

Ixef® HC-1022

聚丙烯酰胺

Solvay Specialty Polymers

Technical Data

产品说明

Ixef® HC-1022 is a 50% glass-fiber reinforced, general purpose polyarylamide compound that exhibits very high strength and rigidity, outstanding surface gloss, and excellent creep resistance.

Ixef® HC-1022 shows no evidence of cytotoxicity, sensitization, intracutaneous reactivity or systemic toxicity based on biocompatibility testing as defined by ISO 10993:1. Solvay offers these materials for healthcare applications that require limited exposure (less than 24 hours) to the body.

- Black: HC-1022 BK 001
- Natural: HC-1022 NT 000

总览

填料/增强材料	• 玻璃纤维增强材料, 50% 填料按重量	
特性	<ul style="list-style-type: none">• 超强刚性• 尺寸稳定性良好• 出色的外观• 低吸湿性• 电子束消毒• 放射性可透的 <ul style="list-style-type: none">• 辐射消毒• 高强度• 好的消毒性• 环氧乙烷消毒• 抗伽马辐射• 抗蠕变特性 <ul style="list-style-type: none">• 流动性高• 耐化学品性能, 良好• 生物兼容性• 通用	
用途	<ul style="list-style-type: none">• 高光应用• 外科器械 <ul style="list-style-type: none">• 牙齿应用领域• 医疗/护理用品 <ul style="list-style-type: none">• 医疗器材• 医疗器械	
机构评级	• ISO 10993	
RoHS 合规性	• RoHS 合规	
外观	• 黑色	• 自然色
形式	• 粒子	
加工方法	• 注射成型	

物理性能	干燥	调节后的	单位制	测试方法
密度	1.64	--	g/cm ³	ISO 1183
收缩率	0.10 到 0.30	--	%	ISO 294-4
吸水率 (24 hr, 23°C)	0.16	--	%	ISO 62
吸水性 - Equil, 65% RH	1.50	--		内部方法
机械性能	干燥	调节后的	单位制	测试方法
拉伸模量	19500	19500	MPa	ISO 527-2
拉伸应力 (断裂)	280	260	MPa	ISO 527-2
拉伸应变 (断裂)	1.9	2.2	%	ISO 527-2
弯曲模量	18500	--	MPa	ISO 178
弯曲应力	380	--	MPa	ISO 178
冲击性能	干燥	调节后的	单位制	测试方法
悬臂梁缺口冲击强度	110	--	J/m	ASTM D256
无缺口悬臂梁冲击	850	--	J/m	ASTM D256
热性能	干燥	调节后的	单位制	测试方法
热变形温度 (1.8 MPa, 未退火)	230	--	°C	ISO 75-2/A
线形热膨胀系数 - 流动	1.5E-5	--	cm/cm/°C	ISO 11359-2

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注射	干燥单位制
干燥温度	120 °C
干燥时间	0.50 到 1.5 hr
料筒后部温度	250 到 260 °C
料筒前部温度	260 到 290 °C
射嘴温度	260 到 290 °C
加工 (熔体) 温度	280 °C
模具温度	120 到 140 °C
注射速度	快速

注射说明

Hot runners: 250°C to 260°C (482°C to 500°F)

Storage

Ixef® compounds are shipped in moisture-resistant packages at moisture levels according to specifications. Sealed, undamaged bags should be preferably stored in a dry room at a maximum temperature of 50°C (122°F) and should be protected from possible damage. If only a portion of a package is used, the remaining material should be transferred into a sealable container. It is recommended that Ixef® resins be dried prior to molding following the recommendations found in this datasheet and/or in the Ixef® processing guide.

Drying

The material as supplied is ready for molding without drying. However, if the bags have been open for longer than 24 hours, the material needs to be dried. When using a desiccant air dryer with dew point of -28°C (-18°F) or lower, these guidelines can be followed: 0.5-1.5 hour at 120°C (248°F), 1-3 hours at 100°C (212°F), or 1-7 hours at 80°C (176°F).

Injection Molding

Ixef® HC-1022 compound can be readily injection molded in most screw injection molding machines. A general purpose screw is recommended, with minimum back pressure.

The measured melt temperature should be about 280°C (536°F), and the barrel temperatures should be around 250 to 260°C (482 to 500°F) in the rear zone, gradually increasing to 260 to 290°C (500 to 554°F) in the front zone. If hot runners are used, they should be set to 250 to 260°C (482 to 500°F).

To maximize crystallinity, the temperature of the mold cavity surface must be held between 120 and 140°C (248 and 284°F). Molding at lower temperatures will produce articles that may warp, have poor surface appearance, and have a greater tendency to creep. Set injection pressure to give rapid injection. Adjust holding pressure and hold time to maximize part weight. Transfer from injection to hold pressure at the screw position just before the part is completely filled (95-99%).