



# BRAKE FLUID DOT 4

## PRODUCT DESCRIPTION

BRAKE FLUID DOT 4 is a synthetic brake fluid for modern brake systems.

This product meets SAE J 1703/1704, FVSS N° 116 under the DOT 4 category and DIN ISO 4925.

This product is based on non petroleum technology.

It gives higher performances versus Brake Fluid DOT 3 and shows the following features:

- ❖ High boiling point / low vapour pressure
- ❖ Satisfactory viscosity over a wide temperature range
- ❖ Appropriate fluidity at low temperatures
- ❖ Good stability and properties retention
- ❖ Adequate compatibility with rubber
- ❖ Satisfactory lubrication performances
- ❖ Good compatibility with the various metals in the brake system
- ❖ Miscibility with other approved fluids of same type

The water tolerance is very important for above product because a small amount of water is inevitably picked up in service: the presence of water lowers the boiling point and increases the possibility of unsatisfactory brake performance due to vapour locking.

The mentioned fluid continues to operate satisfactorily despite limited water contamination, because its boiling point does not fall below 155°C when it is wet.

## PROPERTIES

TESTS (*)			Specification	Method
Equilibrium Reflux Boiling Point °C			Min. 260	SAE J1703/1704
Wet Equilibrium Reflux Boiling Point °C			Min. 165	SAE J1703/1704
Viscosity at - 40°C, cSt			Max. 1400	SAE J1703/1704
Viscosity at 100°C, cSt			2.0-2.6	SAE J1703/1704
PH value			7.0-11.5	SAE J1703/1704
Water content Karl-Fischer (%)			Max.0.20	DIN 51777
Density at 20°C (g/cm3)			1.055-1.065	DIN 51757
Compatibility with other brake fluids			complete	SAE J1703/1704
Water tolerance:				
	At - 40°C	Appearance	clear	clear
		Flow time , sec	3	10 maximum
	At + 60°C	Appearance	clear	clear
		Sediment ( %v/v )	less than 0,05	0,15 maximum



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Effect on Rubber SBR, Natural and EPDM at 70°C		Values within specifications for swelling, volume change, softening, disintegration	
Effect on Rubber SBR and EPDM at 120°C		Values within specifications for swelling, volume change, softening, disintegration	
Corrosion ( weight change : mg/cm <sup>2</sup> )			
	Tin	less than 0,1	0,2 maximum
	Steel	less than 0,1	0,1 maximum
	Aluminium	less than 0,1	0,2 maximum
	Cast Iron	less than 0,1	0,2 maximum
	Brass	less than 0,1	0,4 maximum
	Copper	less than 0,1	0,4 maximum
	Solution pH	7,9	7,0 -- 11,5
Resistance to Oxidation			
	Sediment(%v/v)	less than 0,02	0,05 maximum
	Weight change (mg/cm <sup>2</sup> )		
	Aluminium	less than 0,02	0,05 maximum
	Cast Iron	less than 0,10	0,30 maximum
	Appearance	Pass	No gum, pitting, etching

(\*) NOTE: Test Methods are those foreseen by Standard J 1703 and J 1704 (Society of Automotive Engineers )and by US Department of Transportation (DOT ) for ( Federal Motor Vehicle Safety Standard ) FMVSS 116.

## ADVICE:

This product has density higher than water ( typical figure 1,050 g /cm<sup>3</sup> ).

It is igroscopic and therefore it must be stoed in closed containers.