

Ultraform® W2320 003 TR AT
POM

BASF

Very free-flowing grade for injection molding with special lubricant to minimize friction, wear, stick-slip and squeaking.

Abbreviated designation according to ISO 1043-1: POM
Designation according to ISO 29988-POM-K,,M-GNRS2,5-2

流变性能	数值	单位	试验方法
ISO数据			
熔体体积流动速度, MVR	25	cm³/10min	ISO 1133
温度	190	°C	-
载荷	2.16	kg	-
模塑收缩率, 平行	2.0	%	ISO 294-4, 2577
模塑收缩率, 垂直	1.9	%	ISO 294-4, 2577

机械性能	数值	单位	试验方法
ISO数据			
拉伸模量	2500	MPa	ISO 527
屈服应力	50	MPa	ISO 527
屈服伸长率	5.5	%	ISO 527
名义断裂伸长率	37	%	ISO 527
无缺口简支梁冲击强度, +23°C	110	kJ/m²	ISO 179/1eU
无缺口简支梁冲击强度, -30°C	95	kJ/m²	ISO 179/1eU
简支梁缺口冲击强度, +23°C	5	kJ/m²	ISO 179/1eA
简支梁缺口冲击强度, -30°C	4.4	kJ/m²	ISO 179/1eA

热性能	数值	单位	试验方法
ISO数据			
熔融温度, 10°C/min	167	°C	ISO 11357-1/-3
热变形温度, 1.80 MPa	92	°C	ISO 75-1/-2
线性热膨胀系数, 平行	125	E-6/K	ISO 11359-1/-2

电性能	数值	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	3.5	-	IEC 62631-2-1
介质损耗因子, 100Hz	9	E-4	IEC 62631-2-1
介质损耗因子, 1MHz	55	E-4	IEC 62631-2-1
体积电阻率	1E11	Ohm*m	IEC 62631-3-1
表面电阻率	1E14	Ohm	IEC 62631-3-2
相对漏电起痕指数	600	-	IEC 60112

其它性能	数值	单位	试验方法
ISO数据			
吸水性	0.8	%	类似ISO 62
吸湿性	0.2	%	类似ISO 62
密度	1380	kg/m³	ISO 1183

试样制备条件	数值	单位	试验方法
ISO数据			
注塑, 熔体温度	200	°C	ISO 294
注塑, 模具温度	90	°C	ISO 294
注塑, 注射速度	200	mm/s	ISO 294

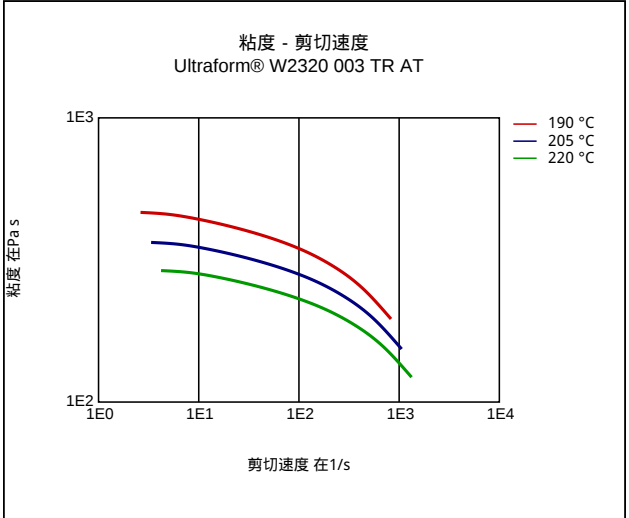
加工推荐 (注塑)	数值	单位	试验方法
预干燥-温度	100	°C	-
预干燥-时间	3	h	-
加工湿度	≤ 0.2	%	-
注塑熔体温度	190 - 230	°C	-
模具温度	60 - 120	°C	-

