Technical Data Sheet

Formerly Known As: **Shell Tellus STX**

Shell **Tellus** ***S3 V 46***

- Long life and improved efficiency
- Versatile applications

Premium Zinc-Free Industrial Hydraulic Fluid for very wide temperature range

Shell Tellus S3 V hydraulic fluids are high performance lubricants that use exclusive ashless technology, coupled with highly shear stable viscosity modifiers. They give excellent viscosity control and protection under severe mechanical, thermal and chemical stresses across a wide range of temperatures. They provide outstanding protection and performance in most mobile equipment and other applications subjected to a wide range of ambient or operating temperatures.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Long fluid life - maintenance saving**

  Shell Tellus S3 V fluids offer an improved capability to extend fluid maintenance intervals and hence reduce equipment downtime through:

  - An extended ASTM D943 TOST lifetime, with an oxidative stability that is designed for a minimum 5000 hours TOST life;

  - Excellent resistance to breakdown in the presence of water and heat;

  - Class leading shear stability to maintain viscosity control.

  These features provide extended maintenance capability without compromising protection or performance, even under severe or extended temperature range applications.

- **Outstanding wear protection**

  Advanced ashless (zinc-free) anti-wear additives provide protection over a wide range of conditions, including low and severe duty, and high-load operations.

  The very high viscosity index (VI) of Shell Tellus S3 V fluids, in combination with outstanding shear stability, help to ensure that critical oil film thicknesses are maintained in the highly stressed components of the hydraulic system. Protection is maintained even under high temperature and high load conditions.

- **Maintaining system efficiency**

  Superior cleanliness and outstanding filterability, excellent water separation, air release and anti-foam characteristics, all help to maintain or enhance hydraulic system efficiency.

  The excellent filterability is maintained even when the fluid is contaminated with water, with negligible production of the silts or gels that can block fine system filters.

  Shell Tellus S3 V fluids meet at the Shell plant filling lines 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.

  These features contribute to extended filter life and allow the use of finer filtration for added equipment protection.

Main Applications



- **Mobile/exterior hydraulic applications**

  Hydraulic and fluid power transmission systems in exposed environments which are subjected to wide variations in temperature. The very high viscosity index of Shell Tellus S3 V helps deliver responsive performance from cold start conditions to full load, severe duty operation.

- **Precision hydraulic systems**

  Precision hydraulic systems require good control of fluid viscosity over the operating cycle and excellent fluid filterability, even when contaminated. Shell Tellus S3 V provides these features and an additional level of temperature-viscosity stability compared to many ISO HV fluids.

- **Environmental impact**

  Shell Tellus S3 V uses ashless anti-wear technology and low sulphur base oils.

- For further reductions in environmental impact we offer the Shell Naturelle range of environmentally considerate lubricants.
- For the most severe operating conditions, longest fluid life and enhanced efficiency, Shell Tellus S4 ME offers our highest level of performance and system efficiency.

Specifications, Approvals & Recommendations

- Denison Hydraulics (HF-0, HF-1 and HF-2)
- Eaton Vickers (Brochure 694)
- Fives Cincinnati P-70
- ISO 11158 (HV fluids)
- DIN 51524-3 (HVLP oils)
- ASTM 6158 (HV mineral oils)
- SS 15 54 34 AV (ISO VG 46 and 68)
- SS 15 54 34 AM (ISO VG 32).

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

Compatibility & Miscibility

- **Fluid Compatibility**

  Shell Tellus S3 V 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 S3 V fluids are compatible with seal materials and paints normally specified for use with mineral oils.

