Processing Data Sheet **Ultrason® E**

2010 NAT

09/2026 **PESU**

Product description

Unreinforced, medium viscosity standard injection moulding grade.
Abbreviated designation according to ISO 1043-1: PESU

Physical form and storage

Ultrason® pellets are supplied in bags and/or octabins. The bulk density ranges between 700 and 800 g/l. Provided the packaging remains undamaged, Ultrason® can be stored indefinitely. Ultrason® pellets absorb moisture very rapidly. Therefore, the pellets need to be dried at least 4h at 130 °C to 150 °C in a vacuum or dry air drier prior to processing.

Product safety

From our experience and information, proper treatment and reasonable use of the product will not have any health hazardous effects.
In view of the high temperatures involved in processing Ultrason®, great care must be exercised -even more than for other thermoplastics- in handling the machinery, molds, moldings and residual melts. If there are concerns or doubts on the thermal capacity and limits, the machinery manufacturer should be consulted.
Any product that has decomposed during injection molding must be removed from the barrel by injection into the atmosphere and simultaneous reduction of the barrel temperature. Noxious odors that could form during this procedure can be reduced by rapid cooling of the degraded material, e.g. in a water bath. If the degraded material is not pumped out of the barrel, gas pressure may build up, particularly if nozzle shutoff devices are used. The built-up pressure could then release violently around the nozzle or hopper areas, and explosions would therefore be expected in the course of pumping.
If the normal precautions are taken and the upper temperature limit, i.e. 390°C, is not exceeded, no health hazardous vapors are formed while Ultrason® is being processed. In common with all other thermoplastics, Ultrason® decomposes on exposure to excessive heat, for instance if the melt temperature is too high and/or the residence time in the plasticizing unit is too long or if residues are burned off during cleaning of the machinery. The figures laid down for the maximum allowable dust concentrations (e.g. MAK value in Germany) must be met in further processing.
The work place must be well ventilated, preferably by means of an extraction system installed above the barrel unit. Irrespective of this, all precautions relating to accident prevention must strictly be taken. Under no circumstances may the plasticizing units be dismantled after a breakdown while they are still hot.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may Change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed. In order to ensure supply ability, our products are produced in several production lines on different sites of the BASF Group. All production lines produce according to identical specifications. In order to check the availability of products please contact us or our sales agency.

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	Test method	Unit	Values
Properties			
Polymer abbreviation	-	-	**PESU**
Density	ISO 1183	kg/m³	**1370**
Melt volume rate MVR 360 °C/10 kg	ISO 1133	cm³/10min	**70**
Drying			
Moisture, max.	-	%	**0.02**
Dryer temperature [1)]	-	°C	**140**
Drying time	-	h	**4**
Injection molding			
Melt temperature range	-	°C	**340 - 390**
Melt temperature, optimal	-	°C	**360**
Mold temperature range	-	°C	**140 - 180**
Mold temperature, optimal	-	°C	**160**
Temperature hopper throat	-	°C	**80**
Peripheral screw speed, recommended	-	m/s	**0.1 - 0.3**
Residence time	-	min	**10**
Schwindung bei Masse-/Werkzeugtemperatur, optimal			
Molding shrinkage (parallel)	ISO 294-4	%	**0.82**
Molding shrinkage (normal)	ISO 294-4	%	**0.86**

Footnotes
1) Dry air dryer or vacuum dryer

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