

MATERIALS / PLASTICS

FNHA-2-D-002.01

POLYETHYLENE, ULTRA HIGH MOLECULAR WEIGHT**1. SCOPE**

1.1 The material defined by this specification is an ultra high molecular weight polyethylene.

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 material used in an exterior fuel tank protective shields where outstanding impact and exceptional resistance to abrasion is required.

3. DESIGNATION

The Engineering drawing shall contain the following notation for the specification of the subject plastic. As described in standard 86511126 (FNHA-3-B-100.00), 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. The color must also be specified on the drawing.

4. RELATED STANDARDS

ASTM D149 - Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies

ASTM D256 - Test Method for Determining the Pendulum Impact Resistance of Notched Specimens of Plastics

ASTM D257 - Test Method for D-C Resistance or Conductance of Insulating Materials

ASTM D638 - Test Methods for Tensile Properties of Plastics

ASTM D785 - Test Method for Rockwell Hardness of Plastics & Electrical Insulating Materials

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

ASTM D1601 - Test Method for Dilute Solution Viscosity of Ehtylene Polymers

ASTM D1822 - Test Method for Tensile Impact Energy to Break Plastics and Electrical Insulating Materials

ASTM D1894 - Test Method for Static and Kinetic Coefficient of Friction of Plastic Film and Sheeting

ASTM D2240 - Test Method for Rubber Property-Durometer Hardness

5. REQUIREMENTS**5.1 PHYSICAL PROPERTIES**

Shown in Table 1.

5.2 ELECTRICAL PROPERTIES

Shown in Table 1.

					NAME	STD POLYETHYLENEUHMW	
					 NEW HOLLAND	ENGINEERING SPECIFICATION	
ALL	B	RLF	110244	JUL 97		FRAME 1	OF 3
ALL	A	RE	106973	951003			
FRAME NO.	REV	BY	ECN NO.	DATE		PART NUMBER	
APP.	DRAWN		ES	AUG 95	THE INFORMATION HEREON IS THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF NEW HOLLAND NORTH AMERICA, INC. AND/OR NEW HOLLAND CANADA, LTD. ANY USE, EXCEPT THAT FOR WHICH IT MAY BE LOANED, IS PROHIBITED.		
KHH OCT 95	CHECKED						

MATERIALS / PLASTICS**FNHA-2-D-002.01****5.3 INFRARED SPECTROPHOTOMETRY**

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. All samples shall produce curves that correspond to the reference standard when tested under the same conditions as those on the master cure.

5.4 To be run as part of certification of Product Quality.

Intrinsic Viscosity 100 ml/g

(ASTM D1601 except temperature to be 135°C and concentration 0.03 g/cm³.)

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 test 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 acknowledgement of the Material Engineering activity. Test data, test samples and a new identification code are to be submitted with the request.

 NEW HOLLAND	NAME			PART NUMBER		
	STD POLYETHYLENEUHMW			86521407		
ENGINEERING SPECIFICATION			REV. B	FRAME 2	OF 3	