

# Product Profile

## Identification

**Product Name:** Poly(methyl methacrylate), isotactic (iso>syndio>hetero)

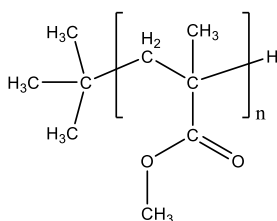
CAS Number : 9011-14-7

**Product Lot Number:** P6326R-iMMA

*Synonym(s): Isotactic PMMA, Isotactic methyl methacrylate polymer, Isotactic poly(methyl methacrylate)*

**Linear Formula:**  $(C_5H_8O_2)_n$

## Product Chemical Architecture:



## Composition:

Mn x 10 <sup>3</sup>	Mw/Mn (PDI)	Microstructure of Polymer by <sup>1</sup> H NMR ( <i>iso:syn:hetero</i> )
20.0	1.03	96:4:0

**Method of Synthesis** Using Grignard catalyst

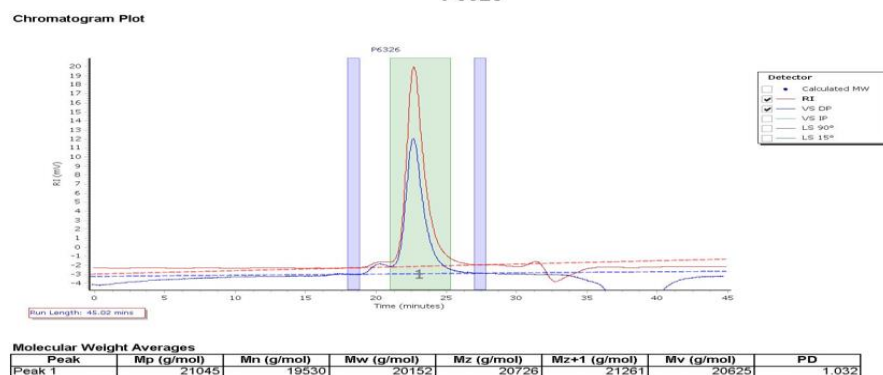
## Solubility in different solvents

THF	√		
CHCl <sub>3</sub>	√	Acetone	√
Toluene-Hot	√		

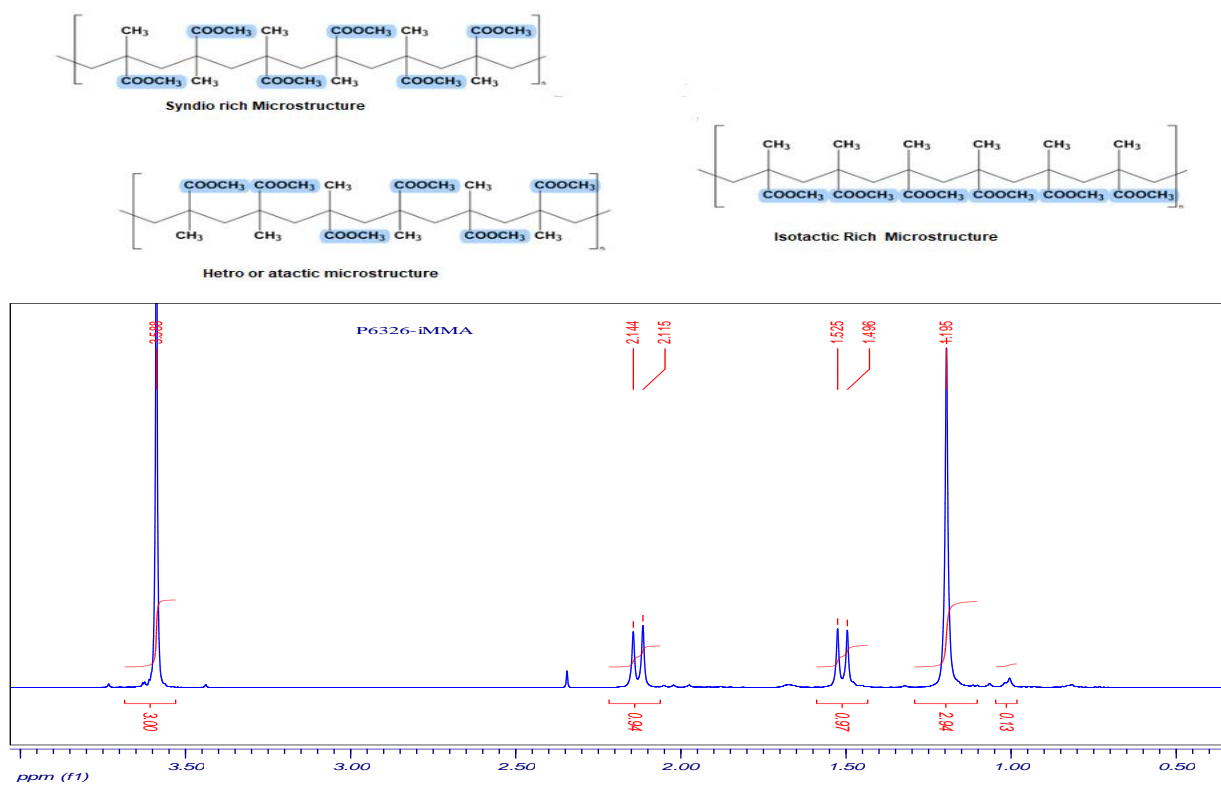
**Purification of Polymer:** By solvent-non solvent process and filtration to remove inorganic salt.

## Validation of Architecture:

### A. Gel Permeation Chromatography (GPC), SEC- Profile



**B. NMR (HNMR) of polymer:**



**C. Summary of DSC results for PMMA of different tacticity:**

PMMA microstructure	Tacticity Syndio : Iso : Hetero	$T_g$ ( $^{\circ}\text{C}$ )
Syndiotactic >79%	79 : 19 : 2	120
Syndiotactic >85%	86 : 0 : 14	123
Isotactic >97%	0 : 97 : 3	44
Atactic	56 : 6 : 38	97