Ultraform® W2320 003 TR AT
POM

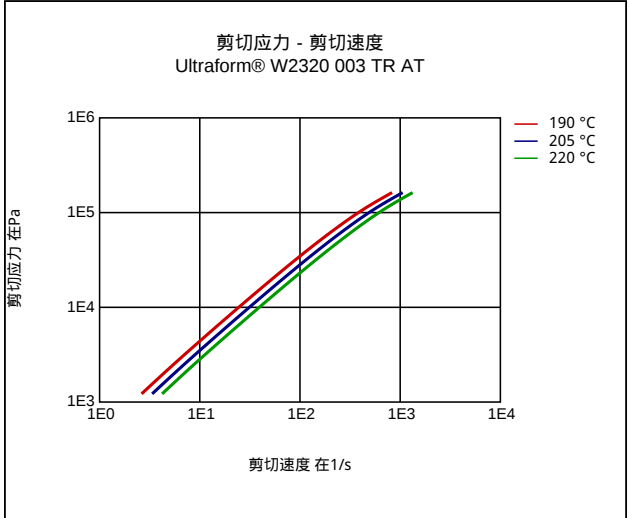
BASF

函数

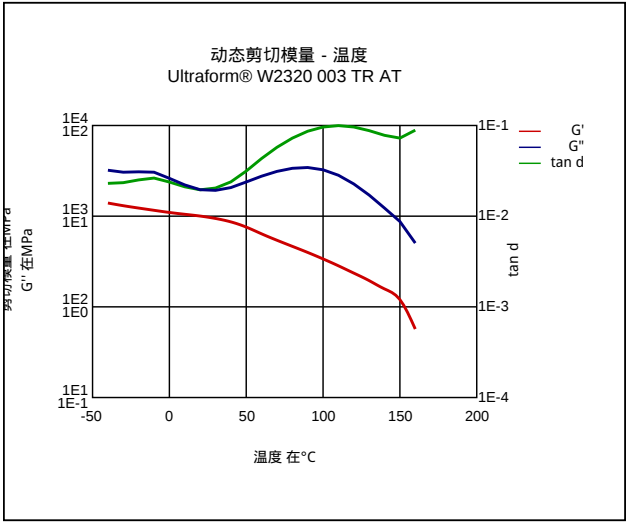
粘度 - 剪切速度



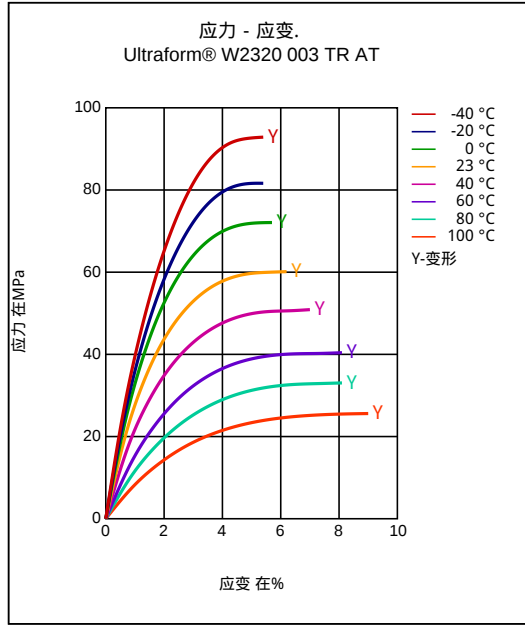
剪切应力 - 剪切速度



