



**■ - BASF**

We create chemistry

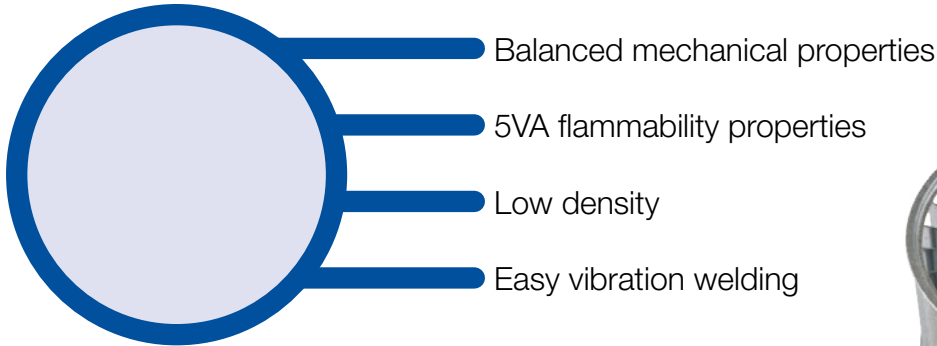
## **Ultramid® B35XG8 BK**

The ideal choice for lightweighting with  
UL V-0/5VA @ 2mm



## Product Overview:

# Ultramid® B35XG8 BK: Halogen-free, PA6 FR that is ideal for lightweighting



**Great choice for metal replacement**



- Initially developed for FR HVAC fans to meet UL V-0/5VA @ 2mm
- An excellent material to replace metals in other industrial machinery parts with FR requirements



## Product Features and Benefits:

# Ultramid® B35XG8 BK offers a wide range of properties that enable its use in machinery parts

### Potential for substantial cost savings

- More cost-effective than PA66
- Less dense than metal

### Fantastic heat aging retention

- RTI values of 140 °C show suitability for high temperature applications

### Balanced mechanical properties

### Excellent flammability properties

- V-0/5VA @ 2mm

### Low density

- Lighter components with the same mechanical performance
- Improved efficiency



### Ultramid® B35XG8 BK 23359

	Test	Values
UL Flammability vs. Standard	UL-94	V-0/5VA @ 2mm
		Dry
Flexural modulus	ISO 178	13,200 MPa
Tensile modulus	ISO 527	13,900 MPa
Tensile strain at break	ISO 527	2.3%
Charpy notched (23 °C)	ISO 179	11 kJ/m <sup>2</sup>
Charpy unnotched (23 °C)	ISO 179	60 kJ/m <sup>2</sup>
<b>Density</b>	<b>ISO 1183</b>	<b>1.59 g/cm<sup>3</sup></b>

### **40% Mass Savings vs. Die-cast Aluminum!**

Density of die cast aluminum	2.7 g/cm <sup>3</sup>
Density of stainless steel	7.9 g/cm <sup>3</sup>



# UL Yellow Card Status: Ultramid® B35XG8 BK Preliminary Yellow Card

iq.ul.com

## PROSPECTOR®

View additional material information including performance and processing data

The information presented on the UL Prospector datasheet was acquired by UL Prospector from the producer of the material. UL Prospector makes substantial efforts to assure the accuracy of this data. However, UL Prospector assumes no responsibility for the data values and strongly encourages that upon final material selection, data points are validated with the material supplier.

Component - Plastics

E36632

Guide Information

### BASF CORP

1609 BIDDLE AVE, WYANDOTTE MI 48192-3729

### B35XG8

Polyamide 6 (PA6) "Ultramid", furnished as pellets

Color	Min. Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK	1.5	V-0	1	0	65	65	65
	2.0	V-0, 5VA	1	0	65	65	65
	3.0	V-0, 5VA	1	0	65	65	65

Comparative Tracking Index (CTI): 1

Dielectric Strength (kV/mm): -

High-Voltage Arc Tracking Rate (HVTR): -

Dimensional Change (%): -

Inclined Plane Tracking (IPT) kV: -

Volume Resistivity (10<sup>x</sup> ohm-cm): -

Surface Resistivity (10<sup>x</sup> ohms/square): -

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

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: 2020-09-18

Last Revised: 2021-06-15

© 2022 UL Solutions



#### IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10, IEC 60695-11-20	Class (color)	1.5	V-0 (BK)
			2.0	V-0, 5VA (BK)
			3.0	V-0, 5VA (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 <sup>2</sup>	-	-
ISO Izod Impact	ISO 180	kJ/m <sup>2</sup>	-	-
ISO Charpy Impact	ISO 179-1	kJ/m <sup>2</sup>	-	-



## Summary: Ultramid® B35XG8 BK

An excellent material to replace metals for HVAC, E&E and other industrial machinery part applications



**Potential for substantial cost savings**

Less expensive than PA66  
Lower density than metals



**Excellent flammability and heat retention properties**

UL V-0/5VA @ 2mm  
RTI values of 140°C



**Balanced mechanical properties**

Good tensile strength, flexural strength, impact and fatigue



**Sustainability**

Low density allows for lighter components and improved efficiency



We create chemistry



**Scan the QR code  
to learn more**

**Contact:**

Alex Mannion

Mobile: +1 914-356-7287

Alexander.mannion@basf.com

THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH, AND ARE BASED ON BASF'S CURRENT KNOWLEDGE AND EXPERIENCE. THEY ARE PROVIDED FOR GUIDANCE ONLY, AND DO NOT CONSTITUTE THE AGREED CONTRACTUAL QUALITY OF THE PRODUCT OR A PART OF BASF'S TERMS AND CONDITIONS OF SALE. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/ USE OF THE PRODUCT, BASF RECOMMENDS THAT THE READER CARRY OUT ITS OWN INVESTIGATIONS AND TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR ITS PARTICULAR PURPOSE PRIOR TO USE. IT IS THE RESPONSIBILITY OF THE RECIPIENT OF PRODUCT TO ENSURE THAT ANY PROPRIETARY RIGHTS AND EXISTING LAWS AND LEGISLATION ARE OBSERVED. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH HEREIN, OR THAT THE PRODUCTS, DESCRIPTIONS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. ANY DESCRIPTIONS, DESIGNS, DATA AND INFORMATION GIVEN IN THIS PUBLICATION MAY CHANGE WITHOUT PRIOR INFORMATION. THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY BASF HEREUNDER ARE GIVEN GRATIS AND BASF ASSUMES NO OBLIGATION OR LIABILITY FOR THE DESCRIPTIONS, DESIGNS, DATA OR INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT THE READER'S RISK.

® = registered trademark of BASF.

© 2022 BASF Corp, Florham Park, NJ 07932. All rights reserved.

