

Technical Literature F-01-04

Oil Resistance of AURUM[®]

AURUM[®] has excellent resistance to oil at high temperatures.

Test specimens were immersed in gear oil, a representative engineering oil, and changes in the physical properties and appearance of the specimens were observed. Results are shown in Table 1.

AURUM[®] shows little or no change even under harsh conditions, and AURUM[®] is guaranteed to have very stable properties under use conditions (automotive use) at normal temperature of 120°C or lower.

Table 1 Oil Resistance of AURUM[®] (200°C x 7 days)

			Initial value	Engine oil	Gear oil
Mechanical properties	Tensile strength at yield point	kg/cm ²	910	930	930
	Tensile strength at break	kg/cm ²	880	790	840
	Tensile elongation at break	%	110	100	120
	Flexural strength	kg/cm ²	1,200	1,290	1,310
	Flexural modulus	kg/cm ²	28,000	28,300	28,200
Thermal properties	HDT	°C	242	242	242
Other	Appearance	—	—	(No change)	(No change)
	Change in weight	%	—	+ 0.02	+ 0.06

Note: Engine oil: Toyota Castle Motor Oil Clean Royal II "7.5W-30SE"
 Gear oil: Toyota Castle High Point Gear Oil "85W-90"

The information contained herein is based on the information and data available at this moment, but none of the data or evaluation results contained herein provide any warranty whatsoever.

Oil Resistance of AURUM® (Room Temperature) (%)

(Film)

		Brake oil		Synthetic fuel oil	
		1,000 hrs	2,000 hrs	1,000 hrs	2,000 hrs
Retention percentage	Tensile strength at yield point	110	115	110	115
	Tensile strength at break	95	110	95	95
Other	Appearance	No change	No change	No change	No change

		Sour oil		Gasohol	
		1,000 hrs	2,000 hrs	1,000 hrs	2,000 hrs
Retention percentage	Tensile strength at yield point	110	115	105	110
	Tensile strength at break	95	95	105	105
Other	Appearance	No change	No change	No change	No change

Note:

Brake oil: Nisseki Brake Fluid DOT 3
 Synthetic fuel oil: Toluene/isooctane = 60/40 (vol/vol)
 Sour oil: Synthetic fuel oil/lauroyl peroxide = 100/5 (wt/wt)
 (The sour oil is replaced with new material every week.)
 Gasohol: Synthetic fuel oil/methanol = 100/20 (vol/vol)

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