BASF
The Chemical Company

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Hydraulan® 404

Brake fluid for hydraulic brake and clutch systems with a boiling point of at least 265 °C and a wet boiling point of at least 175 °C.

Due to the low deep temperature viscosity this brake fluid is especially recommended for brake systems combined with ABS, TCS and ESP/DSC.

Hydraulan 404 has been formulated with glycol ethers and their borates. Hydraulan 404 contains effective corrosion inhibitors and antioxidants.

Properties

Hydraulan 404 satisfies the following specifications: SAE J 1703, SAE J 1704, ISO 4925 Class 6, FMVSS No. 116 DOT 3 and DOT 4.

Furthermore **Hydraulan 404** is officially approved by the following OEMs:

• Volkswagen Group (Volkswagen, Audi, SEAT, ŠKODA, Bentley, Bugatti, Lamborghini)	TL 766-Z, VW 501 14
• BMW Group (BMW, MINI, Rolls-Royce)	QV 34 001
• GM Europe (Opel, Saab, Vauxhall)	GMW 3356
• Shanghai GM (Buick, Chevrolet, Cadillac)	GMW 3356
• PSA Peugeot Citroën	STL S71 2114
• Ford Motor Company	WSS-M6C65-A2
• Geely (Geely Brands, Volvo Car)	k.A.
• Qoros	k.A.
• BYD	k.A.

Hydraulan 404 has high thermal stability.

Hydraulan 404 features excellent corrosion protection for various metals.

Hydraulan 404 leads to an appropriate swelling within the specification limits of natural rubber (NR), styrene-butadiene rubber (SBR) and EPDM rubber.

Tested in accordance with SAE J 1703, SAE J 1704 and FMVSS No. 116 DOT 3 / DOT 4

Appearance	yellow liquid, free from mineral oil and undissolved substances		
Technical data	Density at 20 °C	1.06 g/cm³	
	Viscosity at -40 °C	max. 700 mm²/s	
	Viscosity at 100 °C	min. 1.5 mm²/s	
	Boiling point	min. 265 °C	
	Wet boiling point	min. 175 °C	
	Heat stability	± 3 °C	
	Chemical stability	± 3 °C	
	pH	7 – 8.5	
	Water content	max. 0.15 %	
Low temperature test		6 h / -50 °C	144 h / -40 °C
	Appearance	clear	clear
	Sedimentation	none	none
	Bubble flow time	max. 5 s	max. 3 s
Water tolerance test		120 h / -40 °C	24 h / 60 °C
	Appearance	clear	clear
	Sedimentation	none	none
	Bubble flow time	max. 5 s	
Compatibility with RM		24 h / -40 °C	24 h / 60 °C
	Appearance	clear	clear
	Sedimentation	none	none
Effect on SBR		70 h / 70 °C	70 h / 120 °C
	Increase in base diameter	0.15 - 1.4 mm	0.15 - 1.4 mm
	Decrease in hardness, IRHD	max. 10	max. 15
	Appearance of cups	not tacky, no blistering	not tacky, no blistering
Effect on EPDM		70 h / 70 °C	70 h / 120 °C
	Increase in volume	max. 10 %	max. 10 %
	Decrease in hardness, IRHD	max. 10	max. 10
	Appearance of test specimens	not tacky, no blistering	not tacky, no blistering

Resistance to oxidation		168 h / 70 °C
		Change in weight of metals in mg/cm²
	Aluminium	max. 0.05
	Cast iron	max. 0.30
	Appearance of the metals	no roughening, no pitting
	Rubber deposit	none
Corrosion		260 h / 100 °C
		Change in weight of metals in mg/cm²
	Tinned iron	max. 0.2
	Steel	max. 0.2
	Aluminium	max. 0.1
	Cast iron	max. 0.2
	Brass	max. 0.4
	Copper	max. 0.4
	Appearance of the metals	no roughening no pitting
	Appearance of the liquid	no sedimentation, no gelling
	pH	7 - 9
	SBR cups Increase in base diameter	max. 1.4 mm
	Decrease in hardness, IRHD	max. 10
	Appearance of cups	not tacky, no blistering
Stroking Test	Stroking test acc. to FMVSS No.116	complies

Handling	Brake fluid is hygroscopic and has to be stored in tightly sealed containers. After removal of brake fluid the containers must be closed immediately.
Storage Stability	Hydraulan 404 has a shelf life of at least five years when stored under appropriate conditions in original closed containers at temperatures of maximum 40 °C.
Quality Control	The above-listed data represent average values at the time of going to press of this data sheet. They are intended as a guide to facilitate handling and cannot be regarded as specified data. Specified product data are issued as a separate product specification.

Safety

When using this product, the information and advice given in our **Safety Data Sheet** should be observed. Due attention should also be given to the **precautions** necessary for handling chemicals.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

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