动态剪切模量 - 温度



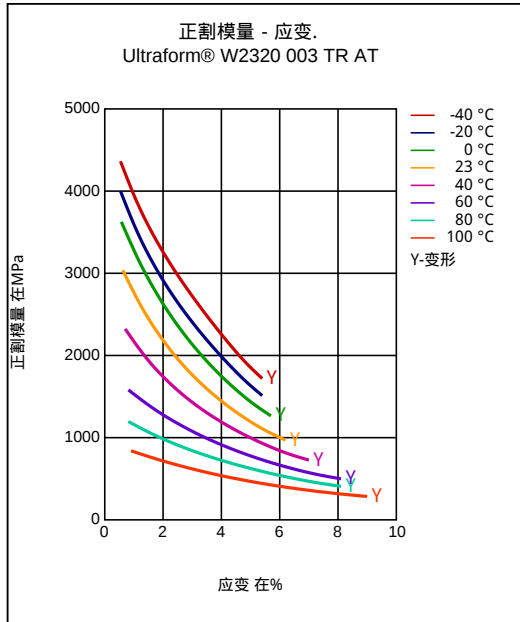
应力 - 应变



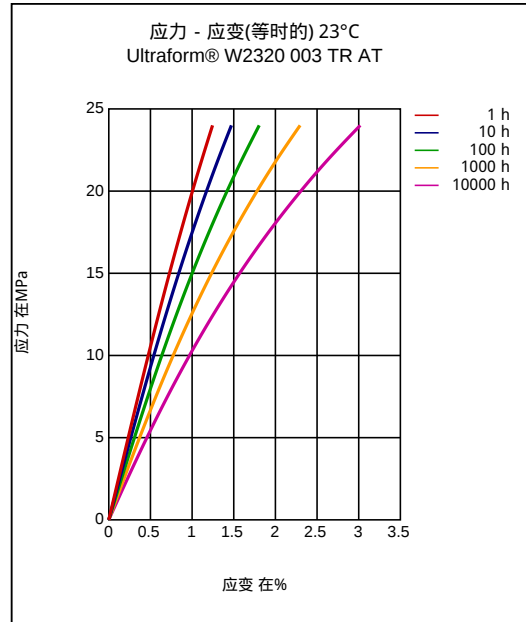
Ultraform® W2320 003 TR AT
POM

BASF

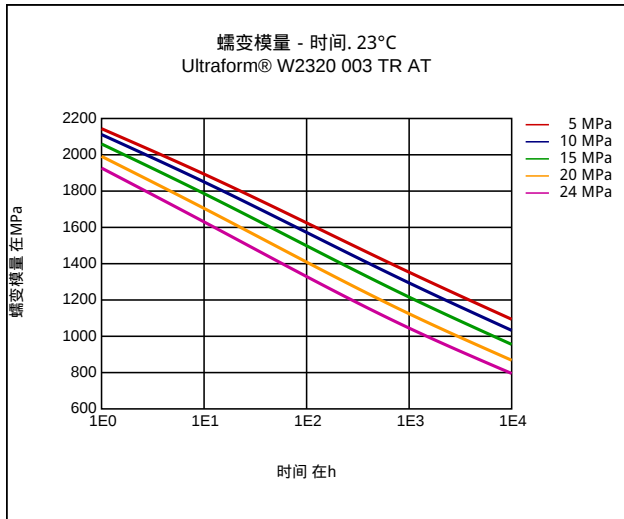
正割模量 - 应变.



