

FLAME RETARDANT HIPS COMPOUND

 Properties Guide 0705/Rev. - 4
 Emissão Nov. 2004

Nitriflex 705 resin is a modified high impact polystyrene compound made with specific raw materials under specially process conditions in the way to comply Underwriters Laboratories Inc., standard UL 94 V0 rating, 2002/96 (WEEE) and 2002/95 (RoHS) directives of the European Parliament Council of Jan, 27, 2003. In accordance with customers requirements other improvements may be done to reach another and rigorous specifications, including coloring developments. Due their specific characteristics and properties 705 resin has a large range of applications in appliances, computers, monitors and everywhere where flame retardants requirements is critical.

Property	Test Method	Unit	Value
Physical			
Specific Gravit	ASTM D-792	-	1,14 - 1,18
Mold Shrinkage	ASTM D-955	%	0,2 - 0,4
Mechanical			
Tensile Strenght - 50mm/s	ASTM D-638	Kgf/mm ²	2,3
Flexural Modulus - 3,2mm	ASTM D-638 V=2mm/min	Kgf/mm ²	119,2
IZOD Impact Strenght - notched 23°C - 3,2 mm	ASTM D-256 (A) - Cp 6,4mm	J/m	Min. 80
Enlongation at break - 50mm/s	ASTM D-638	%	Min. 65
Thermal			
HDT 1,8 Mpa , 12,7 mm	ASTM D-648	°C.	90
Vicat - 6,4 mm, 50°C/h/5Kgf	ASTM D-1525	°C.	92
Flow			
MFI - 200°C/5 Kgf	ASTM D-1238	g/10min.	Min. 4,0
Flammability			
1,6 and 3,2 mm thickness	UL 94 - 6 ^a Ed.	-	V-0

Main Features

General Notes

The above informations and technical data is provided for general reference purposes only. As the usage conditions and process variables are out of our control and supervision NITRIFLEX does not assume any liability with respect to the accuracy or completeness of such informations, or the product results in any specific instance.

PROCESSING INFORMATION

NITRIFLEX 705 resin has been processed at normal conditions on a variety of machines. Melt temperatures above 243°C, should be avoided to prevent degradation and possible machine damage through corrosion and/or high internal pressure. Therefore, processing equipment should be flushed out with polystyrene that does not contain flame retardants whenever and appreciable interruption of cycle occurs (more than 6 hours).

Injection Molding Parameters	Nominal Values English	Nominal Values SI
<i>Drying Temperature</i>	160 °F	70 °C
<i>Drying Time</i>	2 h	2 h
<i>Rear Temperature</i>	360 °F	180 °C
<i>Middle Temperature</i>	410 °F	210 °C
<i>Front Temperature</i>	430 °F	220 °C
<i>Nozzle Temperature</i>	430 °F	220 °C
<i>Processing (Melt) Temperature</i>	430 °F	220 °C
<i>Mold Temperature</i>	90 to 120 °F	32 - 50 °C
<i>Injection Pressure</i>	5 000 to 40 000 psi	-
<i>Back Pressure</i>	50 to 250 psi	-
<i>Clamp Tonnage</i>	2 to 4 ton / in ²	-

COMBUSTIBILITY

Although 705 resin contains ignition resistant chemical additives, resin will burn, and once ignited, may burn under the right conditions of heat and oxygen supply. Do not permit dust to accumulate. Dust layers can be ignited by spontaneous combustion or other ignition sources. When suspended in air dust can pose an explosion hazard. Dense black smoke is produced when product burns. Toxic fumes are released in fire situations.

HAZARDS AND HANDLING PRECAUTIONS

705 resin have a very low degree of toxicity and under normal conditions of use should pose no usual problems from ingestion, eye or skin contact. However, caution is advised when handling, storing, using or disposing of these resins and good housekeeping and controlling of dusts are necessary for safe handling of product. Generally speaking in the environment lost pellets are not a problem except under unusual circumstances. Organic polymers containing flame retardant additives may release hazardous or toxic vapors if given lengthy or excessive exposure to high heat. Adequate ventilation should be used during processing.

NITRIFLEX DA AMAZÔNIA INDÚSTRIA E COMÉRCIO S.A