



A Medium Density Polyethylene Compound

TYPICAL APPLICATIONS:

Wire Troughs, and other automotive components.

Product Description:

Properties shown below for this filled blend are typical for a medium density polyethylene compound. This product is designed for blow molding and extrusion processes.

Product Reference: PE10

Color available: Black (M0013)

Features and Options:

- High Impact
- Good Flexibility
- Chemical Resistance
- 85°C continuous rating (3000 hours)
- short term : 115°C - 168 hours

Physical Properties	Test Methods	Values	Unit
Melt Flow Index (190°C, 21.6 kg)	ASTM D1238	>0.9	g/10 min
Specific Gravity	ASTM D792	0.94	g/cm ³
Tensile Strength, Yield (50 mm/min)	ASTM D638	15	MPa
Tensile Elongation, Break (50 mm/min)	ASTM D638	>450	%
Flexural Modulus, secant (1.3 mm/min)	ASTM D790	350	MPa
Flammability (3mm)	UL94	HB	-

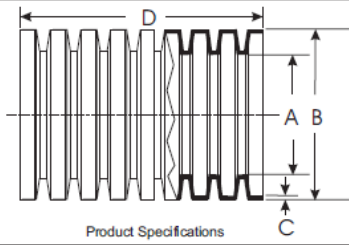
This raw material is designed to meet:

- Ford ES-XU5T-14A099-AA RevB - 85°C-
- UTMS 18013
- Yazaki YPES 16-122 - 85°C-
- ESB-M4D152-A and ESB-M4D153-A
- DELPHI M2092 / M3421 / C0836

IMDS report available on demand.

*This material must be compliant with **ELV directive 2000/53/EC and its Annexes**. A maximum concentration value up to 0.1% by weight and per homogeneous material for lead, hexavalent chromium and mercury and up to 0.01% by weight per homogeneous material for cadmium shall be tolerated provided these substances are not intentionally introduced. No intentionally introduced amount is tolerated.*

The data listed here falls within normal range of properties, but they should not be used for setting specific limits or used as a basis for design. The applications and conditions for use of this product including technical assistance and information are beyond our control. Users of this product are responsible for evaluating this product to ensure their own satisfaction that it is suitable for their intended uses. All information is given without warranty or guarantee. Before working with this product, users must read and familiarize themselves with the available health, safety and environmental information that is available regarding product hazards, proper use and handling.



Product Specifications

Material Type	Code	Tech Data Sheet	Delphi (Packard)	Ford	General Motors	Chrysler	ASTM	Flame Rating For Material
Polyethylene	DE	TD-013						
	HE	TD-015						
	KE	TD-018	M-2092					
	ME	TD-017						
	PE	TD-013						
	FE	TD-003						DR-006
	VE	TD-019						
	**	VO	TD-014					UL-94 V2
								UL-94 V0
	Nylon	SE	TD-002		ESB-M4D152-A			
NC		TD-004				MS-DB41		
ND		TD-005						
NF		TD-007		WSS-M4D933-A1			D4066PA263	
NP		TD-008	M-2170		GMP-PA6.003 GM 7001-M-PA6	MS-DB41 CPN-2785	D4066PA260	UL-94 HB
Polypropylene	PP	TD-009						
	RP	TD-011	M-2262-001			MS-DB532-B CPN-2796		
	FP	TD-010						UL-94 V2
Polyester	PT	TD-001	M-2373					

* The asterisk designates preliminary dimensions of a new or modified product. These values are set from initial statistical studies and will be verified after further production runs are completed.

** The "VO" is a non-Halogenated product.

Note: All "UL" flame ratings are for the resin used to manufacture our product, not on our product. All "UL" ratings are created by testing a standard "UL" plaque specimen, not tubing samples.

Product Dimensions

Nominal ID Diameter	Dia. Code	Units	Dimension "A" I.D.		Dimension "B" O.D.		Dimension "C" Wall Thickness Min.
			Min.	Max.	Min.	Max.	
			1/4" (6mm)	6.02 0.237	6.76 0.266	9.49 0.374	
1/4" (7mm)	6.50 0.256	7.01 0.276	9.47 0.373	10.11 0.398	0.11 0.004		
3/8" (9mm)	8.66 0.341	9.65 0.380	12.62 0.497	13.36 0.526	0.12 0.005		
3/8" (9mm)	9.35 0.368	10.11 0.398	12.56 0.494	13.32 0.525	0.12 0.005		
7/16" (10mm)	10.13 0.399	11.10 0.437	14.55 0.573	15.16 0.597	0.12 0.005		
1/2" (13mm)	11.97 0.471	13.07 0.515	16.39 0.645	17.31 0.681	0.12 0.005		
1/2" (13mm)	12.01 0.473	13.11 0.516	16.87 0.664	17.78 0.700	0.12 0.005		
5/8" (16mm)	15.11 0.595	16.68 0.653	19.59 0.732	19.56 0.770	0.12 0.005		
5/8" (16mm)	15.32 0.603	16.23 0.639	20.45 0.805	21.26 0.837	0.12 0.005		
3/4" (19mm)	17.96 0.707	19.28 0.759	24.13 0.950	25.12 0.989	0.12 0.005		
3/4" (19mm)	18.97 0.747	19.86 0.782	23.10 0.909	23.86 0.939	0.12 0.005		
7/8" (22mm)	21.54 0.848	22.81 0.898	28.12 1.107	28.24 1.151	0.13 0.005		
1" (25mm)	22.78 0.897	24.10 0.949	27.36 1.077	28.17 1.109	0.15 0.006		
1" (25mm)	25.20 0.992	26.52 1.044	31.66 1.246	32.88 1.294	0.15 0.006		
1" (25mm)	25.91 1.020	27.16 1.069	31.78 1.251	33.13 1.304	0.15 0.006		
1 1/8" (29mm)	28.50 1.122	29.86 1.176	34.58 1.356	35.88 1.413	0.15 0.006		
1 1/4" (30mm)	30.45 1.199	31.53 1.257	36.73 1.446	38.10 1.500	0.15 0.006		
1 1/2" (40mm)	39.78 1.566	41.83 1.647	47.42 1.867	49.45 1.947	0.15 0.006		
2" (51mm)	50.01 1.969	51.77 2.038	58.04 2.285	60.66 2.388	0.28 0.011		
2 1/2" (64mm)	62.15 2.447	63.90 2.516	70.39 2.771	73.01 2.874	0.28 0.011		
3 1/2" (89mm)	88.41 3.481	90.41 3.559	97.00 3.819	100.00 3.937	0.28 0.011		

Dimension "D" Cut-To-Length Specifications

Less Than or Equal to 400mm +/- 10mm	Greater Than 400mm +/- 2.5% of Target Length
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Note: (1) Product tolerances are general and are designed to encompass all available materials. Tighter tolerances may be available for a specific material.
 (2) Product with an ID. > 1.5" will not meet the std. cut length tolerances listed above. Special cut length tolerance will be given on a case to case basis.

Convuluted Tubing	
MATERIALS: N/A	FINISH: N/A
SCALE: N/A	To: <input type="checkbox"/> XX <input type="checkbox"/> XXX <input type="checkbox"/> ANGLE <input type="checkbox"/> ±
ENGINEERING APPROVAL: Patrick De Belder	QUALITY APPROVAL: Neil Coleman DATE: 10/25/05

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