ZEDEX®
Tribological Polymer Solutions

ZX-410VMT

Inject molding instruction

EN 1.0

Product characteristics

ZX-410VMT is a fibre-reinforced, tribological optimized compound with very small expansion coefficients. It has also got a high resistance to hot oils.

Physical forms and storing

ZX-410VMT granules are available both in bags (5, 10, 25 kg) and in octabins (500 kg). The bulk density is between 0,7 and 0,8 kg/dm³. Undamaged packaging of ZX-410VMT can be unlimited stored.

Safety precautions

When the material is properly handled, no adverse health hazardous effects have to be expected. If the temperature limits (maximum 390°C) are met, there are no harmful fumes. The high temperatures during processing of ZX-410VMT require extra care when handling injection moulding parts. Degraded material must be removed by a purging mechanism at reduced cylinder temperature. By a rapid cooling of the decomposed material, e.g. in water bath, unpleasant odours can be prevented. The decomposed material must be pumped away, otherwise it can build up an increased gas pressure in the cylinder. When pumping, deflagrations might occurred. ZX-410VMT decomposes at an excessive thermal stress. This can result in gaseous decomposition products. The disassembly of the plasticizing unit must take place only at a cooled state. When processing ZX-410VMT make sure that the allowable dust limit value (e.g. "MAK-Wert-Richtlinien" (MAK-value-guidelines) in Germany) is not exceed. A sufficient workplace ventilation is be ensured.

Injection moulding

ZX-410VMT can be processed on all conventional injection moulding machines, taking into account that the correct set-up of the plasticizing unit and the mould temperature control is important. Long residence times at high temperatures should be avoided. For long pause periods, the cylinder temperature can be reduced to 250-280°C. When starting and stopping of the machine should be set first an uniform temperature in the lower working range (340-350°C). Then, when steady state is reached, the material can be pumped out from the barrel. Eventually the required processing temperature can be set or you can turn off the heaters.

Note

These information reflect our current knowledge and inform you about our products and their application of usage. We can not guarantee an particular properties of the end products or their suitability for a particular application. Existing commercial patents must be observed. he quality of our products is warranted under the terms of our General Conditions of Sale. If case of doubts please contact our technical department.

Material- / machine data

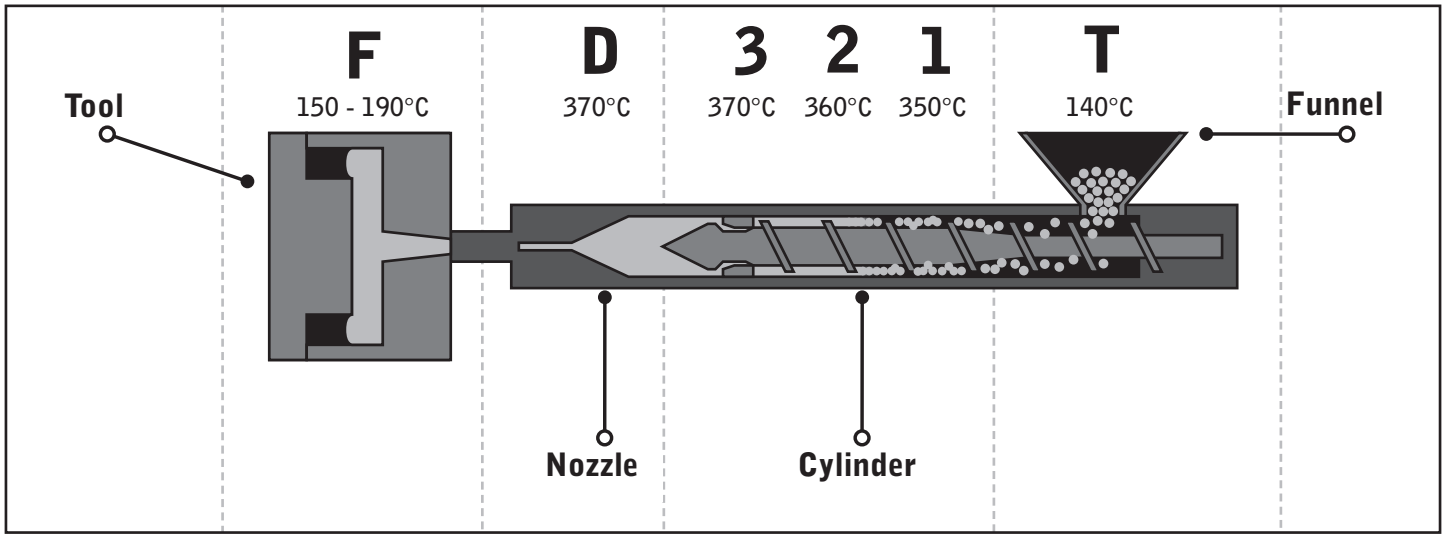
Product characteristics			
Properties	**Unit**	**Test method**	**Values**
Materialcode	-	-	106
Colour	-	-	Black
Density	kg / dm³	ISO 1183	1,48
Schüttdichte	kg / dm³	internal standard	0,7 - 0,8
Melt volume rate MVR 337°C / 6,7 kg	cm³ / 10 min	ISO 1133	3,8 - 5

Shrinkage			
Molding shrinkage (parallel)	%	ISO 2577, 294-4	0,26
Molding shrinkage (normal)	%	ISO 2577, 294-4	0,09

Drying			
Moisture, max.	%	-	0,01
Dryer temperature (Dry air dryer or vacuum dryer) **T**	°C	-	140
Drying time	h	-	4

Injection molding			
Melt temperature range	°C	-	350 - 390
Melt temperature (optimal)	°C	-	375
Mold temperature range **F**	°C	-	150 - 190
Mold temperature (optimal) **F**	°C	-	170

Machine Settings			
Temperature hopper throat	°C	-	80
Cylinder temperature **1** (feed zone)	°C	-	350
Cylinder temperature **2** (compression)	°C	-	360
Cylinder temperature **3** (metering-zone, in front of the screw)	°C	-	370
Cylinder temperature D (nozzle)	°C	-	370
Peripheral screw speed	m/s	-	0,13



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