AMIR KABIR PETROCHEMICAL COMPANY

HDPE EX3 (GM 5010 T2N)

High Density Polyethylene

A M I R K A B I R P E T R O C H E M I C A L C O M P A N Y

HDPE

1 Product Description:

"EX3 (GM 5010 T2N)" is a natural colored high density polyethylene with Butene-1 as comonomer. The product is classified as PE100 and shows good stress crack resistance properties (ESCR) combined with good impact strength.
Stabilization: Ca-Stearate, Zn-Stearate, Irganox1010, Irgafos168

2 Applications:

Pipe Extrusion PE100 Class

- Pressure pipe.
- Drinking water and gas pipes.
- Discharge pipes.
- Sewer pipes and their fittings.
- For injection moulded and other fit tings.
- Sheets

No.	Property	Unit	Test Method	Value
1	MFR(190 °C/5Kg)	g/10min	ISO 1133	0.45 ± 0.05
2	MFR(190 °C/21.6Kg)	g/10min	ISO 1133	12.0 ±3.0
3	FRR21.6/5	----	----	28±4
4	Density	g/cm^3	ISO 1183	0.945 ± 0.002
5	Notched Impact Strength	mj/mm^2	ISO179/1eA	> 12
6	Pipe Evaluation Hydrostatic Strength (80oc,4N/mm2)	Hours	(DIN 8074 & DIN 8075 & ISO 1167)	1000 min.

Typical properties:
these are not to be construed as specifications.

AKPC

High Density Polyethylene

EX3 (GM5010T2N) (Pipe Extrusion)

Typical properties	Test method (DIN)	Unit	Value
MFI@190˚C, 5Kg	53735	gr/10min	0.5
Density	53479	gr/cm^3	0.944
Volatiles	BP138	%Wt	0.2
Impact Strength(Charpy Index)	53453	mj/mm^2	22
Resistance to internal pressure (80˚C/4N/mm^2)	8074	hr	170 min.

➢ Values shown are averages & are not to be considered as product specifications.

❖ Main application & Characteristics:

EX3 (M5010T2N) is high molecular weight, high density polyethylene copolymers, developed as general purpose resin for use in pressure and non-pressure pipes. A minimum service life of 50 years is achievable under appropriate pressure and temperature conditions. EX3 (GM5010T2N) offer excellent chemical resistance and environmental stress crack resistance.

EX3 (GM5010T2N) is suitable for extrusion into a full range of pipe and fittings sizes, where high density resins are required.

EX3 (GM5010T2N) is suitable for use in transport of a wide range of fluids for industrial, rural and mining applications.

Suitability for use in any application should be determined by appropriate performance testing.

* EX3 (GM5010T2N) is suitable for food contact.

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Product data sheet

HDPE made via Hostalen Process

HM-5010T2N (EX3)

HM-5010T2N (EX3) is a pipe grade resin which is manufactured by suspension polymerization of ethylene monomer. HM-5010T2N (EX3) is a bi-model high density polyethylene with 1-Butene as co monomer.

HDPE: HM-5010T2N (EX_3) | **Density: 0.943-0.947 g/cm3** | **MFR 190/5: 0.39-0.51**

Characteristic Properties

- Tough and rigid pipe resin.

Main Applications

- Pressure pipes, e.g. drinking-water and gas pipes, waste pipes and sewer pipes, their fittings and also sheets (UV stabilization and pigments during processing)

Additives

- Antioxidant/Process stabilizer
- Lubricant (processing aid) /acid scavenger

Material properties *(This data are typical values and are not to be construed as product specifications.)*

Resin Properties	Unit	Typical Value	Test Method
Melt Index (21.6)	(g/10 min)	12	ISO 1133
Melt Index (5)	(g/10 min)	0.45	ISO 1133
FRR (21.6/5)		27	
Density	g/cm³	0.945	ISO 1183
Moulded Properties	**Unit**	**Typical Value**	**Test Method**
Notched Impact @ 23 °C	mJ/mm²	12	ISO 179/ 1 eA
Mechanical Properties	**Unit**	**Typical Value**	**Test Method**
Hydrostatic Strength (80 ºC)	h	(4.0 N/mm²) 1000	ISO 1167

Handling and Health Safety

Molten polymers could be injured skin or eye so safety glasses and appropriate gloves are suggested to prevent possible thermal injuries. Also appropriate ventilation is suggested in working by melt polymer.

Accumulation of fines or dust particles that are in this grade is not suitable because of explosion hazard probability. So adequated filters and grounding exists at all time are recommended.

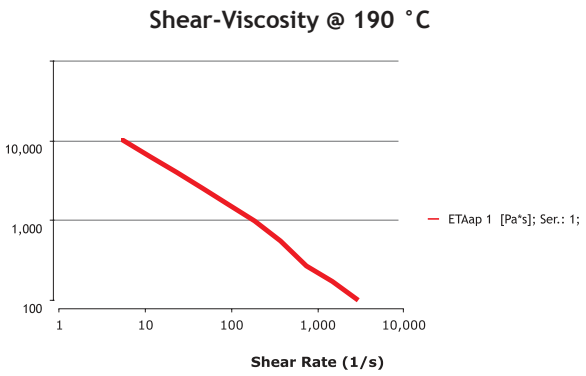
Storage

Polyethylene products (in pelletised or powder form) should not be stored in direct sunshine and/or heat radiation. Ultraviolet cause a change in the material properties.The Storage area should be dry and preferably don't exceed 50 °C. Under cool, dry, dark conditions Jam Polymers polyolefin resins are expected to maintain the original material and processing properties for at least 18 month. JPC would not ressponsible about quality diminishing such as color change, bad smell or ets which caused by bad storage conditions. It is better to process PE resin within 6 months after delivery.

packaging

Jam Polymers Polyolefin resins are supplied in Pellet form packed in 25kg bags. Alternative packaging modes are avalable for selected grades.

- On compression moulded according to ASTM D1928C
Processing Conditions
Recommended barrel tempratures range between 190 °C and 280 °C.



The above values were Calculated from data for 100 µm produced on a 75mm Barrnage extruder with 190°C melt temperature using a 2:1 blow ratio and a gap die of 3.0 mm.