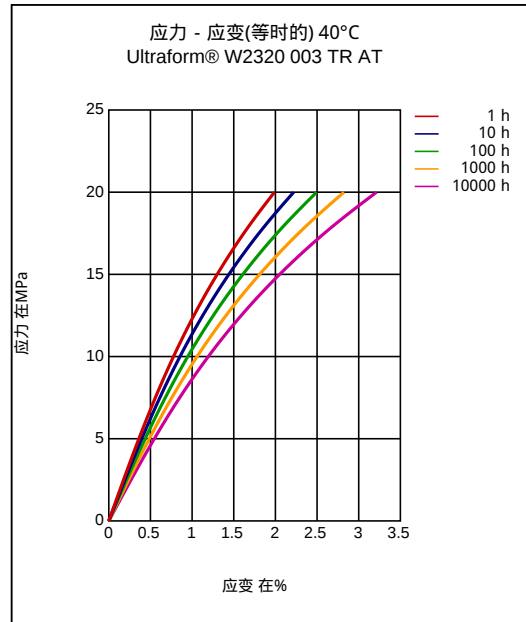
应力 - 应变(等时的) 23°C



蠕变模量 - 时间. 23°C



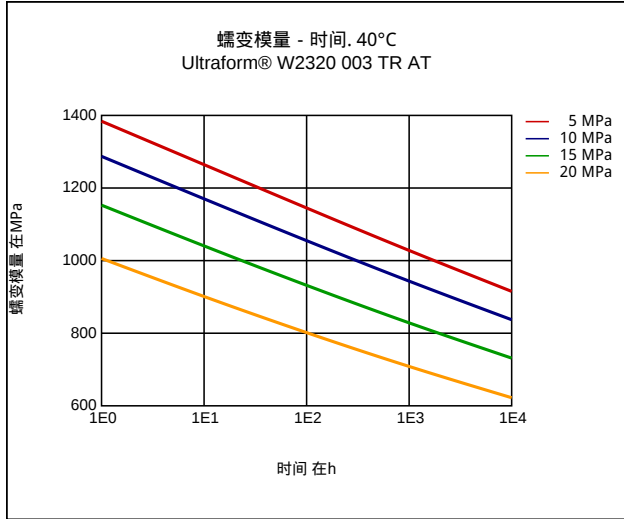
应力 - 应变(等时的) 40°C



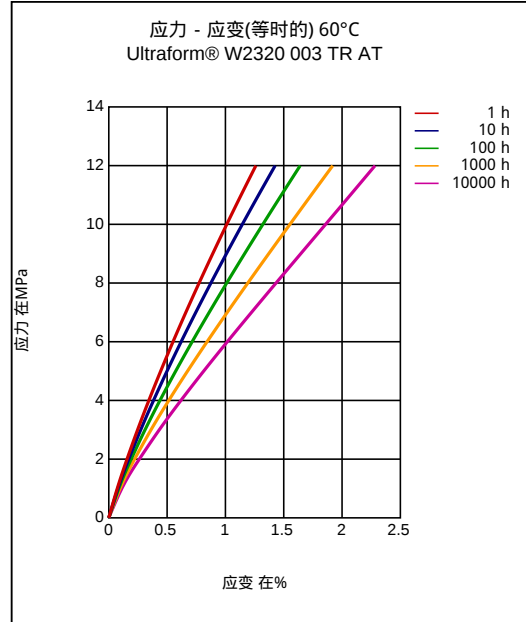
Ultraform® W2320 003 TR AT
POM

BASF

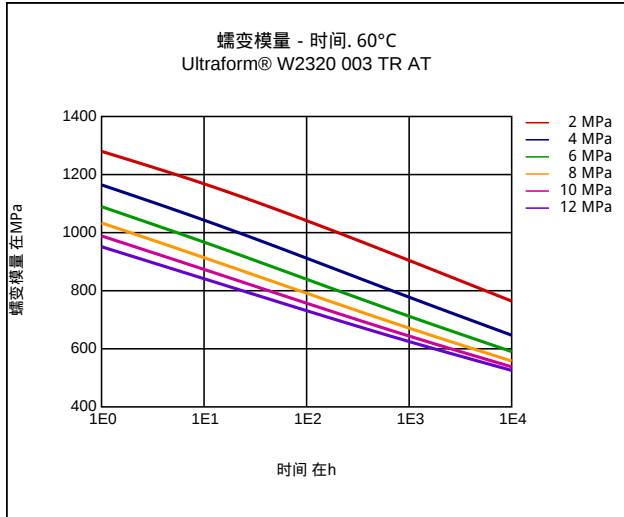
蠕变模量 - 时间. 40°C



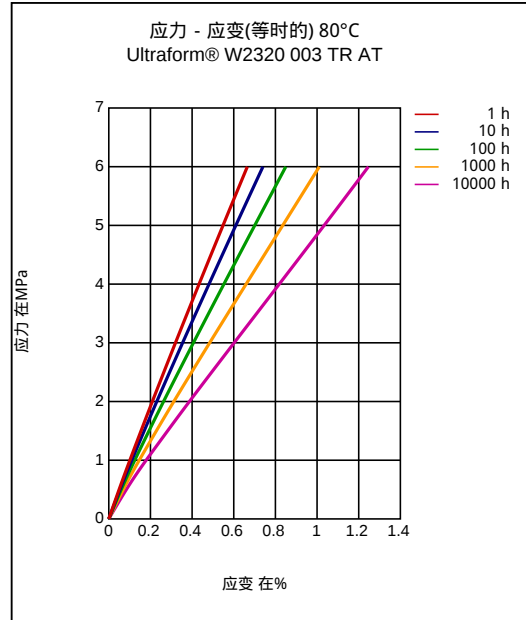
应力 - 应变(等时的) 60°C



蠕变模量 - 时间. 60°C



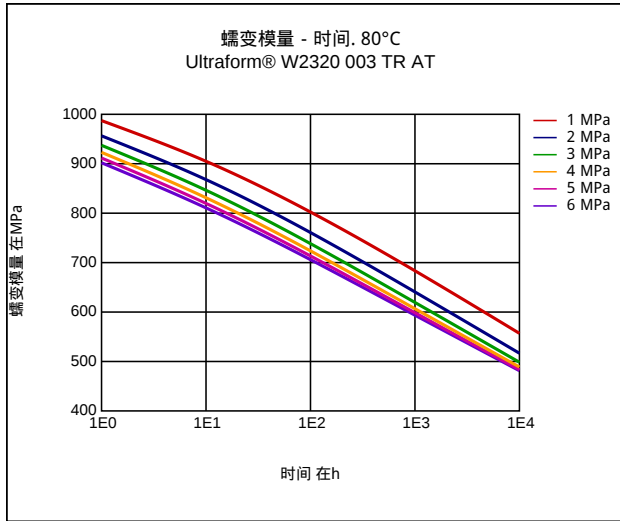
应力 - 应变(等时的) 80°C



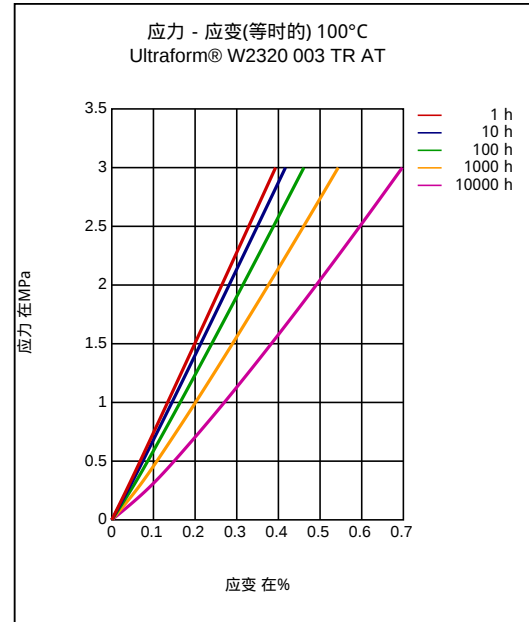
Ultraform® W2320 003 TR AT
POM

BASF

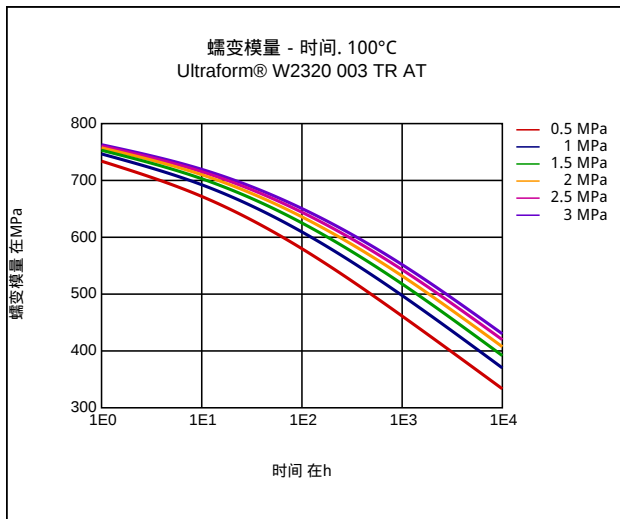
蠕变模量 - 时间, 80°C



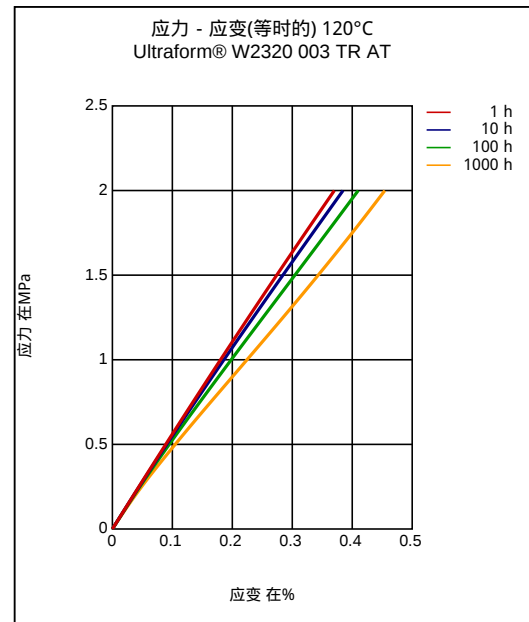
应力 - 应变(等时的) 100°C



蠕变模量 - 时间, 100°C



应力 - 应变(等时的) 120°C

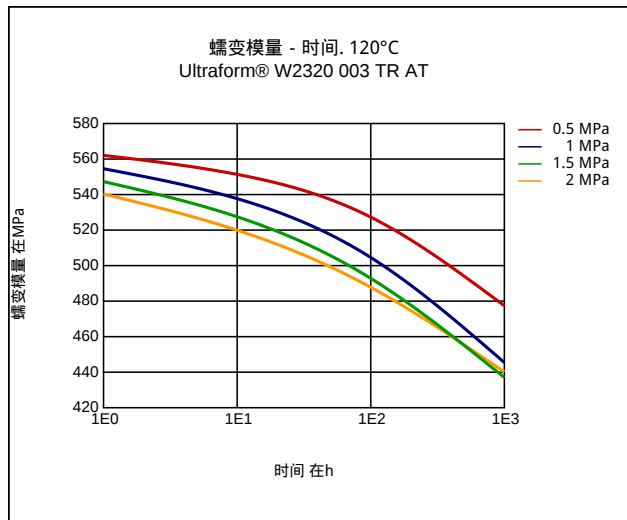


Ultraform® W2320 003 TR AT

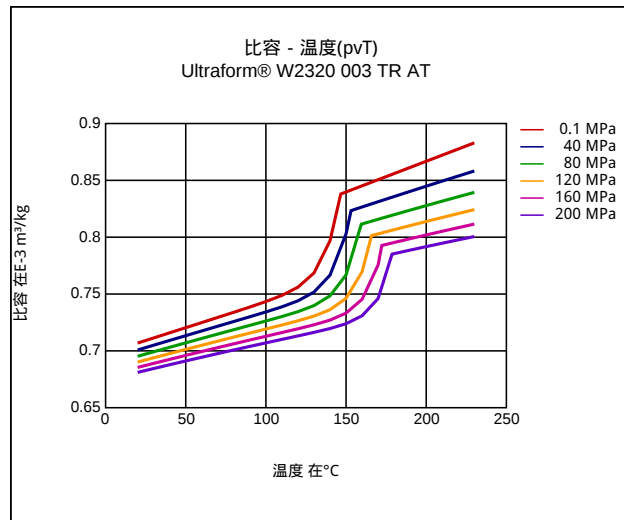
POM

BASF

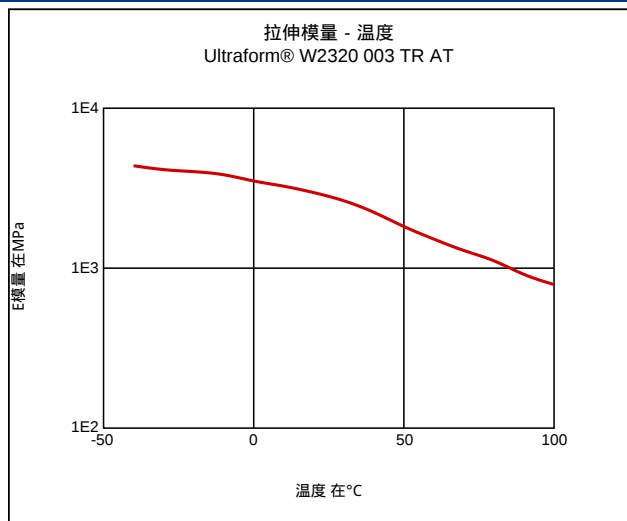
