

ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

**BARRIER, ACOUSTICAL, 25% MINIMUM POST CONSUMER
AND/OR POST INDUSTRIAL RECYCLATE CONTENT**

WSS-M5G65-A

1. SCOPE

The material defined by this specification is a thermoplastic blend of nylon, polyester, polyethylene, and polypropylene containing a minimum of 25% recycled content from post consumer and/or post industrial sources.

2. APPLICATION

This specification was released originally for material used in acoustical barrier composites.

3. REQUIREMENTS

In addition to the requirements listed herein, the end item acoustical assemblies, shall meet all the requirements of the WSS-M99P32-A performance specification for acoustical and thermal assemblies.

Material specification requirements are to be used for initial qualification of materials.

3.1 QUALITY SYSTEM REQUIREMENTS

Material suppliers and part producers must conform to the Company's Quality System Requirements.

3.1.1 All requirements of this specification, identified by symbol (s), shall be met with data representing 3 sigma values.

3.2 INFRARED SPECTROPHOTOMETRY AND/OR THERMAL ANALYSIS

IR spectra and thermograms established for initial approval shall constitute the reference standard and shall be kept on file at the designated material laboratory. All samples shall produce IR spectra and thermograms that correspond to the reference standard when tested under the same conditions.

3.3 CONDITIONING AND TEST CONDITIONS

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Date	Action	Revisions
2002 05 10	Activated	D. Whyte, J. Crist

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3.5 PHYSICAL PROPERTIES

	3.5.1	Density (ISO 1183, Method A) Type A: dash insulator Type B: floor system		1.12 – 1.24 g/cm ³ 1.05 – 1.15 g/cm ³
(s)	3.5.2	Tensile Strength at Max Load, min (ISO 37/ASTM D 412, Die A, 25 mm/min)		
	3.5.2.1	Original	WMD AMD	350 N/cm ² 250 N/cm ²
	3.5.2.2	After Humidity Aging, max (48 h at 38 +/- °C and 95 +/-2% R.H., 1 h at room temperature)		- 30 % Change
	3.5.2.3	After Heat Aging, max (14 days at 38 +/- °C, 1 h at room temperature)		- 15 % Change
	3.5.2.4	After Immersion, max (48 h in distilled water at room temperature)		- 30 % Change
(s)	3.5.3	Tear Strength, min (ISO 34, Method B/ASTM D624, Die C, 50 mm/min)	WMD AMD	30 kN/m 20 kN/m
	3.5.4	Cold Flexibility		No Cracking
		Condition 50 x 150 mm and a 50 mm diameter mandrel at – 30 °C for a minimum of 4 h. Bend specimen 180 degree around the mandrel.		
	3.5.5	Heat Resistance		No Cracking
		Condition 50 x 150 mm and a 50 mm diameter mandrel at 80 °C for a minimum of 4 h and then test per paragraph		