



TECHNICAL DATA SHEET

HDPE rocket shells regrind

Physical properties	Metric
Material and quality	HDPE rocket shells unwashed (clean from other material contamination)
Shape and size	Regrind ~ 10 mm
Melt Flow Index	0,95 – 2,10 g/10 min (190°C, 5,00kg)
Determination of the melt mass-flow rate (MFR) in accordance with LVS EN ISO 1133-1:2022	
Color	Green
Density of polymer materials	
Average density of the sample	0,961 g/cm ³
The density of polymeric materials was determined in accordance with LVS EN ISO 1183-1:2019	
The immersion fluid used	Ethanol (density $\rho_{EtOH}=0,806$ g/cm ³)
Testing temperature	$T_t=22,8^{\circ}\text{C}$
The average value of the ash content of the polymer material	
The average value of the ash content	1,06%
The ash content of the polymer material was determined in accordance with LVS EN ISO 3451-1:2019	
Testing method	Direct calcination method @ 750 °C (4h)
Infrared spectroscopy	
Polymer materials infrared spectroscopy spectra wave figures in range from 600 – 4000 cm ⁻¹	HDPE sample total spectrum - see attachment Nr.1 HDPE sample spectrum compared to the test machine data base sample spectrum results – see attachment Nr.2
Differential scanning calorimetry (DSC)	
The DSC curve was taken in temperature range of from 25 °C to 400 °C with heating rate 10,0 °C/min in a nitrogen atmosphere, flow rate - 50±5 cm ³ /min. See attachment Nr. 3	
Sample mass	8,73 mg
The onset temperature of the calorimetric effect	94,29 °C
The maximum temperature of the calorimetric effect	135,43 °C
The end temperature of the calorimetric effect	148,11 °C
Enthalpy of calorimetric effect	-159,17 J/g
Delivery options	
Packaging	Big – bags, max 880 kg
Delivery on pallets	1x1,2m
One truck load (AVAILABLE)?	22-24t

Source material picture



Regrind

