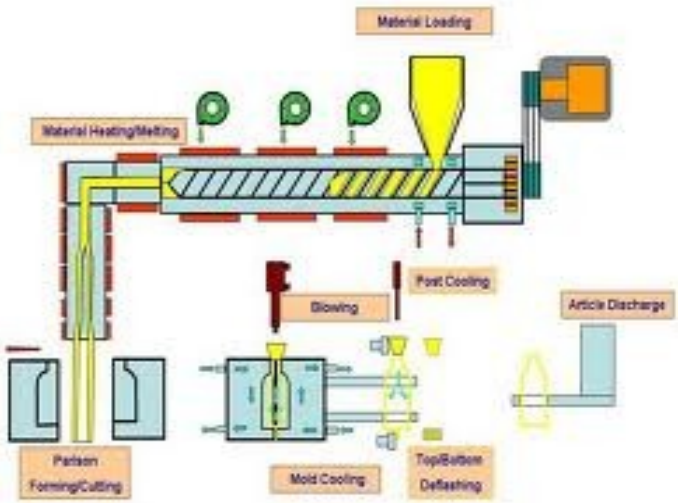
KEYTECH
SOLUTION



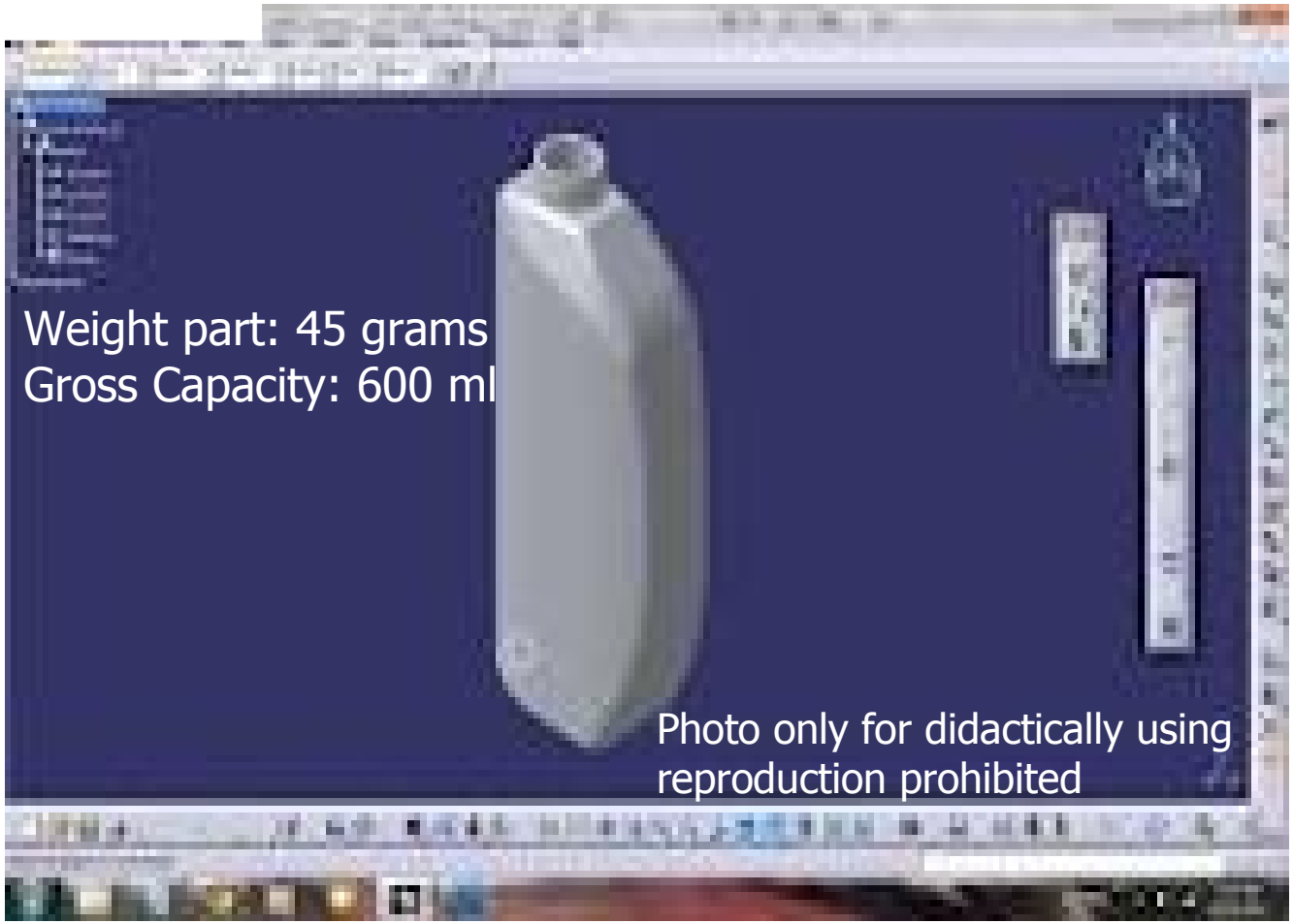
PolyPlus in
Blow Moulding Application

02.12.12

Introducing

- Description of Plastic Product
- Description of Plastic Polymer
- Results after Application
- Final Consideration

Description of Plastic Product



Description of Plastic Polymer

TOTAL PETROCHEMICALS

Polyethylene HDPE 5502

Technical data sheet
High Density Polyethylene BLOW MOULDING
Produced in Europe

Description

HDPE 5502 is a high density polyethylene (HDPE) with good compromise between stiffness and Environmental Stress Crack Resistance (ESCR). It has been specifically designed for the manufacture of blow molded packaging for household, industrial and cosmetics liquids.

HDPE 5502 is a pellet grade and contains antioxidants.

Characteristics

Property	Method	Unit	Typical value (*)
Density	ISO 1183	g/cm³	0.954
Melt Flow Rate (190°C/2.16 kg)	ISO 1133/D	g/10 min	0.25
Melt Flow Rate (190°C/21.6 kg)	ISO 1133/G	g/10 min	22
ESCR Antarox 100%	ASTM D 1693B	h	F_{50} = 60
Notched Charpy Impact Resistance 23°C	ISO 179-1	kJ/m²	16

(*) Data not intended for specification purposes

Processing

It is recommended to process HDPE 5502 within the temperature range 180-220°C.

Results after Application

Process Parameter Description	Unit	Standard Production	With PolyPlus Production
Screw Melt Temperatures	°C	190-190-190°C	140-150-160°C
Moog Melt Temperature	°C	190-190°C	190-190°C
Exit Parison Melt Temp.	°C	230°C	215°C
Screw R.p.m.	r.p.m.	77	99*
Motor Energy Absorption	A	19	19
Nr. Parts per Hour	pcs.	514	591*
Productivity Increasing	%		15*

Final Consideration

- No change in the transparency
- Melting temperature of the polymer with 50 ° C in less than standard
- Temperature output of the Parison 15 ° C lower than the standard (consequent improving sprue cooling and its removal)
- Increase the maximum number of turns of the screw plasticizing
- The same power consumption of the engine
- No dimensional changes
- No mechanical variations
- No temperature changes
- Crushing test ok
- Increase cold skin thickness and then more resistant to compression
- **Only 15% increased productivity because the screw has not a capacity of greater plasticizing*

The information contained herein is provided for information purposes and therefore did not value of formal guarantee