

Product Information

Preliminary Product Information

VESTAMID® HT*plus* M1933

Glass-fiber reinforced, flame retardant polyphthalamide compound

VESTAMID HT*plus* M1933 is a glass-fiber reinforced (30%), heat-stabilized polyphthalamide compound (PPA) containing a halogen-free flame retardant. It is free of red phosphorus.

Due to the halogen-free flame retardant VESTAMID HT*plus* M1933 is especially suitable for interior parts in aircrafts, railway vehicles and ships.

This compound can be used for injection molding and is especially suitable for manufacturing parts subjected to high temperature. Parts made of VESTAMID HT*plus* M1933 can be used in reflow soldering process.

VESTAMID HT*plus* M1933 is supplied as spherical pellets in polyethylene packaging.

We recommend a processing temperature between 325°C and 335°C during the injection molding process. The mold temperature should be within a range of 140°C to 180°C, preferably 160°C.

Drying at 120°C for at least 4 hours before processing is recommended.

Property	Test method		Unit	VESTAMID HTplus M1933	
	international	national			
Density	23°C	ISO 1183	DIN EN ISO 1183	g/cm ³	1.44
Tensile test		ISO 527-1	DIN EN ISO 527-1		
Stress at break		ISO 527-2	DIN EN ISO 527-2	MPa	105
Strain at break				%	1.7
Tensile modulus		ISO 527-1	DIN EN ISO 527-1	MPa	11300
		ISO 527-2	DIN EN ISO 527-2		
CHARPY impact strength		ISO 179/1eU	DIN EN ISO 179/1eU		
	23°C			kJ/m ²	28 C ¹⁾
	-40°C			kJ/m ²	26 C ¹⁾
CHARPY notched impact strength		ISO 179/1eA	DIN EN ISO 179/1eA		
	23°C			kJ/m ²	4 C ¹⁾
	-40°C			kJ/m ²	3 C ¹⁾
Temperature of deflection under load		ISO 75-1	DIN EN ISO 75-1		
		ISO 75-2	DIN EN ISO 75-2		
Method A	1.8 MPa			°C	267
Method B	0.45 MPa			°C	301
Melting range		ISO 11357			
DSC	2 nd heating			°C	300-315
Comparative tracking index		IEC 60112	IEC 60112		
Test solution A	CTI				< 600
	100 drops value				575
Glow wire test		IEC 60695-2-	DIN EN 60695-2-12/13		
GWIT	2 mm	12/13		°C	800
GWFI	2 mm			°C	960
Flammability acc. UL94		IEC 60695	UL94		
	0.4 mm				V-0
	0.8 mm				V-0
Mold shrinkage		determined on 2 mm sheets			
	in flow direction	with film gate at rim		%	0.2
	in transverse direction	mold temperature 80°C ISO 294-4		%	0.9

Pigmentation may affect values.

¹⁾ C = Complete break, incl. hinge break H

The results shown have been generated from a low number of production lots. Therefore, they are preliminary and not yet the result of a statistical evaluation. Therefore they must not be used to establish specifications.

For processing of VESTAMID HTplus M1933 corrosion resistant steel is recommended:

Steel Type	Thermal conductivity W/m*K	Density g/cm ³	Application
Steel 1.2083	24	7.85	Corrosion resistant hot worked steel with HRC 50 to 54 for chemical aggressive polymers, good polishing and wear resistance, flame retardants polymer
Steel 1.2316	24	7.85	Corrosion resistant hot worked steel up to 52HRC, for mold and mold cavities, good polishing, PVD-coating and chrome plating is possible, flame retardants polymer

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