产品信息

Ultramid® Advanced

N3U41G6

09/2025

PA9T-GF30 FR(40)

We create chemistry

产品介紹

聚邻苯二甲酰胺，可浅色着色，具有高熔点，无卤素阻燃剂，极低的吸水性，高温下良好的机械和介电性能以及出色的耐化学性，耐焊锡槽。有着色产品（例如橙色 RAL 2003）。

市场与应用
汽车：汽车电子电气,传感器,燃料电池,电动汽车
E&E：连接器，SMT（表面安装技术）应用，能源分配
消费品：家电，消费电子，手机零件

物理形态和储存

本产品以颗粒形式供应，堆积密度约为 0.7 g/cm 。标准包装为袋装和散装容器（八角形 IBC 是一类由瓦楞纸板制成并带有内衬袋的中型散装容器）。其他包装形式以及通过公路或铁路筒仓运输可根据协议安排。
容器应仅在加工或干燥前立即开启。为确保产品尽可能少地吸湿，容器应存放在干燥的房间内，并在取用部分产品后再次仔细密封。
原则上，该产品可长期储存。若容器存放于冷库中，开启前应先恢复至室温，以避免颗粒表面凝结水分。无论储存条件如何，产品在加工前应根据我们的建议进行预干燥，并优先使用封闭式输送系统进行上料。

安全

如果在推荐的条件下进行加工（参见加工数据表），熔体是热稳定的，不会因分子降解或气体和蒸汽的释放而产生危害。像所有热塑性聚合物一样，产品在过度的热负荷下分解，例如过热或通过燃烧进行清洁时。更多信息可从安全数据表中获得。

注

本资料内容基于本公司目前掌握的知识和经验。
由于存在很多因素可能影响我们产品的应用和加工，因此本公司不排除用户进行试验研究的必要。
本资料也不保证具体应用的适应性或某些性能的可靠性。 这里的任何描述、图纸、 照片、 数据、 大小、 重量等可能不事先通知而更改， 但不包括已经达成一致的合同。我们产品的使用者应确保遵守所有权及现有的法律法规。

有关BASF产品有效性， 请联系我们或我们的销售代理。

BASF SE
67056 Ludwigshafen, Germany

Ultramid® Advanced N3U41G6

产品信息

未着色产品的典型值，在23°C下[1]	测试方法	单位	代表值[2]
特征			
树脂缩写	-	-	PA9T-GF30 FR(40)
密度	ISO 1183	kg/m³	1440
粘数 (0.5% in 96% H_2SO_4)	ISO 307, 1157, 1628	cm³/g	100
吸水性(CAMPUS)	类似 ISO 62	%	1.9 - 2.3
饱和吸湿率,在标准环境下23°C/50%相对湿度	类似 ISO 62	%	0.7 - 1
加工			
熔融温度, DSC	ISO 11357-1/-3	°C	300
MVR 325 ° C/5 kg	ISO 1133	cm³/10min	30
熔体温度范围,注塑成型/挤出成型	-	°C	310 - 340
模具温度范围,注塑成型	-	°C	100 - 160
成型收缩率, 限制收缩, 平行方向, 试验盒, d=1.5 mm	-	%	0.5
成型收缩率(平行)	ISO 294-4	%	0.30
成型收缩率(垂直)	ISO 294-4	%	1.00
Test specimen production, injection moulding, melt temp.	ISO 294	°C	330
Test specimen production, injection moulding, mould temp.	ISO 294	°C	140
热性能			
热变形温度, 1.8MPa负荷 (HDT A)	ISO 75-1/-2	°C	265
线膨胀系数 23 ° C-55 ° C (平行)	ISO 11359-1/-2	E-6/K	19
线膨胀系数 23 ° C-55 ° C (垂直)	ISO 11359-1/-2	E-6/K	53
燃烧特性 (UL-yellow card see attachment)			
GWFI (厚度)	IEC 60695-2-12	°C (mm)	960 (0.8)
GWIT (厚度)	IEC 60695-2-13	°C (mm)	775 (0.8)
厚度为h时的燃烧性(ISO 1210) (厚度)	UL-94, IEC 60695	class (mm)	V-0 (0.25)
Yellow Card available (1)	UL-94, IEC 60695	-	yes
厚度为h时的燃烧性(ISO 1210) (厚度)	IEC 60695-11-20	class (mm)	5VA (1.6)
Yellow Card available (5V)	-	-	yes
燃烧性－氧指数	ISO 4589-1/-2	%	38
电性能			**干 / 湿**
相对介电常数 (1 MHz)	IEC 62631-2-1	-	4.1 / 3.5
介质损耗因子 (1 MHz)	IEC 62631-2-1	E-4	110 / 160
体积电阻率	IEC 62631-3-1	Ohm*m	1E13 / 1E13
表面电阻率	IEC 62631-3-2	Ohm	- / 1E15
相对漏电起痕指数, CTI, 试验溶液A	IEC 60112	-	600
介电强度 K20/K20, (60*60*1 mm)	IEC 60243-1	kV/mm	45 / 44
机械性能			**干 / 湿**
拉伸模量	ISO 527-1/-2	MPa	10500 / 10500
断裂应力	ISO 527-1/-2	MPa	140 / 130
断裂应变.	ISO 527-1/-2	%	2.2 / 2.2
弯曲模量	ISO 178	MPa	10500 / 10500
弯曲强度	ISO 178	MPa	220 / 210
无缺口简支梁冲击强度 ISO 179-1eU(23 ° C)	ISO 179/1eU	kJ/m²	60 / 50
无缺口简支梁冲击强度 ISO 179-1eU(-30 ° C)	ISO 179/1eU	kJ/m²	60 / -
简支梁缺口冲击强度 ISO 179-1eA(23 ° C)	ISO 179/1eA	kJ/m²	6.5 / 6.5

