

HM5010T2N (EX3)

High Density Polyethylene for Pipes

General Description

HM5010T2N (EX3) is a high density polyethylene with 1-butene as comonomer. It has good ESCR and impact strength. EX3 is a tough and rigid pipe grade resin for gas and water transportation. UV stabilization and pigments can be used during processing.

Typical Applications

- Gas pipes
- Drinking water pipes
- Industrial & pressure pipes

Catalyst: THT/BM

Product Specification

PHYSICAL/MECHANICAL PROPERTIES	VALUE*	UNIT	TEST METHOD
Density	0.945±0.002	g/cm ³	ISO 1183
FRR 21.6/5	27±34		
Hydrostatic strength (80 °C)	1000 (4.5 N/mm ²)	h	ISO 1167
MFR190°/2.16	12±2	g/10 min	ISO 1133
MFR190°/5	0.45±0.06	g/10 min	ISO 1133
Notched impact (23 °C)	e12	MJ/mm ²	ISO 179/1eA
Stress at yield	22	MPa	ISO 527
Flexural creep modulus (4 points,1 min)	950	MPa	DIN 19537-2
Tensile modulus (23 °C, v = 1mm/min, Secant)	850	MPa	ISO 527
Stress at break	35	MPa	ISO 527
Elongation at break	>850	%	ISO 527
Elongation at yield	8	%	ISO 527
Softening temperature	67	°C	ISO 306
Brittle temperature	< -80	°C	ASTM D746-72
Shore D hardness	60	-	ISO 868
ESCR in full notch creep test (80 °C, 2% Arcopal)	50	h@4.0 MPa	ISO CD 16770
Impact strength (23 °C)	23	kJ/m ²	ISO 179/1eA
S4 test (RCP)	Pc > 3	Bar	ISO DIS 13477
Notch test (SCG)	>250	h@4.0 MPa	ISO DIS 13479

* Typical values; not to be considered as product specification.

Note:

Test specimens were taken from compression moulded sheet according to ASTM D1928C.

FRR values are statistical and calculated by dividing MFR values.

Notch impact test specimen was taken from compressed moulded sheet at 23°C and the data quoted here are average values.

Processing conditions:

Recommended barrel temperature is 190 - 280 °C.

Recommended melt temperature is 190 - 220 °C.

Storage and handling. Polyethylene products (in pelletized or powder form) should not be stored in direct sunshine and/or heat radiation. The storage area should be dry and the temperature preferably doesn't exceed 50 °C. JPC would not be responsible about quality diminishing such as color change, bad smell or other defects which have been caused by bad storage conditions. It is recommended to process PE resin within 6 months after delivery.