蠕变模量 - 时间, 120°C



比容 - 温度(pvT)



拉伸模量 - 温度



特征

加工方法

注塑

供货形式

粒料

添加剂

润滑剂, 脱模助剂

特征

低摩擦系数

注塑

PREPROCESSING

Pre/Post-processing, max. allowed water content: .2 %

Pre/Post-processing, Pre-drying, Temperature: 100 °C

Pre/Post-processing, Pre-drying, Time: 3 h

PROCESSING

injection molding, Melt temperature, range: 190 - 230 °C

injection molding, Melt temperature, recommended: 210 °C

injection molding, Mold temperature, range: 60 - 120 °C

injection molding, Mold temperature, recommended: 90 °C

Ultraform® W2320 003 TR AT POM

BASF

injection molding, Dwell time, thermoplastics: 10 min

Processing

Usual single-flighted three-section screws with an effective screw length of at least 15 D, better 20 - 23 D are suitable for the injection molding of Ultraform.

Pretreatment

Granules or pellets in original packaging can be processed without any special pretreatment. Granules or pellets which have become moist due to prolonged or incorrect storage (e.g. by formation of condensed water) must be dried in dehumidifying or recirculating air dryers for approx. 3 hours at about 100 - 110 °C. The moisture content should not exceed 0.2 %.

Postprocessing

If parts were produced at a comparatively low mold temperature (e.g. in order to obtain short cycle times) and must not change their geometry in use thermal postprocessing inducing dimensional changes by postcrystallization may be necessary. In such cases parts should be stored in an oven with recirculated air at temperatures of 100 - 130 °C until dimensions don't change significantly any further. The time needed for this has to be determined experimentally.