Technical Data Sheet

Previous Name: **Shell Valvata J**

Shell **Omala** *S1 W 680*

- *Reliable Protection*
- *Worm Drive Applications*

Industrial Gear Oils

Shell Omala S1 W oils are quality refined, high viscosity mineral oils compounded with a small percentage of fatty oils. They are particularly suitable for the lubrication of low speed enclosed gears and worm drive application. They are also suitable for the lubrication of high temperature, high pressure steam cylinders.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Oil life – Maintenance saving**

  Shell Omala S1 W possesses low volatility and a natural resistance to the formation of gummy or carbonaceous deposits in high temperature conditions to give consistent performance through the lubrication maintenance intervals.

- **Wear protection**

  Provides a reliable oil film under low speed operation such as worm gear drives.

Main Applications





- **Enclosed industrial worm gear systems**

  Shell Omala S1 W may be used to advantage in worm gears prone to suffer extensive wear and to reduce the bulk oil temperature. Typical examples are gears running at low speed under stop-start conditions.

- **Steam cylinder lubrication**

  Suitable for steam cylinder applications working under high temperature and high pressure conditions.

  For highly-loaded worm drives Shell Omala S4 WE is recommended.
  For industrial enclosed spur and helical gear systems the Shell Omala “G” series is recommended. For automotive hypoid gears, the appropriate Shell Spirax Oil should be used.

Specifications, Approvals & Recommendations

- AGMA 9005-EO2 (CP)

  For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk, or the OEM Approvals website.

Typical Physical Characteristics

Properties			Method	Shell Omala S1 W
ISO Viscosity Grade			ISO 3448	680
Kinematic Viscosity	@40°C	mm^2/s	ISO 3104	680
Kinematic Viscosity	@100°C	mm^2/s	ISO 3104	35.2
Viscosity Index			ISO 2909	83
Density	@15°C	kg/m^3	ISO 12185	891
Flash Point (COC)		°C	ISO 2592	322
Pour Point		°C	ISO 3016	-6

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

- Guidance on Health and Safety is available on the appropriate Material 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.