

Technical Data Sheet

Bakelite® UP 3415

Product Description

Polyester moulding compound, inorganically filled, glass fibre reinforced, styrene free, very high dimensional stability, nonflammable, high mechanical properties, UL listed moulding compound 0.75 mm / V-0 (ALL), RTI 170°C

Application Areas

Safety switch housings and electrotechnical parts, e. g. strip switch housings, clamp boards, bobbins, neon tubes end parts and bases, etc.

Typical Physical Properties

Property	Standard	Typical Value	Unit
* Density (23°C)	ISO 1183	2,0	g/cm ³
Apparent density (moulding compound)	ISO 60	0,88	g/cm ³
Injection - Moulding shrinkage	ISO 2577	0,3	%
Injection - Post shrinkage	ISO 2577	0,01	%
Compression - Moulding shrinkage	ISO 2577	0,15	%
Compression - Post shrinkage	ISO 2577	0,02	%
* Tensile strength * (5mm/min)	ISO 527 - 1/2	45	MPa
* Tensile modulus * (1mm/min) (Elongation _{e1} 0,05%; e ₂ 0,25%)	ISO 527 - 1/2	10.000	MPa
Compressive strength (test specimen flat tested)	ISO 604	250	MPa
Flexural strength (2mm/min)	ISO 178	105	MPa
Flexural modulus	ISO 178	13.000	MPa
* Charpy impact strength (23°C)	ISO 179-1 eU	8,5	kJ/m ²
* Charpy notched impact strength (23°C)	ISO 179-1 eA	4,5	kJ/m ²

Bakelite UP 3415

<https://www.hexion.com/en-US/product/bakelite-up-3415>

Generated: November 21, 2019

Issue Date:

Revision:

® and ™ Licensed trademarks of Hexion Inc.

The information provided herein was believed by Hexion Inc. ("Hexion") to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied by Hexion are subject to Hexion's terms and conditions of sale. **HEXION MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY HEXION**, except that the product shall conform to Hexion's specifications. Nothing contained herein constitutes an offer for the sale of any product.

Property	Standard	Typical Value	Unit
Ball indentation hardness (H961/30)	ISO 2039/P1	325	MPa
* Temp. of deflection under load. HDT C-8,0 MPa	ISO 75-2	210	°C
* Surface resistivity (Following IEC 60093)		1E+12	Ohm
* Volume resistivity (Following IEC 60093)		1E+13	Ohm*cm
* Dissipation factor (100 Hz) (Following IEC 60250)		0,02	
* Relative permittivity (100 Hz) (Following IEC 60250)		5,5	
* Electric strength (1mm thickness) (short term, electrode layout P25mm/P25mm in transformer oil equivalent to IEC 60296)	IEC 60243-P1	28,0	kV/mm
Proof tracking index (Test liquid A)	IEC 60112	600	PTI
Flammability UL 94 (ALL=all colours, BG=beige, BK=black, BN=brown, BL=blue, GN=green, GY=grey, NC=natural, OR=orange, RD=red, WT=white, YL=yellow)	UL 94	V-0 / 0,75mm (ALL)	Step/mm
Water absorption (24h / 23°C) (Following ISO 62)		20	mg
Additional Characteristic		D, LB, UL, HS	

Preparation of Test Specimens of Thermosetting Moulding Compound

- Compression to ISO 295
- Injection to ISO 10724

Moulding Conditions

Property	Value	Unit
Cavity Moulding Pressure	>15	MPa
Curing Time (per mm of Wall Thickness)	20 - 40	s
Mould Temperature	160 - 190	°C

Property	Value	Unit
Back Pressure	0,5 - 2	MPa
Barrel Temperature - Feed Zone	60 - 75	°C
Barrel Temperature - Nozzle Zone	80 - 100	°C
Cavity Moulding Pressure	>15	MPa
Curing Time per mm of Wall Thickness	10 - 20	s
Holding Pressure	injection pressure	ca. 60%
Mould Temperature	160 - 190	°C
Temperature of Material	80 - 100	°C

Properties marked with * are elements of the database CAMPUS (Computer Aided Material Preselection by Uniform Standards) and based on the obliging introduced guidelines of the norm committee of plastic. (CAMPUS is a registered trademark of the CWFG.)

Storage Capability

12 months (shorter shelf life for darker colours), (relative humidity of 50-60% and maximum storage temperature of approximately 20°C)

Contact Information

Hexion GmbH	Postfach 7154
Gennaer Str. 2-4	Germany 58609 Iserlohn-
Germany 58642 Iserlohn-Letmathe	Letmathe
e-mail: molding-compounds@hexion.com	Tel.: +49 (0) 2374 / 925 280
Internet: www.hexion.com	Fax: +49 (0) 2374 / 925 723