

Technical Data Sheet

HGS-640 Compound



Description

HGS-640 is an engineered formulation of LL/HDPE compound designed for the production of high-performance geomembrane sheets used in environmental protection, civil engineering, and water management applications. HGS-640 shows outstanding chemical and mechanical resistance, long-term durability and ESCR, smooth surface finish, and excellent UV and thermal stability.

General

Form: Black Pellets

Process: Extrusion

Application: Geomembrane liners for water storage, aquaculture pools, environmental protection

Additives: AO, PPA, Carbon Black

Packaging: 25 kg sack / 850 kg big bag

Physical Properties

Property	Test Method	Unit	Result
Density	ISO 1183	g/cm ³	0.95±0.005
Melt Flow Rate (190°C/5kg)	ISO 1133	g/10 min	0.6±0.2
Carbon Black Content	ISO 6964	%	2.3
Tensile Strength at Break	ISO 527	MPa	28
Elongation at Break	ISO 527	%	800
Vicat Softening Temperature	ISO 306	°C	127
Oxidation Induction Time	ISO 11357	min	120
Tear Resistance	ISO 6383	N	>250
ESCR (50°C, F50)	ISO 22088	h	>1000

Processing Guidelines

The compound provides excellent surface finish and output rates over a broad range of conditions in PE screw extruder; however, the optimum results are recommended as follows:

- Barrel Temperatures: 150-230 °C
- Die Head Temperatures: 230-240 °C

Notes

- The typical properties have been determined using laboratory equipment. Users are advised to verify results through their own standard testing methods.
- The compound is suitable for use on various machines; however, minor adjustments may be required for individual equipment. Customers are advised to verify product quality prior to commercial use.
- The compound should be stored in its original packaging under cool and dry conditions, protected from direct sunlight, heat and contamination. The recommended storage period at the customer's site should not exceed two years.

