



TECHNICAL DATA SHEET (TDS)

Product name: **SHELL BRAKE FLUID DOT 4 ESL**
Product code: **CRX824**

1. Composition / information on ingredients

Shell Brake Fluid DOT 4 ESL is a high performance brake and clutch fluid based on mixture containing polyethylene glycol ether and its borates and amines with additives and stabilizers. Shell Brake Fluid DOT 4 ESL far exceeds SAE J1703 and US FMVS No 116 DOT 3 specifications and meets and exceeds SAE J1704 and US FMVS No 116 DOT 4 and ISO 4925 specifications.

Additionally, Shell Brake Fluid DOT 4 ESL is a class by itself, as one of few brake fluids world-wide exceeds the strong requirements of **ISO 4925, Class 3, 4 & 6**. This formulation has been specifically developed for vehicles with electronic ESP/DSC driving stability system to operate effectively over a wide temperature range. Shelf life is 3 years.

2. Application

Brake fluids play a particularly important role for the security of the car as the main medium transferring the braking force in the vehicle. Shell Brake Fluid DOT 4 ESL increases safety and the life of the braking system due to:

- ✓ high boiling point by limiting the influence of water absorption which prevents dangerous “vapour lock” during braking;
- ✓ low viscosity level at low temperatures, provides fast response of brake system in advanced ride control and stability systems (ABS, ASR, ESP, EBD, BAS, TCS);
- ✓ suitable inhibitors to prevent corrosion of the brake system;
- ✓ special components lubricate the system;
- ✓ it has high compatibility with elastomers.

3. Usage

When topping up brake fluid, follow the manufacturers' recommendations.

Brake fluid must always be clean and not contain water. Dust, pollution, water, fuel or other substances can cause damage to the brake system / costly repairs.

WARNING

The fluid can leave marks on the painted surfaces. In case of spills, wash immediately with water.

4. Miscibility

Shell Brake Fluids are completely miscible with one another and are compatible with other approved DOT glycol ether and borate ester brake fluids. **They must not be mixed with silicone type or silicate ester type brake fluids.**



5. Physical and chemical properties

Property / Unit	Value	Standard
Appearance	fluid without sediment and mechanical impurities	
Colour	colourless to light amber	
Density at 20°C / g/ml	1.04-1.08; typ 1.06	DIN 51757
Water Content / %(m/m)	0.20 max	DIN 51777
Equilibrium Reflux Boiling Point (ERBP) /°C	260 min	SAEJ1703/4/ISO4925 kl.6
Wet Equilibrium Reflux Boiling Point (WERBP)/°C	165 min	SAEJ1703/4/ISO4925 kl.6
pH	7.0–11.5	SAE J1703/4
Flash point	125°C	
Auto ignition temperature	246°C	
Melting point	< -70 °C	
Kinematic viscosity / mm ² /s		
at temp. -40°C	750 max	SAE J1703/4
at temp. 100°C	1.5 min	SAE J1703/4
Corrosion (COR),	corresponding	SAE J1703/4
Water Tolerance (WT)		
at temp - 40°C	10 sec max	
at temp +60°C	sediment not to exceed 0,05% v/v	
Resistance to oxidation (RTO)	corresponding	SAE J1703/4
Compatibility with other brake fluids (COM)	corresponding	SAE J1703/4
Effect on SBR cups (EOS)	corresponding	SAE J1703/4

6. HSE and storage information

For details, see Safety Data Sheet. A safety data sheet according to current regulations is available.

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