transfer and minimise fluid and equipment impacts of cavitation induced oxidation that can shorten fluid life.

Main Applications



- **Mobile/exterior hydraulic systems**

  Hydraulic and fluid power transmission systems in exposed environments can be subject to wide variations in temperature. The high viscosity index of Shell Tellus S2 VX helps deliver responsive performance from cold start conditions to full load, severe duty operation.

- **Precision hydraulic systems**

  Precision hydraulic systems require excellent control of fluid viscosity over the operating cycle. Shell Tellus S2 VX provides greater temperature-viscosity stability compared to ISO HM fluids that can help improve the performance of such systems.

- **Marine hydraulic systems**

  Suitable for marine applications where ISO HV category hydraulic fluids are recommended.

Specifications, Approvals & Recommendations

Product is designed to meet :

- ISO 11158 (HV fluids)
- DIN 51524 Part 3 HVLP type
- ASTM D6158 (HV fluids)
- DTFR 31B130

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

Compatibility & Miscibility

- **Compatibility**

  Shell Tellus S2 VX fluids are suitable for use with most hydraulic pumps.

- **Fluid Compatibility**

  Shell Tellus S2 VX fluids are compatible with most other mineral oil based hydraulic fluids. However, mineral oil hydraulic fluids should not be mixed with other fluid types (e.g. environmentally acceptable or fire resistant fluids).

- **Seal & Paint Compatibility**

  Shell Tellus S2 VX fluids are compatible with seal materials and paints normally specified for use with mineral oils.

Typical Physical Characteristics

Properties			Method	Shell Tellus S2 VX 22
ISO Fluid Type				HV
Kinematic Viscosity	@-20°C	cSt	ASTM D445	700
Kinematic Viscosity	@40°C	cSt	ASTM D445	22
Kinematic Viscosity	@100°C	cSt	ASTM D445	4.8
Viscosity Index			ISO 2909	143
Shear Stability	@100°C	% loss	CEC L45-A-99	8
Density	@15°C	kg/l	ISO 12185	0.835
Flash Point (COC)		°C	ISO 2592	210
Colour			ASTM D1500	L0.5
Water Separation		minutes	ASTM D1401	20
TOST life		hours minimum	ASTM D943	5 000
Pour Point		°C	ISO 3016	-42

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

Health, Safety & Environment

- **Health and Safety**

  Shell Tellus S2 VX hydraulic fluid 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.

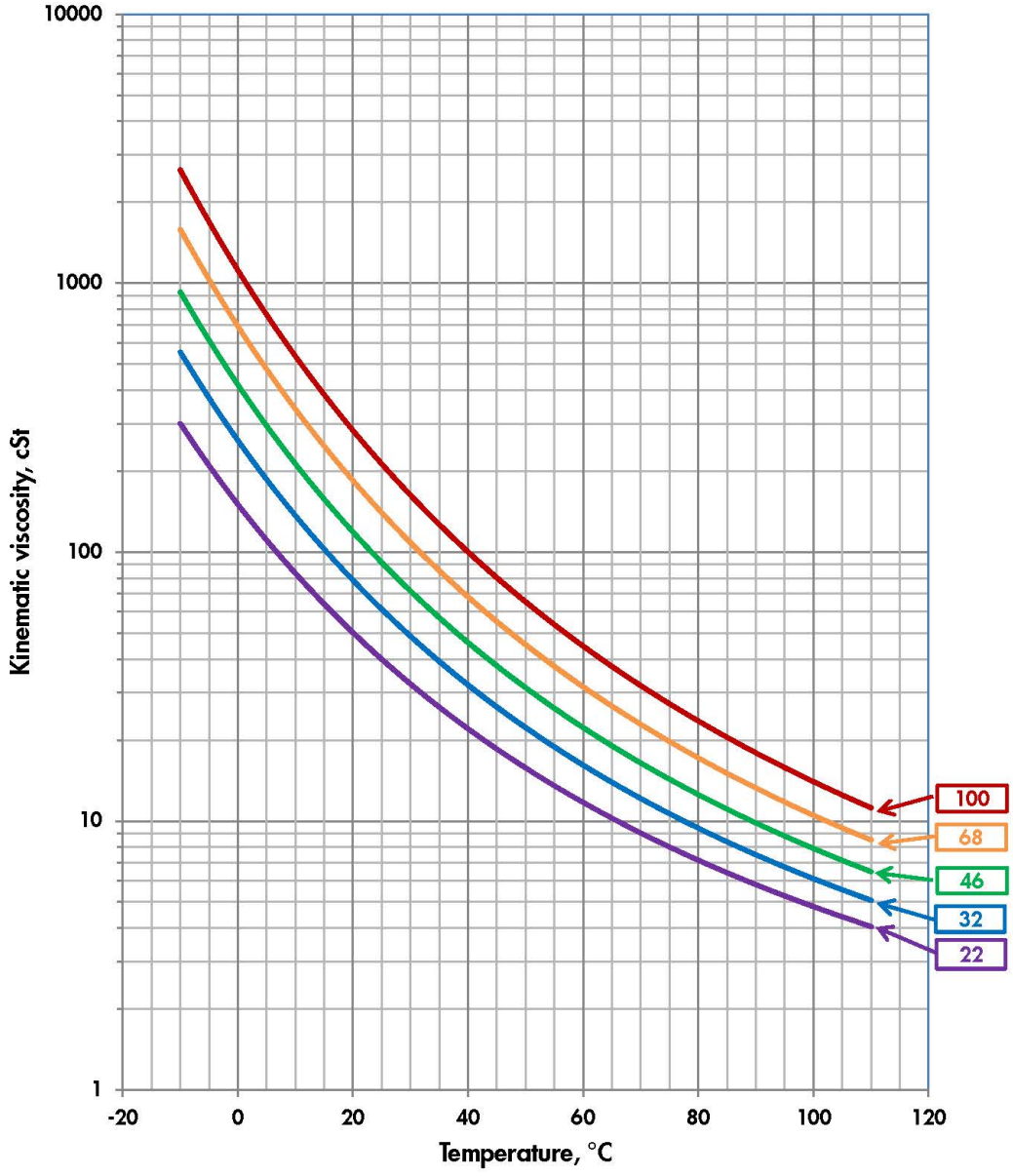
  Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from http://www.epc.shell.com

- **Protect the Environment**

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

Additional Information

- **Advice**

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

Viscosity - Temperature Diagram for Shell Tellus S2 VX