SKAPS INDUSTRIES

TECHNICAL NOTE:
DETERMINING CARBON CONTENT

The American Society for Testing Materials (ASTM) has two methods for determining carbon black content in polyolefin: ASTM D 1603 and ASTM D 4218. Both methods are developed and approved by the ASTM Plastic Committee D20.

Test Method ASTM D 1603, "Standard Test Method for Carbon Black Content in Olefin Plastics" covers the determination of the carbon black content in polyethylene, polypropylene, and polybutylene plastics. This test method is not applicable to compositions that contain nonvolatile pigments or fillers other than carbon black.

Test Method ASTM D 4218, "Standard Test Method for Determination of Carbon Black Content in Polyethylene Compounds By the Muffle-Furnace Technique" covers the determination of black polyethylene compounds containing channel or furnace black. This test method is capable of yielding duplicate test data, in 20 min or less, for a simple carbon black content determination.

CONCLUSION:

Both ASTM D 1603 and ASTM D 4218 can measure the carbon black contents of a polyethylene Geonet. ASTM D 4218 is specifically developed and approved test method for polyethylene material and is more efficient test method compared to ASTM D 1603. SKAPS Industries uses ASTM D 4218 in its Manufacturer Quality Control testing to determine carbon black content of Geonets.

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