



# Shell Spirax S4 AX 80W-90

## Heavy Duty Automotive Gear Oil

Shell Spirax S4 AX 80W-90 is an extreme-pressure (EP) automotive hypoid gear oil designed to exceed the latest performance standards for heavy duty, severe service.

### DESIGNED TO MEET CHALLENGES

#### Performance, Features & Benefits

- Superior load carrying ability**  
 The EP additives contained in Shell Spirax S4 AX 80W-90 provides excellent, long lasting protection against scuffing and minimize wear, even in the toughest operating conditions.
- Superior thermal and oxidation stability**  
 Shell Spirax S4 AX 80W-90 provides superior resistance to high temperature decomposition (breakdown). Even when operating conditions approach 150°C, Shell Spirax S4 AX 80W-90 provides excellent performance, resisting temperature degradation. This improved thermal and oxidation stability helps ensure that deposits do not form around seals and helps maintain clean bearing surfaces to minimize wear.
- All-season service**  
 Depending on the ambient temperatures involved, Shell Spirax S4 AX 80W-90 provides potential one grade, all-season operation. It can eliminate the need for seasonal changes and reduce the number of gear oils required.
- Potential for fuel economy**  
 Shell Spirax S4 AX multigrade and low temperature range features lessen frictional energy loss which improves fuel economy.

#### Main Applications



Shell Spirax S4 AX oils are designed for service in the drive-train gears of heavily loaded equipment and passenger vehicles. They are recommended for the lubrication of hypoid, spur, bevel, helical, spiral-bevel and worm gears in differentials, transmissions, final drives, transfer cases, and steering mechanisms.

Shell Spirax S4 AX 80W-90 is a premium all-season, multigrade gear oil designed to exceed Original Equipment Manufacturers' lubrication requirements under today's increased temperature and loads.

#### Specifications, Approvals & Recommendations

- API GL-4, GL-5
- API MT-1
- SAE J 2360
- Mack GO-H approved
- Mack GO-J approved
- Dana approved
- Meets MIL-L-2105D (obsolete)
- Meets MIL-PRF-2105E (obsolete)

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

#### Typical Physical Characteristics

Properties			Method	Shell Spirax S4 AX
SAE Viscosity Grade				80W-90
Density	@15°C	kg/m <sup>3</sup>	ASTM D1298	887.2
Colour, ASTM			ASTM D1500	2.5
Pour Point			ASTM D97	-27
Flash Point (COC)			ASTM D92	218

Properties		Method	Shell Spirax S4 AX
Kinematic Viscosity	cSt	ASTM D445	139
Kinematic Viscosity	cSt	ASTM D445	14.8
Brookfield Viscosity	cP	ASTM D2983	136000
Channel Point	°C		<-35
Viscosity Index		ASTM D2270	110

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 Spirax S4 AX 80W-90 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.