



Brembo S.p.A.

Headquarters and offices:
Viale Brembo, 25 – 24036 CURNO (BG)

Viale Europa, 2 – 24040 STEZZANO (BG)
tel. 035 605 1111 – Fax: 035 605 2300

BRAKE FLUID DOT 5.1

TECHNICAL SPECIFICATION

BRAKE FLUID DOT 5.1 meets the requirements of SAE J1704, FMVSS 116 DOT 5 and ISO 4925 Class 5-1.

BRAKE FLUID DOT 5.1 has a higher boiling point than standard DOT 4, providing enhanced thermal protection against ‘vapour lock’, while the low viscosity ensures safe braking even at cold temperatures.

BRAKE FLUID DOT 5.1 offers excellent corrosion protection of braking system and all metal alloys and compatibility with rubber components to enable long durability of the vehicle braking system.

Suitable for all hydraulic brake systems based on glycol ethers and polyglycol technology. It can be mixed together with DOT 3, DOT 4 and DOT 5.1, but not with products based on mineral and silicone oils.

<i>PROPERTY</i>	<i>UNITS</i>	<i>REQUIREMENT</i>	<i>SPEC.</i>	<i>METHOD</i>
Appearance	-	-	Liquid homogenous	Visual
Colour	-	Colourless to amber	Colourless to amber	Visual
Equilibrium Reflux Boiling Point (ERBP)	°C	260 min.	260 min.	FMVSS 116 SAE J1704 ISO 4925
Wet Equilibrium Reflux Boiling Point (WERBP)	°C	180 min.	180 min.	FMVSS 116 SAE J1704 ISO 4925
Viscosity at -40 °C	mm ² /s	900 max.	900 max.	FMVSS 116 SAE J1704 ISO 4925
Viscosity at 100 °C	mm ² /s	1.5 min.	1.5 min.	FMVSS 116 SAE J1704

BREMBO S.p.A.	BRAKE FLUID DOT 5.1	Rev. 02 – May 2019	Pag. 2 of 4
--------------------------	----------------------------	---------------------------	--------------------

				ISO 4925	
pH	-	7-11.5	7-11.5	FMVSS 116 SAE J1704 ISO 4925	
Fluid Stability (High temperature)	°C	± 3	± 3	SAE J1704 ISO 4925	
Fluid Stability (Chemical)	°C	± 3	± 3	SAE J1704 ISO 4925	
Effect on SBR Rubber	70 °C	Increase of diameter, mm	0.15-1.4	0.15-1.4	FMVSS 116 SAE J1704 ISO 4925
		Hardness decrease (IRHD)	10 max.	10 max.	
		Disintegration	none	none	
	120 °C	Increase of diameter, mm	0.15-1.4	0.15-1.4	
		Hardness decrease (IRHD)	15 max.	15 max.	
		Disintegration	none	none	
Effect on EPDM Rubber	70 °C	Volume increase, %	0-10	0-10	SAE J1704 ISO 4925
		Hardness decrease (IRHD)	10 max.	10 max.	
		Disintegration	none	none	
	120 °C	Volume increase, %	0-10	0-10	
		Hardness decrease (IRHD)	15 max.	15 max.	
		Disintegration	none	none	
Fluidity and appearance at low temperatures	-40 °C	Appearance	As before test	As before test	FMVSS 116 SAE J1704
		Sludging, sedimentation crystallisation or stratification	none	none	
		Flow time, secs	10 max.	10 max.	
	-50 °C	Appearance	As before test	As before test	
		Sludging, sedimentation crystallisation or stratification	none	none	
		Flow time, secs	35 max.	35 max.	

Water tolerance	-40 °C	Appearance	As before test	As before test	FMVSS 116 SAE J1704
		Sludging, sedimentation crystallisation or stratification	none	none	
		Flow time, secs	10 max.	10 max.	
	60 °C	appearance	As before test	As before test	
		Stratification	none	none	
		Sediment, % v/v	0.15 max.	0.15 max.	
Wet corrosion	Wt. change (mg/cm ²)	Tinned iron	± 0.2 max.	± 0.2 max.	FMVSS 116 SAE J1704
		Steel	± 0.2 max.	± 0.2 max.	
		Aluminum	± 0.1 max.	± 0.1 max.	
		Cast iron	± 0.2 max.	± 0.2 max.	
		Brass	± 0.4 max.	± 0.4 max.	
		Copper	± 0.4 max.	± 0.4 max.	
	Pitting or etching		none	none	
	pH (after test)		7-11.5	7.68	
	Gelling at 23 ± 5 °C		none	none	
	Deposit		No crystalline	No crystalline	
	Sediment, %v/v		0.1 max.	<0.1	
	SBR rubber	Increase of diameter, mm	1.4 max.	1.4 max.	
		Hardness decrease (IRHD)	15 max.	15 max.	
		Disintegration	none	none	
	EDPM Rubber	Volume increase, %	10 max.	10 max.	
		Hardness decrease (IRHD)	10 max.	10 max.	
Disintegration		none	none		
Dry corrosion	Wt. change (mg/cm ²)	Tinned iron	± 0.2 max.	± 0.2 max.	SAE J1704
		Steel	± 0.2 max.	± 0.2 max.	
		Aluminum	± 0.1 max.	± 0.1 max.	
		Cast iron	± 0.2 max.	± 0.2 max.	
		Brass	± 0.4 max.	± 0.4 max.	
		Copper	± 0.4 max.	± 0.4 max.	
	Pitting or etching		none	none	
	pH (after test)		7-11.5	8.0	
	Gelling at 23 ± 5 °C		none	none	
	Deposit		No crystalline	No crystalline	
	Sediment, %		0.1 max.	<0.1	
	SBR rubber	Disintegration	none	none	

	EPDM rubber	Disintegration	none	none	
Compatibility	-40 °C	Sludging sedimentation crystallisation or stratification	none	none	FMVSS 116 SAE J1704
		Stratification	none	none	
	60 °C	Sediment %v/v	0.05 max.	0.05 max.	
Resistance to oxidation		Pitting or etching (tin foil)	none	none	FMVSS 116 SAE J1704
		Gum deposit	Trace only	Trace only	
		Aluminum wt. change mg/cm ²	0.05 max.	0.05 max.	
		Cast iron wt. change mg/cm ²	0.3 max.	0.3 max.	

Handling and Safety

- FOLLOW VEHICLE MANUFACTURER'S RECOMMENDATIONS WHEN ADDING BRAKE FLUID.
- KEEP BRAKE FLUID CLEAN AND DRY. Contamination of brake fluid with dirt, water or other materials may result in brake failure or costly repairs.
- STORE BRAKE FLUID ONLY IN ITS ORIGINAL CONTAINER. KEEP CONTAINER CLEAN AND TIGHTLY CLOSED TO PREVENT ABSORPTION OF MOISTURE.
- CAUTION: DO NOT REFILL CONTAINER AND DO NOT USE FOR OTHER LIQUIDS.
- Minor spills should be soaked up with, sand or absorbent granules.
- Any spills on painted surfaces should be removed as quickly as possible and washed off with water to avoid paint damage.
- Dispose of content / container in accordance with local regulations.
- The compliance with the performance requirements is guaranteed for at least 24 months, as long as the product is kept in its sealed original package and kept at maximum 23 °C and 50 % relative humidity.