Asrene®

High Density Polyethylene

Chandra Asri Petrochemical

SP 4808

Density	**0.949**
Melt Index (5.0 kg)	**0.25**

CHARACTERISTIC :
- Natural pellet
- High tensile properties
- Low sagging grade
- Long term hydrostatic strength
- Excellent stress cracking resistance

APPLICATION :
- PE-100 certified (MRS=10 MPa)
- σ_{LPL} @ 50 years = 10.78 MPa
- Pressure pipes
- Water distribution pipes (Potable water certified)
- Subduct conduit, Sewerage & Industrial pipes

Physical Properties	Test Method*	Unit	Value
Density	ASTM D 1505	g/cm^3	0.949
MI (190 ^{o}C/2.16 kg)	ASTM D 1238	g/10 min.	0.06
MI (190 ^{o}C/5.0 kg)	ASTM D 1238	g/10 min.	0.25
MI (190 ^{o}C/21.6 kg)	ASTM D 1238	g/10 min.	9.0
Brittleness temperature	ASTM D 746	^{o}C	< - 70
ESCR [10% Igepal, F_{50}]	ASTM D 1693	Hrs	> 1,000
Tensile strength @ yield	ASTM D 638	MPa	30
Tensile strength @ break	ASTM D 638	MPa	50
Ultimate elongation	ASTM D 638	%	> 700
Tensile impact strength	ASTM D 1822	kJ/m^2	550
Flexural modulus	ASTM D 790	MPa	1,300
Oxidative-Induction Time @ 200^{0}C	ASTM D3895	min	> 80
Viscosity @ 0.1sec^{-1}, 190^{0}C	Torque Rheometer	Pa.s	>100,000

Pipe Properties**			
Hydrostatic Resistance @ 12.4 MPa, 20^{0}C **	ISO 1167	hrs	> 100
Hydrostatic Resistance @ 5.5 MPa, 80^{0}C **	ISO 1167	hrs	> 165
Hydrostatic Resistance @ 5.0 MPa, 80^{0}C **	ISO 1167	Hrs	> 1,000
Rapid Crack Propagation (S4 test @ 0^{0}C) ***	ISO 13477	Bar	> 12
Slow Crack Growth (notch test @ 80^{0}C, 9.2 bar) ***	ISO 13479	hrs	> 1,058
Longitudinal reversion ***	ISO 2505-1 & 2	%	0.63

* Polyethylene tested per ASTM D 1928
** PE-100 , S-5, SDR-11, PN-16, OD-32mm
*** PE-100, S-5, SDR-11, PN-16, OD-110mm

Conversion : 1 MPa = 10.2 kg/cm^2 (bar)
1 kJ/m2 = 0.01 kgf.cm/mm^2

Recommended Processing Conditions:

Melt Temperature . . . . . 190 – 220 ^{o}C

This material complies with recommendations & statutory regulations in the USA, Japan and most European countries regarding packaging materials intended to come in contact with foodstuff, since it is used unmodified.

This technical datasheet is effective as from January 2011 and supersedes all previously published data.

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QMS ISO 9001
EMS ISO 14001