Typical Physical Characteristics

Properties			Method	Shell Tellus S3 V 46
ISO Fluid Type			ISO 6743-4	HV
Kinematic Viscosity	@-20°C	cSt	ASTM D445	2 200
Kinematic Viscosity	@40°C	cSt	ASTM D445	46
Kinematic Viscosity	@100°C	cSt	ASTM D445	8.4
Viscosity Index			ISO 2909	162
Density	@15°C	kg/m^3	ISO 12185	870
Flash Point (COC)		°C	ISO 2592	210
Pour Point		°C	ISO 3016	-39

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

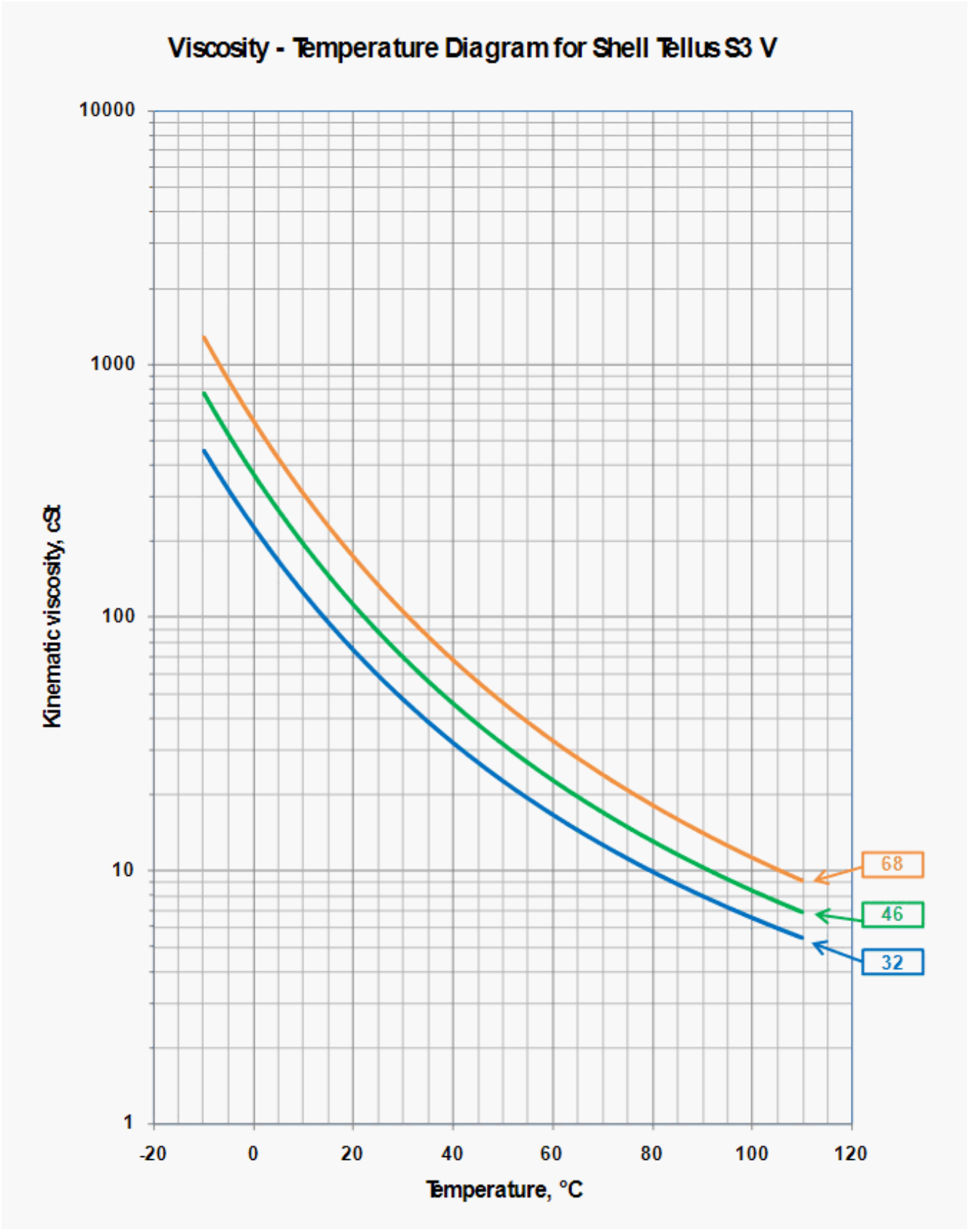
- **Protect the Environment**

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

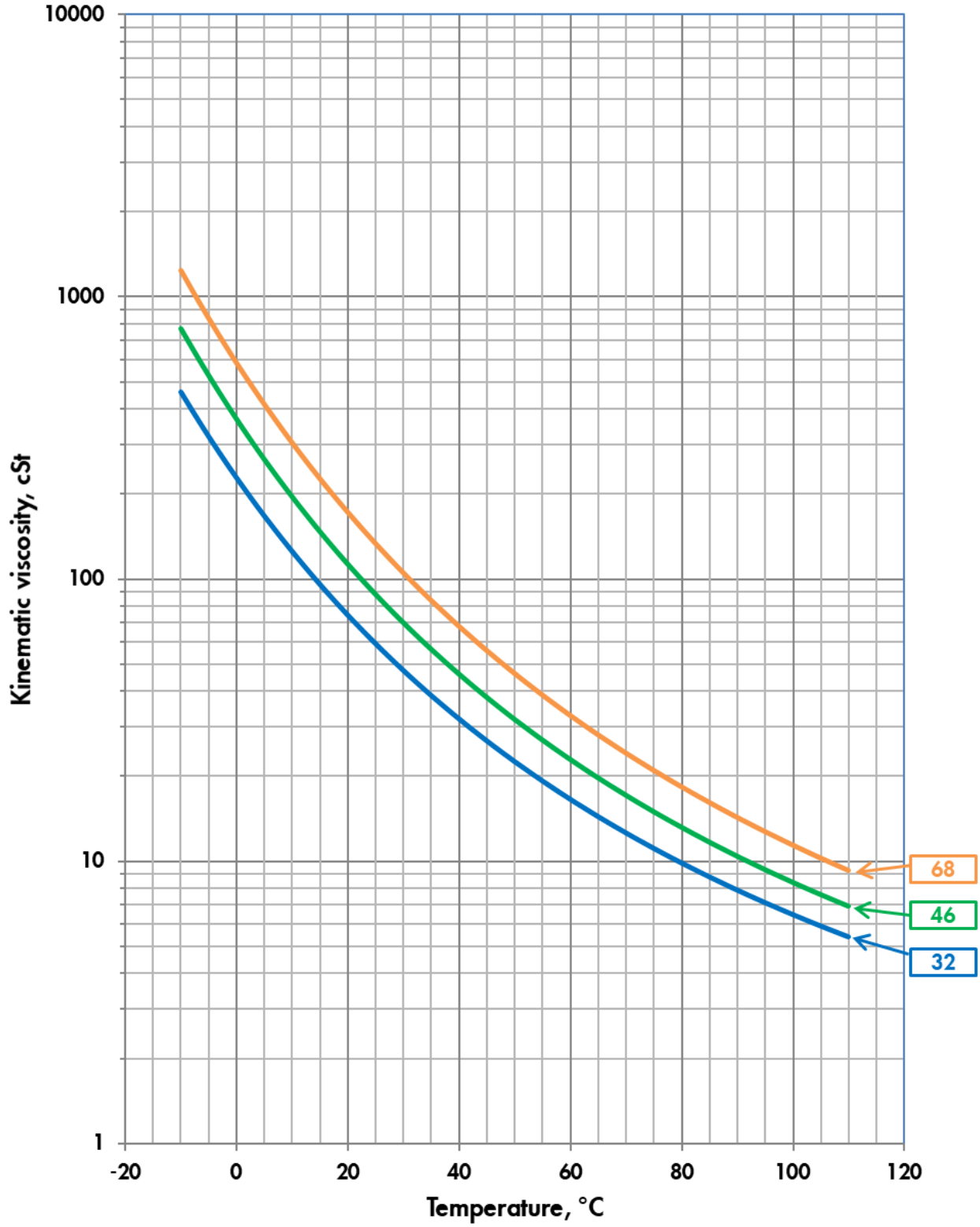
Additional Information

