

RAW MATERIAL SPECIFICATION FOR BLACK HD PE

1. Scope

This specification covers the requirement of **black weather resistant special high-density polyethylene compounds** used for insulation of self-supporting overhead power cables.

2. Quality requirement

The material shall be supplied in uniform granules free from contamination, fines and other defects. The material should have good process ability for extrusion line with excellent mechanical properties,

The polyethylene compounds shall be confirm to ASTM D 1248 standard

Properties	Unit	Test method	Requirements
Type			HDPE
Color			Black
Form of material			Granule
Density	g/cm ³	IEC 811-1-3 DIN 53479	≥ 0.94
Melt flow index	g / 10 min	IEC 811-4-1	0.1...0.5
Tensile strength	N/mm ²	IEC 811-1-1	≥ 20
Tensile strength after ageing max.	%	IEC 811-1-1	± 25
Elongation	%	IEC 811-1-1	≥ 400
Elongation after ageing max.	%	IEC 811-1-1	± 25
Dielectric constant at 1 MHz		IEC 250	≤ 2.4
Dispersion factor at 1 MHz		IEC 250	≤ 7× 10 ⁻⁴
Dielectric Strength min.	KV/mm	IEC 243	40
Carbon black content	%	IEC 811-4 -1	2.5 ± 0.5
Shrinkage at 115 °C ,24 h max.	%	IEC 538	3

Note : Ageing 100 °C , 240 h

3. Packing

The material shall be properly packed in moisture proof bags in a manner that avoids problem in transportation & storage. The material shall be marked for proper identification and each bag weights 25 kg

And about one ton packet on wooden pallet and then wrapped for easy transportation

4. Test certificate

The supplier shall submit test report for each lot/batch of material

5. Criteria of acceptance/ rejection

The material shall be subjected to inspection and the test shall be carried out for acceptance/ rejection on part or whole lot. .

6. Sample

Each tenderer should provide 25 kg as a sample of material to reach us before closing date for making tests ,unless his material is already successfully tested .

The sample shall be the basis for accepting or rejecting the offer.