

Manufacturing QC/QA Testing Program

Obtain resin samples from top and bottom of each tankcar hopper or truck shipment and deliver to Poly•Flex laboratory.

LABORATORY TESTS:

- Density, ASTM D 1505
- Melt Index, ASTM D 1238
- Oxidative Induction Time, ASTM D 3895
- Additives (Infrared Respectroscopy)

RESIN PROPERTIES:
DO THEY MEET POLY•FLEX SPECIFICATIONS?

Resin is rejected and cannot be used in the manufacture of Poly•Flex liners.

Offload resin from tankcar hopper or truck into a designated silo

Transport resin to production facilities; resin is extruded as Poly•Flex liner.

Poly•Flex QC personnel continuously monitor sheet thickness, appearance, and extrusion parameters.

DOES SHEET MEET APPEARANCE AND THICKNESS REQUIREMENTS?

Entire roll is held up for further evaluation. may be sold as low-gauge material in non-critical applications.

QC personnel obtain a 12" wide strip off end of each roll. Strips are checked by micrometer against gauge variation limits.

DOES SHEET MEET POLY•FLEX MINIMUM GAUGE

Three tags are affixed to each roll, in accordance with Poly•Flex QC manual guidelines. The lab strip sample obtained from the extrusion line is also labeled. Lab personnel retain and file strip samples from every roll, and perform the following tests in accordance with the Poly•Flex QC Manual:

Property Test Method Testing Frequency (min.)		
Thickness (smooth sheet)	ASTM D 5199	per roll
(textured sheet)	ASTM D 5994	
Asperity Height (textured sheet only)	ASTM D 7466	every second roll
Alternate the measurement side for double-sided textured sheet.		
Sheet Density	ASTM D 1505/D 792	200,000 lb (90,000 kg)
Tensile Properties	ASTM D 6693	20,000 lb (9,000 kg)
1. Yield Stress (HDPE only)		
2. Break Stress		
3. Yield Elongation (HDPE only)		
4. Break Elongation		
2% Modulus (LLDPE only)	ASTM D 5323	per each formulation
Tear Resistance	ASTM D 1004	45,000 lb (20,000 kg)
Puncture Resistance	ASTM D 4833	45,000 lb (20,000 kg)
Axi-Symmetric Break Strain (LLDPE only)	ASTM D 5617	per each formulation
Stress Crack Resistance (HDPE only)	ASTM D 5397 (App.)	per GRI GM10
Carbon Black Content	ASTM D 1603	20,000 lb (9,000 kg)
Carbon Black Dispersion	ASTM D 5596	45,000 lb (20,000 kg)
Oxidative Induction Time (OIT)		
Standard OIT	ASTM D 3895	200,000 lb (90,000 kg)
Oven Aging at 85C	ASTM D 5721	
High Pressure OIT	ASTM D 5885	per each formulation
UV Resistance GRI GM11		
High Pressure OIT	ASTM D 5885	per each formulation

DOES MATERIAL PASS POLY•FLEX SPECIFICATIONS?

NO

YES

Remove rolls to designated storage area before shipping to client.
Prepare Poly•Flex laboratory QC reports and submit to Owner or Project Engineer prior to installation.