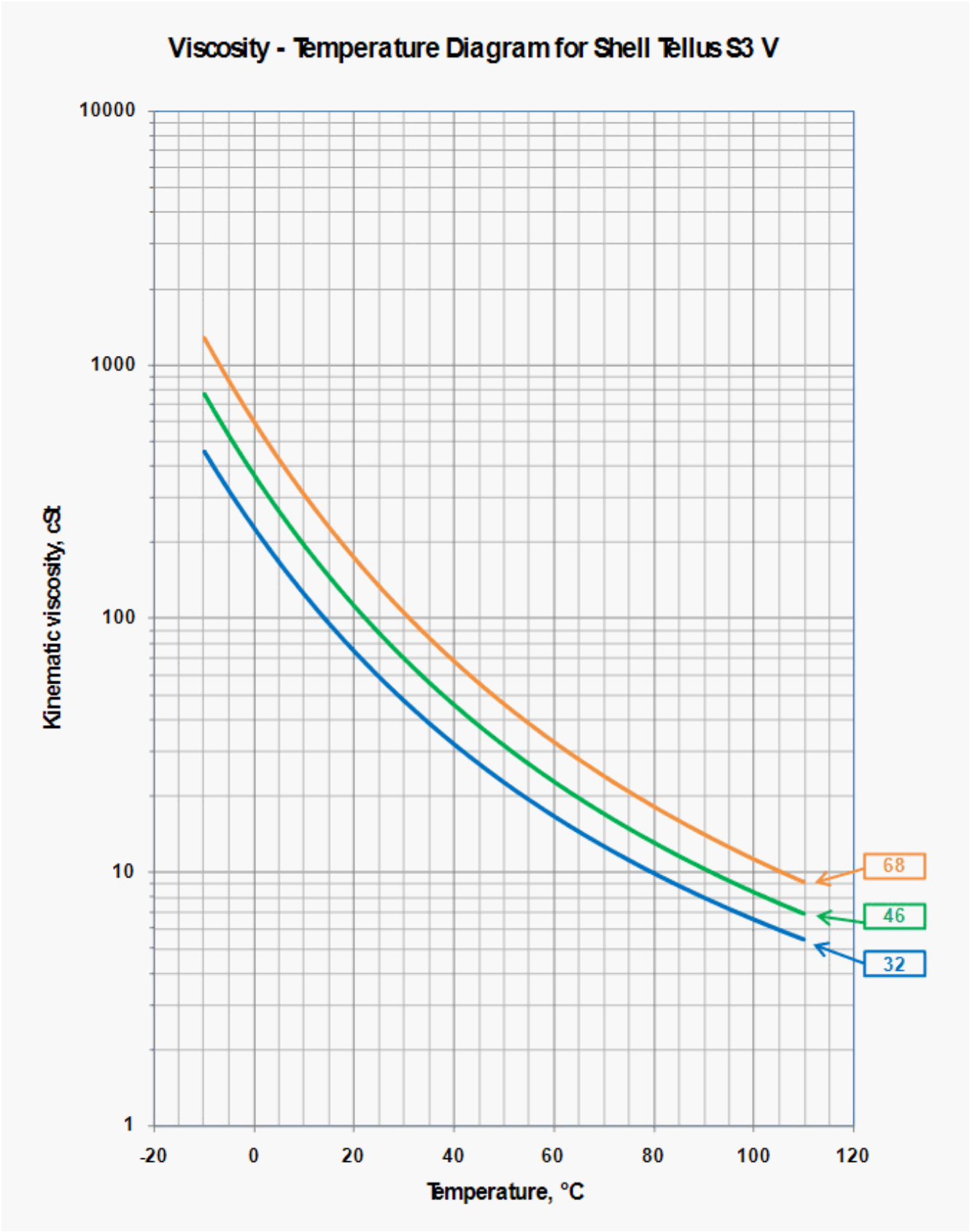
- **Advice**

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


Viscosity - Temperature Diagram for Shell Tellus S3 V
10000
1000
100
10
1
Kinematic viscosity, cSt
-20
0
20
40
60
80
100
120
Temperature, °C
68
46
32

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