



PolyPlus in  
Caps Spray Dispenser  
Injection Moulding Application  
With and Without Mini Chiller

*30.03.12 rev.1*



# Introducing

- Description of Plastic Product
- Description of Plastic Polymer
- Description of Mould and Machine
- Results after Application
- Final Consideration



# Description of Plastic Product





# Description of Plastic Polymer



**Polypropylene**

**RE420MO**

## Description

**RE420MO** is a specially modified highly-transparent polypropylene random copolymer with medium melt flow rate. This grade is intended for injection moulding and stretch blow moulding, and is designed for high-speed injection moulding and contains nucleating and demoulding additives.

Products originating from this grade have excellent transparency, very good organoleptic properties, good balance of stiffness and impact strength at ambient temperature, low blooming and good demoulding properties.

## Processing Techniques

This product is easy to process with standard injection moulding machines.

Following moulding parameters should be used as guidelines:

Melt temperature	210 - 260 °C	
Holding pressure	200 - 500 bar	Minimum to avoid sink marks.
Mould temperature	30 - 40 °C	
Injection speed	High	



# Description of Mould and Machine

Mould

32 cavities

2 grams each cavities

Hot Runners and Manifold

Injection Machine

150 Ton hydraulic (no accumulator version)



# Results after Application

Process Parameter Description	Unit	Standard Production	With PolyPlus without Mini Chiller	With PolyPlus and Mini Chiller
Screw Melt Temperatures	°C	226-220-211-200	170-160-150-140	170-160-150-140
Water Circuit Temperature	°C	22	22	10
Mould Temperature	°C	40	40	28
Cooling Time	sec.	12	7,6	5,6
Cycle Time	sec.	21,4	17	15
Ejector Temperature Parts	°C	54	55	54
Productivity Increasing	%		20,5	30
Monthly Saving	€		1.000	2.100
Yearly Saving	€		11.000	23.100



# Final Consideration

- *No change in the transparency*
- *Melting temperature of the polymer more 50 ° C in less than standard*
- *Reduction Electric power consumption*
- *No dimensional changes*
- *No mechanical variations*
- *Assembled test OK*
- *Increase cold skin thickness and then more resistant to compression*
- *30% increased productivity possible with Mini Chiller use*
- *23.100 € yearly with Mini Chiller use*

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