

Ultrason® S 6010 NAT

PSU

BASF

无增强、较高粘度的等级，尤其具有专门为薄膜应用的良好抗化学性。

根据ISO 1043-1: PSU的缩写名称

加工/物理特性	数值	单位	试验方法
ASTM数据			
密度, 73°F	1240	kg/m³	ASTM D 792

流变性能	干 / 湿	单位	试验方法
ISO数据			
熔体体积流动速度, MVR	30 / *	cm³/10min	ISO 1133
温度	360 / *	°C	-
载荷	10 / *	kg	-
模塑收缩率, 平行	0.7 / *	%	ISO 294-4, 2577
模塑收缩率, 垂直	0.8 / *	%	ISO 294-4, 2577

机械性能	干 / 湿	单位	试验方法
ISO数据			
拉伸模量	- / 2560	MPa	ISO 527
屈服应力	- / 74	MPa	ISO 527
屈服伸长率	- / 5.7	%	ISO 527
无缺口简支梁冲击强度, +23°C	- / 无断裂	kJ/m²	ISO 179/1eU
无缺口简支梁冲击强度, -30°C	- / 无断裂	kJ/m²	ISO 179/1eU
简支梁缺口冲击强度, +23°C	- / 6	kJ/m²	ISO 179/1eA
简支梁缺口冲击强度, -30°C	- / 6.5	kJ/m²	ISO 179/1eA
ASTM数据			
屈服应力	75.2 / -	MPa	ASTM D 638
屈服伸长率	5.7 / -	%	ASTM D 638
弯曲模量	2599 / -	MPa	ASTM D 790
弯曲强度	114 / -	MPa	ASTM D 790
悬臂梁缺口冲击强度, 1/8 in	10 / -	J/m	ASTM D 256

热性能	干 / 湿	单位	试验方法
ISO数据			
玻璃化转变温度 (10°C/min)	187 / *	°C	ISO 11357-1/-2
热变形温度, 1.80 MPa	177 / *	°C	ISO 75-1/-2
热变形温度, 0.45 MPa	183 / *	°C	ISO 75-1/-2
线性热膨胀系数, 平行	53 / *	E-6/K	ISO 11359-1/-2
ASTM数据			
DTUL @ 66 psi	182	°C	ASTM D 648
DTUL @ 264 psi	172	°C	ASTM D 648

电性能	干 / 湿	单位	试验方法
ISO数据			
相对介电常数, 100Hz	- / 3.5	-	IEC 62631-2-1
相对介电常数, 1MHz	- / 3.4	-	IEC 62631-2-1
介质损耗因子, 100Hz	- / 11	E-4	IEC 62631-2-1
介质损耗因子, 1MHz	- / 71	E-4	IEC 62631-2-1
体积电阻率	- / >1E13	Ohm*m	IEC 62631-3-1
表面电阻率	* / >1E15	Ohm	IEC 62631-3-2
介电强度	- / 37	kV/mm	IEC 60243-1
相对漏电起痕指数	- / 125	-	IEC 60112

其它性能	干 / 湿	单位	试验方法
ISO数据			
吸水性	0.8 / *	%	类似ISO 62
吸湿性	0.3 / *	%	类似ISO 62
密度	1230 / -	kg/m³	ISO 1183

模塑测量的特殊性能	干 / 湿	单位	试验方法
ISO数据			
粘数.	81 / *	cm³/g	ISO 307, 1157, 1628

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试样制备条件	数值	单位	试验方法
ISO数据			
注塑, 熔体温度	370	°C	ISO 294
注塑, 模具温度	140	°C	ISO 294
注塑, 注射速度	200	mm/s	ISO 294
注塑, 保压压力	70	MPa	ISO 294
加工推荐 (注塑)			
预干燥-温度	140	°C	-
预干燥-时间	4	h	-
加工湿度	≤ 0.02	%	-
注塑熔体温度	330 - 390	°C	-
模具温度	120 - 160	°C	-

特征

加工方法

注塑, 异型材挤出成型, 片材挤出成型, 吹塑, 热成型

供货形式

粒料, 自然色

注塑

PREPROCESSING

Pre/Post-processing, max. allowed water content: .02 %

Pre/Post-processing, Pre-drying, Temperature: 140 °C

Pre/Post-processing, Pre-drying, Time: 4 h

PROCESSING

injection molding, Melt temperature, range: 330 - 390 °C

injection molding, Melt temperature, recommended: 350 °C

injection molding, Mold temperature, range: 120 - 160 °C

injection molding, Mold temperature, recommended: 140 °C

injection molding, Dwell time, thermoplastics: 10 min

Pretreatment

Drying temperature: 130 - 150°C

Drying time: minimum 4h

recommended dryer: vaccum or dry air dryer

maximum moisture: 0,02 - 0,05%

Ultrason® can be injection molded by any type of machinery on the market, provided that the plasticizing unit and the mold temperature control system have been configured appropriately. The machinery manufacturer must be consulted if any doubts exist on the ability of various parts to withstand the high temperatures required (e.g. barrel, barrel head, bolted connections, etc.)

Long residence time in combination with high temperatures should be avoided e.g. by pump out material at regular intervals.

During extended interruptions, the barrel temperature should be lowered to about 250-280°C.

It has been found out that heating to the requested processing temperature and shutting down or lowering the temperature is best carried out in two steps.

First, the barrel temperatures are set at the lower processing temperature range for the particular thermoplastic (340 - 350 °C). As soon as these temperatures have reached a steady state, the material in the barrel is pumped out. Second, the barrel temperature can be set to the required processing temperature or the heaters can be shut down.