

# M6405



## High Density Polyethylene

## Injection Molding

### Product Description:

HDPE M6405 is a natural colored grade produced with the latest Mitsui CX slurry polymerization

Technology exhibiting following features:

- ✓ Excellent Impact Strength
- ✓ Excellent Rigidity

HDPE M6405 is recommended for following applications:

- ✓ General Purpose & Industrial Crates
- ✓ Vegetable/Fruit Containers
- ✓ Tool Boxes
- ✓ Shipping Crates / Pellets

### Typical Properties:

Sr. No.	Properties	Test Method	Units	Values*
<b>Physical Properties</b>				
1	Melt Flow Index ( 190°C & 2.16 kg)	ASTM D1238	g / 10 min	5.0
2	Density (at 23 °C)	ASTM D1505	gm/cm <sup>3</sup>	0.964
<b>Mechanical Properties</b>				
3	Tensile Strength @ Yield (50mm / min)	ASTM D638	MPa	28.0
4	Tensile Strength @ Break (50mm / min)	ASTM D638	MPa	17.0
5	Elongation @ Break (50mm / min)	ASTM D638	%	>500
6	Flexural Modulus	ASTM D790	Mpa	900
7	Izod Impact Strength (at 23 °C)	ASTM D256	J/m	80
8	Charpy Impact Strength	ISO 179-1	KJ/m <sup>2</sup>	7.2
9	Hardness	ASTM D2240	Shore D	65
10	Stress Cracking Resistance (F <sub>50</sub> )	ASTM 1693	Hrs	4
<b>Thermal Properties</b>				
11	Vicat Softening Point (10N)	ASTM D1525	°C	130
12	Heat Deflection Temperature (0.455 MPa)	ASTM D648	°C	85
** Mechanical Properties tested on Injection molded specimen in accordance with ASTM D4101 and conditioned as per ASTM D618.				
* Typical Values and not to be taken as specification limits, values may change without any prior notice.				

Recommended Processing Temperature: 190 – 230 °C

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### **Regulatory Requirements:**

HDPE grade M6405 shall meet the requirements stipulated in IS 10146:1982 on 'Specification of Polyethylene for safe use in contact with Foodstuff, Pharmaceutical & Drinking water'. The grade and Additives incorporated in this grade shall meet the positive list of constituents as prescribed in IS 10141:1982. The Grade and the additives incorporated in it shall also comply with the FDA: CFR Title 21,177.1520, Olefin Polymers.

### **Storage & Handling:**

Prevent Polyethylene Material from direct exposure to sunlight & heat to avoid quality deterioration. The storage location should be dry, dust free and the Storage temperature should not exceed 50 °C. Non - compliance to these precautionary measures can lead to degradation of the product causing Color changes, Odor & inadequate product performance.

### **Health and Safety Information:**

The product described herein may require precautions in handling and use because of toxicity, flammability, or other consideration. The Material Safety Data Sheet (MSDS) contains the available product health and safety information for this material and can be found at [www.opalindia.in](http://www.opalindia.in). Before using any material, a customer is advised to consult the MSDS for the product under consideration for use.



**ONGC Petro additions Ltd**

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