

STRUCTURAL SHEET MOLDING COMPOUND

SCOPE

1.1 The material defined by this specification is a thermoset polyester sheet molding compound (SMC) created for use in compression molding. This material shall exhibit good strength, crack resistance and good surface smoothness characteristics. Typically there is a supplementary painting process performed to this material after molding. High quality surface finishes type Class "A" is expected.

1.2 This specification may involve hazardous materials, procedures and apparatus. This specification does not address the health and safety problems associated with its application or use. It is the specification user's responsibility to follow appropriate health or safety practices and determine the application or regulatory limitation prior to use.

2. APPLICATION

This specification was originally released for materials used in the exterior applications of fenders and hoods for tractors.

3. DESIGNATION

3.1 The Engineering drawing shall contain the following notation for the specification of the subject plastic. As described in Standard 86511126 (FNHA-3-B-100), the Applicable Standards blocks will each include a space for one standard. The part number shall be the number of this specification and the name shall be the name of this specification.

4. RELATED STANDARDS

ASTM D256 - Test Methods for Impact Resistance of plastic and Electrical Insulating Materials.
 ASTM D570 - Test Methods for Water Absorption of Plastics
 ASTM D638 - Test Methods for Tensile Properties of plastics
 ASTM D648 - Test Method for Deflection Temperature of Plastic Under Flexural Load
 ASTM D695 - Test Methods for Compressive Properties of Rigid Plastics
 ASTM D790 - Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical insulating Materials
 ASTM D792 - Test Methods for Specific Gravity (Relative Density) and Density of Plastics by Displacement
 86529682 - Surface Finish Requirements

5. REQUIREMENTS

5.1 PROPERTIES

The properties for this specific material after molding are listed in Table 1.

5.2 PROCESSING PRACTICE

5.2.1 The best molding practice shall be used in processing of the specified material. Surface finish and surface imperfections shall be resolved prior to any final processing of the material. Vacuum - assist molding may be use to reduce surface imperfections.

5.2.2 The painting process on this molded compound will be performed in the final step. Pin

					NAME	STD SMC MATERIAL		
					 NEW HOLLAND		ENGINEERING SPECIFICATION	
							FRAME 1	OF 2
							PART NUMBER	
							86578524	
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FRAME NO.	REV	BY	ECN NO.	DATE				
APP.	DRAWN		1 EKIS	9/7/98				
G.S. 11/23/98	CHECKED							

MATERIALS / PLASTICS**FNHA-2-D-901.00**

holes and surface defects visible in the paint shall not be accepted on any surfaces when designated on the Engineering Drawing as Class "A" surface. Also see specification 86529682.

5.3 INFRARED SPECTROPHOTOMETER

New Holland at its option, may conduct infrared analysis of material/parts supplied to this specification. The curves established for initial approval shall constitute the reference standard and shall be kept on file at New Holland, Inc. All samples shall produce curves that correspond to the reference standard when tested under the same conditions as those on the master cure.

6. APPROVAL OF MATERIALS

Materials defined by this specification must have prior approval by the responsible Materials Engineering Activity. Suppliers desiring approval of their materials shall first obtain an expression of interest from the effected Purchasing, Design or Supplier shall submit to the affected Materials

Engineering Activity its own Laboratory report to the specification (test results, not nominal values) the material designation and code number, and specimens for New Holland Inc. evaluation. Upon approval, the material will be added to the Materials Engineering Approved Source List.

7. SUPPLIER'S RESPONSIBILITY

All materials supplied to this specification shall be equivalent in all characteristics to the material upon which approval was originally granted. Prior to the making of any changes in the properties, composition, construction, color, dimensions, processing or labeling of the material originally approved under this specification, the supplier shall notify Purchasing and the affected Materials Engineering activity of the proposed changes and obtain the written acknowledgment of the Material Engineering activity. Test data, test samples and a new identification code are to be submitted with the request.

TABLE 1 PROPERTIES			
Description	Unit	Specification	Procedure
Color		Gray	
Specific Gravity		1.92	ASTM D-792
Glass Content	percent	27	
Glass Fiber Length	inch	1	
Tensile Strength	psi	11,500	ASTM D-638
Tensile modules	psi	1,750,000	ASTM D-790
Flexural Strength	psi	23,500	ASTM D-790
Compression strength	psi	20,000	ASTM D-695
Impact Notched	Ft-lb/in	18	ASTM D-256
Water Absorption	%	.40	ASTM D_570
Hardness			

TABLE 2 APPROVED SUPPLIERS	
SUPPLIER	SUPPLIER PRODUCT CODE

 NEW HOLLAND	NAME STD SMC MATERIAL				PART NUMBER 86578524	
	ENGINEERING SPECIFICATION				REV. A	FRAME 2