Technical Data Sheet

Formerly Known As: **Shell Tellus TD**

Shell **Tellus** *S2 VA 46*

- Water Tolerant
- Versatile Applications

Industrial Detergent Hydraulic Fluid for wide temperature range

Shell Tellus S2 VA is a high performance detergent-based hydraulic fluid for use where emusifiable fluids are preferred. Using proven zinc-based anti-wear technology it provides proven performance in applications such as construction or mobile applications where contamination by water, cleanliness or control of solid contaminants is important in conjunction with a wide range of operating temperatures.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Protection in severe environments**

  The established detergent and zinc based anti-wear technology in Shell Tellus S2 VA fluids provides extra protection in challenging environments by:

  - Preventing water accumulation

  - Dispersing solid contaminants

  - Preventing corrosion in presence of water

  - Providing low-friction anti-wear performance

  In addition, the high viscosity index helps ensure protection and performance from low-temperature start-up conditions to high temperature and severe duty operations.

- **Fluid life – Maintenance saving**

  Shell Tellus VA fluids have good resistance to thermal and chemical breakdown to ensure consistent performance and protection throughout the fluid drain interval.

- **Maintaining system efficiency**

  Superior cleanliness in severe environments helps keep the hydraulic system functioning efficiently. This is supported by excellent air release and anti-foam characteristics.

  In addition, Shell Tellus S2 VA provides excellent filterability allowing the use of fine filters for extra protection and long equipment life.

  Smooth operation of the hydraulic system is supported by the low-friction additive system that helps reduce stick-slip behaviour under high loads or poorly lubricated contacts.

  Shell Tellus S2 VA are manufactured with a Quality System assuring the fluid at the Shell plant filling lines meets the requirements of max ISO 4406 21/19/16 class.

  As recognized by DIN 51524 specification, the oil is exposed to various influences with transport and storage that could effect the cleanliness level.

Main Applications



- **Mobile Equipment**

  Earth moving equipment and similar units subjected to the most severe outdoor operating conditions.

- **HVLPD Oil recommendations:**

  All hydraulic systems for which an HVLPD oil is specified.

- **Engine Oil Hydraulic Applications**

  Hydraulic systems which specify the use of engine oils meeting SAE 10W, 20W-20 or 30 viscosity classifications

- **Other applications**

  Certain industrial gearboxes.

Specifications, Approvals & Recommendations

- DIN 51524-3 (HVLP fluids)*
- ISO 11158 (HV fluids)*
- ASTM D6158 (HV fluids)
- Bosch Rexroth RD 90220-01 (2011), ISO 32-68

  * Meets DIN and ISO specification, except for demulsibility which is not applicable for high detergency hydraulic oil

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

Compatibility & Miscibility

- **Compatibility**

  Shell Tellus S2 VA fluids are suitable for use with most hydraulic pumps. However, please consult your Shell Representative before using in pumps containing silver plated components.

- **Fluid Compatibility**

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

Typical Physical Characteristics

Properties			Method	Shell Tellus S2 VA 46
ISO Viscosity Grade			ISO 3448	46
ISO Oil Type				L-HV
Kinematic Viscosity	@40°C	cSt	ASTM D445	46
Kinematic Viscosity	@100°C	cSt	ASTM D445	9.3
Viscosity Index			ISO 2909	185
Density	@15°C	kg/m³	ISO 12185	874
Flash Point (COC)		°C	ISO 2592	185
Pour Point		°C	ISO 3016	-54

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 & 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

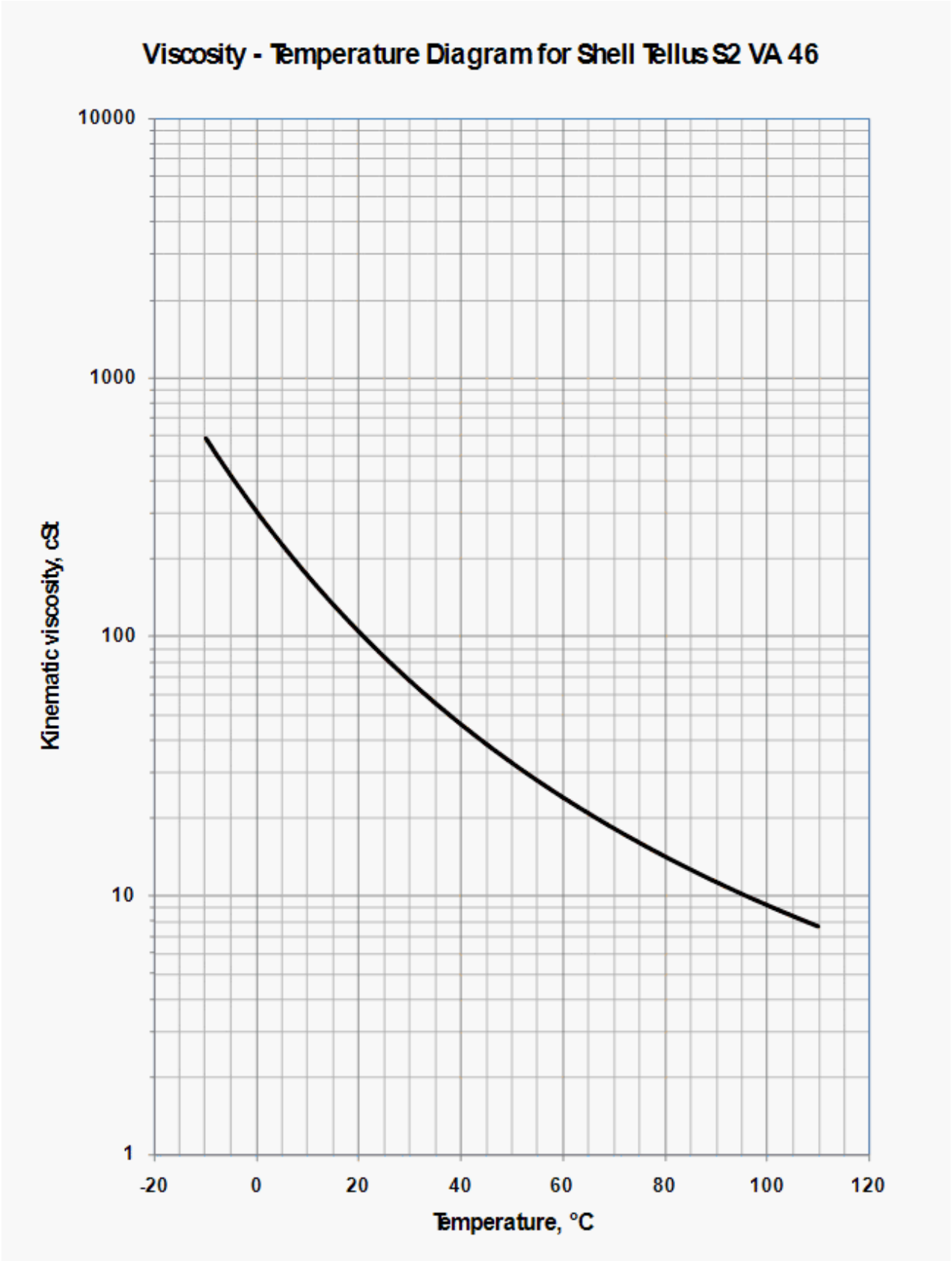
- **Protect the Environment**

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

Additional Information

- **Advice**

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


Viscosity - Temperature Diagram for Shell Tellus S2 VA 46
10000
1000
100
10
1
Kinematic viscosity, cSt
-20
0
20
40
60
80
100
120
Temperature, °C