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Confirmation *UL 746C - f1*

Date: 20.11.2013

Description: HSK-K black
Material: Polyamid PA6
Operating temperature: -40°C - +100°C

Dear Sir or Madam,

we confirm that the black polyamide material which is used in the HSK-K series reach the stated international classification UL "f1" according UL 746C.
The blacken manufactor UL file is attached on page 2.

f1 Qualified for outdoor use in connection with UV radiation, water, exposure to light, submerge (according UL 746C)

The description "f1" declares that the material complied the following examinations
- UV irradiation
- impact of water / submerge

The exact wording of the UL classification can be found on the UL Homepage.
See the link below.

http://www.ul.com/global/eng/pages/offerings/industries/chemicals/plastics/testing/outdoor/

We provide this information to the best of our knowledge and belief and in accordance with the current state of the art. However, it does not represent any warranty in the legal sense.

Your Hummel Team

Component - Plastics [redacted]

[redacted]

[redacted] V0 (f1)

Polyamide 6 (PA6), furnished as granular material

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK	0.38	V-0	-	-	125	90	115
	0.75	V-0	4	0	125	90	115
	1.5	V-0	3	0	125	90	115
	3.0	V-0	2	0	125	90	115

Comparative Tracking Index (CTI): 1

Dielectric Strength (kV/mm): -

High-Voltage Arc Tracking Rate (HVTR): -

Dimensional Stability (%): -

Inclined Plane Tracking (IPT): -

Volume Resistivity (10^{X} ohm-cm) : -

High Volt, Low Current Arc Resis (D495): -

(f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1992-10-23

Last Revised: 2011-07-22

IEC and ISO Test Methods

Test Name	Test Method	Units	Thickness Tested (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.38	V-0 (BK)
			0.75	V-0 (BK)
			1.5	V-0 (BK)
			3.0	V-0 (BK)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	-	-
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m^2	-	-
ISO Izod Impact	ISO 180	kJ/m^2	-	-
ISO Charpy Impact	ISO 179-2	kJ/m^2	-	-

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Your Hummel Team