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ADVANCENE™ BY ADVANCED PE TECHNOLOGY

ETHYDCO إيثيدكو

ADVANCENE™ bEE-4906-AAH

Bimodal High Molecular Weight
High Density Polyethylene Resin

Overview :

ADVANCENE™ bEE-4906-AAH is a thermally stabilized bimodal high molecular weight high density polethylene - hexene copolymer, produced using advanced gas phase PE process in a single reactor. It is intended for use in PE-100 pipe applications where the highest standards of long term hydrostatic strength and resistance to slow crack growth are desired. These high performance pipes can be used at higher pipeline operating pressures and have a potential to down-gauge. ADVANCENE™ bEE-4906-AAH has good processability with a high specific output (kg/ hr/ rpm), exceptional melt strength with very Low Sag, and good fusion compatibility. It is very suitable for large diameter and thick wall pipe but also for small diameter pipes.

Main Characteristics :

- Natural gas distribution pipes (ISO 4437).
- Large diameter industrial piping.
- Mining, sewage, and municipal water service lines (ISO 12201, ISO 4427).

Complies with:

- ISO 12162: PE-100.
- Russia: Gost 18599 and Gost 16388.
- Australia, New Zealand: AZ/ NZS 4130.

Physical (Virgin Material)	Nominal Value (SI)	Test Method
Density	0.949 g/cm³	ASTM D1505
Melt Index		
(190°C/5 kg)	0.2 g/10min	ASTM D1238, ISO 1133
(190°C/21.6 kg)	6.0 g/10min	
Mechanical (Virgin Material)	**Nominal Value (SI)**	**Test Method**
Tensile Strength		
Yield	24 MPa	ASTM D638[1], ISO 527
Break	26 MPa	
Tensile Elongation		ASTM D638[1], ISO 527
Break	500 %	
Flexural Modulus – 2% Secant	1000 MPa	ASTM D790B[1], ISO 178
Pipe Properties (UHXP – 4808 +2.25% Black)	**Nominal Value (SI)**	**Test Method**
Designation	PE-100	ISO 12162
Minimum Required Strength	>10 Mpa	ISO 9080
Creep Rupture Strength	>200 hrs	Note[3]
Slow Crack Growth Resistance2	>1000 hrs	ISO 13479
PENT (slow crack growth; 80°C, 3.0 MPa)	>1000 hrs	ASTM F1473
Resistance to Rapid Crack Propagation[2], Pc	>10 bar	