

## TIMCAL TIMREX® KS15 Primary Synthetic Graphite

Category : Carbon , Graphite , Other Engineering Material , Additive/Filler for Polymer

### Material Notes:

TIMREX Primary Synthetic Graphite is produced in a unique highly controlled graphitization process which assures narrow specifications and unequalled consistent quality due to: monitoring of all production and processing stages, strict final inspection, and clearly defined development processes. TIMREX Primary Synthetic Graphite shows unique properties thanks to the combination of a consistent purity, perfect crystalline structure and well defined texture. Tribological and mechanical properties: Medium toughness Good lubrication properties Advantages and applications: Low friction coefficient Low wear of the counterpart Good transfer-film formation High electrical conductivity Suitable for pitch-bonded and resin-bonded brushes Special alloys (Al, Mg, Ti) Hard metals (WC, TiC, Mixed Carbides) Fe-sintered engineering parts Fe-self lubricating engineering parts Fe-friction parts Copper/bronze bearings Copper friction parts copper clutch facings Information provided by TIMCAL

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_TIMCAL-TIMREX-KS15-Primary-Synthetic-Graphite.php](http://www.lookpolymers.com/polymer_TIMCAL-TIMREX-KS15-Primary-Synthetic-Graphite.php)

Physical Properties	Metric	English	Comments
Bulk Density	0.100 g/cc	0.00361 lb/in <sup>3</sup>	Scott, Typical
Particle Size	5.0 µm	5.0 µm	at a density of 1.81 g/cc, pressure 2.5 t/cc
	8.0 µm	8.0 µm	d50
	13 µm	13 µm	at a density of 1.90 g/cc, pressure 2.5 t/cc
	14.2 - 20 µm	14.2 - 20 µm	d90, Guaranteed
	17.2 µm	17.2 µm	d90
	43 µm	43 µm	Springback 20.5%, pressure 0.477 t/cc
	45 µm	45 µm	at a density of 1.85 g/cc, pressure 2.5 t/cc
	75 µm	75 µm	at a density of 1.73 g/cc, pressure 2.5 t/cc
	75 µm	75 µm	Springback 20.5%, pressure 0.477 t/cc
	145 µm	145 µm	Springback 20.5%, pressure 0.477 t/cc
Specific Surface Area	20 m <sup>2</sup> /g	20 m <sup>2</sup> /g	BET
Ash	0.050 %	0.050 %	Typical
	<= 0.10 %	<= 0.10 %	Guaranteed

Mechanical Properties	Metric	English	Comments
Coefficient of Friction	0.12 @Temperature 850 °C, Time 10800 sec	0.12 @Temperature 1560 °F, Time 3.00 hour	Friction coefficient of sintered Cu-C - brake pads with 10% TIMREX® KS Graphite as a function of the particle size, Sinterdensity: 55% of the theoret. density

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.55 ohm-cm	1.55 ohm-cm	particle size 80 um, pressure 2.5 t/cc
	1.60 ohm-cm	1.60 ohm-cm	particle size 42 um, pressure 2.5 t/cc
	1.80 ohm-cm	1.80 ohm-cm	particle size 15 um, pressure 2.5 t/cc
	2.25 ohm-cm	2.25 ohm-cm	particle size 10 um, pressure 2.5 t/cc
	140 ohm-cm	140 ohm-cm	8% graphite
	200 ohm-cm	200 ohm-cm	6.7% graphite
	400 ohm-cm	400 ohm-cm	5.4% graphite
	600 ohm-cm	600 ohm-cm	4.6% graphite

Processing Properties	Metric	English	Comments
Moisture Content	0.10 %	0.10 %	Typical
	<= 0.50 %	<= 0.50 %	Guaranteed

Descriptive Properties	Value	Comments
Crystallite Height	80-90 nm	
Flexural Strength	5.5 N	4% graphite
	6 N	5.1% graphite
	6.5 N	6% graphite
	7 N	7.4% graphite

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