



# Shell Tegula V 32

*Advanced Technology Oil for Hydrodynamic Transmissions*

Shell Tegula V 32 is an advanced technology oil designed to meet the latest requirements of variators and advanced railway transmission systems combining hydrodynamic couplings and torque converters with mechanical gears.

## DESIGNED TO MEET CHALLENGES

### Performance, Features & Benefits

- Based on a blend of highly refined mineral oils and optimized additive system for superior thermal and oxidative stability
- Meets increased thermal requirements of railway hydrodynamic transmissions for extended drain intervals
- Provides excellent and constant air release properties over long period
- Excellent extreme-pressure and micro-pitting resistance properties permit excellent load carrying capacity with reduced component wear
- Compatibility with all seal materials and paints normally specified for use with mineral oil
- Enhanced compatibility with yellow metals even at higher temperatures
- Not recommended for use in industrial couplings if excessive water entrainment cannot be avoided

### Main Applications

#### • Railway hydrodynamic transmission systems

Transmission systems for railway diesel engines consist of various combinations of fluid couplings, torque converters and transmission gears. This type of transmission is used in combination with a hydrodynamic brake which is operated to reduce brake shoe wear during periods of prolonged braking down long slopes. At times, the brake oil temperature may reach up to 140°C.

#### • Gears and PIV variator lubrication

### Specifications, Approvals & Recommendations

- Voith 3.285-149 (for use in Voith Power Transmissions)
- Tegula V 32 is approved and recommended by Voith Turbo, PIV and Lenze

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

### Typical Physical Characteristics

Properties			Method	Shell Tegula V 32
ISO Viscosity Grade				32
Kinematic Viscosity	@40°C	mm <sup>2</sup> /s	ISO 3104	32
Kinematic Viscosity	@100°C	mm <sup>2</sup> /s	ISO 3104	5.6
Viscosity Index			ISO 2909	110
Density	@15°C	kg/m <sup>3</sup>	ISO 12185	870
Flash Point (COC)			ISO 2592	211
Pour Point			ISO 3016	-30
FZG-Test A/8.3/90 Failure Load Stage			DIN 51354-2	>12

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 Tegula V 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 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.