注
1) 对于只提供着色粒子的产品,测定值针对表中所指定的特殊色。
2) 星符号（*）出现在定量性能参数值的位置表示 " 不合适 " 的值。

BASF SE

67056 Ludwigshafen, Germany

Ultramid® Advanced N3U41G6

UL - Yellow Card

Component - Plastics E41871

BASF SE

Performance Materials Europe, PMD/EX - H201, Ludwigshafen 67056 DE

Advanced N3U41G6 (t) (f2)(w2)

Polyamide 9T (PA9T), flame retardant "Ultramid", furnished as pellets

Color	Min. Thk (mm)	Flame Class	HWI	HAI	RTI Elec (°C)	RTI Imp (°C)	RTI Str (°C)
ALL	0.25	V-0	2	1	85	85	85
	0.40	V-0	1	0	150	110	125
	0.75	V-0	0	0	150	115	130
	1.5	V-0, 5VA	0	0	150	115	130
	3.0	V-0, 5VA	0	0	150	130	140

Comparative Tracking Index (CTI):	0	Inclined Plane Tracking (IPT) kV:	1.5
Dielectric Strength (kV/mm):	35	Volume Resistivity (10^xohm-cm):	-
High-Voltage Arc Tracking Rate (HVTR):	-	Surface Resistivity (10^xohms/square):	-
Dimensional Change (%):	-	High Volt, Low Current Arc Resis (D495):	-

(f2) - Subjected to one or more of the following tests: Ultraviolet Light, Water Exposure or Immersion in accordance with UL 746C, where the acceptability for outdoor use is to be determined by UL.

(t) - May be followed by the letters LS and a color code indicating laser sensitive coloring.

(w2) - Virgin and regrind up to 50% by weight have the same basic characteristics for BK color, with the exception of the weatherability testing

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: 2021-03-22

Last Revised: 2023-01-26

IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10, IEC 60695-11-20	Class (color)	0.25	V-0 (ALL)
			0.40	V-0 (ALL)
			0.75	V-0 (ALL)
			1.5	V-0, 5VA (ALL)
			3.0	V-0, 5VA (ALL)
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 AC Dielectric Strength (AC DS)	IEC 60243-1	kV/mm	-	-
IEC DC Dielectric Strength (DC DS)	IEC 60243-2	kV/mm	-	-
IEC Volume Resistivity (VR)	IEC 62631-3-1	10x ohm-m	-	-

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UL - Yellow Card

IEC Surface Resistivity (SR)	IEC 62631-3-2	10x ohms	-	-
IEC Inclined Plane Tracking (IPT)	IEC 60587	kV	-	-
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/m2	-	-
ISO Izod Impact	ISO 180	kJ/m2	-	-
ISO Charpy Impact	ISO 179-1	kJ/m2	-	-

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Ultramid® Advanced N3U41G6

UL - Yellow Card

Component - Plastics E41871

BASF SE

Performance Materials Europe, PMD/EX - H201, Ludwigshafen 67056 DE

Advanced N3U41G6 (t) (f1)(g)

Polyamide 9T (PA9T), flame retardant "Ultramid", furnished as pellets

Color	Min. Thk (mm)	Flame Class	HWI	HAI	RTI Elec (°C)	RTI Imp (°C)	RTI Str (°C)
BK	0.75	V-0	0	0	150	115	130
	1.5	V-0, 5VA	0	0	150	115	130
	3.0	V-0, 5VA	0	0	150	130	140

Comparative Tracking Index (CTI):	0	Inclined Plane Tracking (IPT) kV:	1.5
Dielectric Strength (kV/mm):	35	Volume Resistivity (10^Xohm-cm):	-
High-Voltage Arc Tracking Rate (HVTR):	-	Surface Resistivity (10^Xohms/square):	-
Dimensional Change (%):	-	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.

(g) - Virgin and regrind up to 50% by weight have the same basic characteristics with the exception of the weatherability testing.

(t) - May be followed by the letters LS and a color code indicating laser sensitive coloring.

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Last Revised: 2023-01-26

IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10, IEC 60695-11-20	Class (color)	0.75	V-0 (BK)
			1.5	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 AC Dielectric Strength (AC DS)	IEC 60243-1	kV/mm	-	-
IEC DC Dielectric Strength (DC DS)	IEC 60243-2	kV/mm	-	-
IEC Volume Resistivity (VR)	IEC 62631-3-1	10x ohm-m	-	-
IEC Surface Resistivity (SR)	IEC 62631-3-2	10x ohms	-	-
IEC Inclined Plane Tracking (IPT)	IEC 60587	kV	-	-
IEC Ball Pressure	IEC 60695-10-2	°C	-	-

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UL - Yellow Card

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/m2	-	-
ISO Izod Impact	ISO 180	kJ/m2	-	-
ISO Charpy Impact	ISO 179-1	kJ/m2	-	-

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