Technical Data Sheet

Previous Names: **Shell Gear Oil SI, Shell Omala SW**

Shell Omala *S3 GP 320*

- *Extra Protection*
- *Special Applications*

Special Application Industrial Gear Oils

Shell Omala S3 GP oils are specialist 'problem solving' lubricants developed to lubricate industrial gearboxes subject to extremely high and heavily shock loaded operations such as those found in steel, cement, mining and quarrying industries. They are formulated for use where ultra-high levels of extreme-pressure performance are required.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Long oil life – maintenance saving**
  Shell Omala S3 GP oils are formulated to resist thermal and chemical breakdown throughout the maintenance interval. They help resist the formation of sludge to provide good oil life capability even at temperatures up to 100°C.
- **Excellent wear & corrosion protection**
  Shell Omala S3 GP oils are formulated with high levels of extreme pressure and anti-wear additives properties to help ensure optimal gear and bearing protection even under the severest operating conditions.

  Shell Omala S3 GP has excellent corrosion protection, protecting steel components, even in the presence of contamination by water and solids.
- **Maintaining system efficiency**
  Shell Omala S3 GP oils have excellent water separation properties, such that excess water can be drained easily from lubrication systems to help maintain the integrity of critical oil films and extend the life of the gears.

Main Applications

- **Highly loaded gears**
  Shell Omala S3 GP oils are designed for use in enclosed industrial gear systems subject to severe operating conditions including high shock loading applications.
- **Worn or damaged gears**
  These oils can be used in older gear systems that may be damaged or misaligned. The extreme pressure performance provides additional protection in such applications.
- **Other applications**
  Shell Omala S3 GP oils are suitable for lubrication of bearings and other components in circulating and splash-lubricated systems.

  For normal load applications the other Shell Omala "G" series oils are recommended.
  For automotive hypoid gears, the appropriate Shell Spirax Oil should be used.

Specifications, Approvals & Recommendations

- Textron Power Transmission (former David Brown) S1.53.101E, except ISO 680 and 1500
- ISO 12925-1 Type CKD, except ISO 680 and 1500
- ANSI/AGMA 9005-E02 (EP)
- US Steel 224
- DIN 51517-3 (CLP), except ISO 680 and 1500
- Shell Omala S3 GP 1500 is included in the Bucyrus Certified Lubricants list.

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

Typical Physical Characteristics

Properties			Method	Omala S3 GP 320
ISO Viscosity Grade			ISO 3448	320
Kinematic Viscosity	@40°C	mm^2/s	ISO 3104	320
Kinematic Viscosity	@100°C	mm^2/s	ISO 3104	25.5
Viscosity Index			ISO 2909	103
Density	@15°C	kg/m^3	ISO 12185	897
Flash Point (COC)		°C	ISO 2592	239
Pour Point		°C	ISO 3016	-15
FZG - Test Failure Load Stage			FZG, A/16.6/90	>12
Four Ball Weld Load		kg		500

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**

  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.