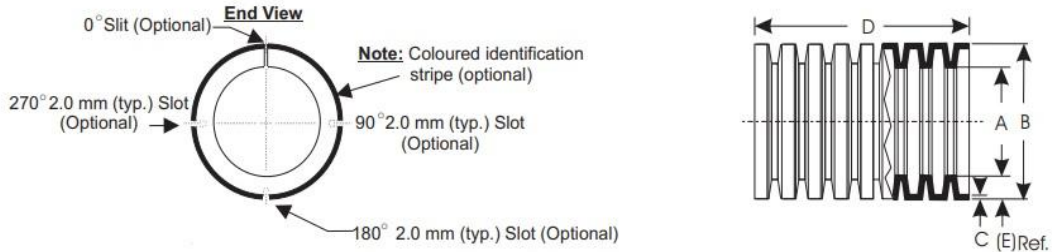


## TECHNICAL DATA – PRODUCT DETAILS



### Product Description

Flexible convoluted tubing / conduit manufactured from a nylon 6 co-polymer resin and UV Inhibitor.

### Performance Enhancers

|                 |     |
|-----------------|-----|
| Flame Retardant | No  |
| UV Inhibitor    | Yes |
| Heat Stabilizer | No  |

### Performance Characteristics

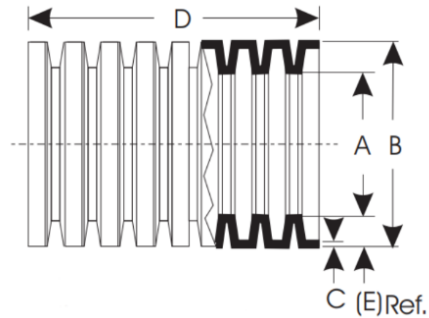
|                                    |                                            |
|------------------------------------|--------------------------------------------|
| Flexibility                        | Good                                       |
| Abrasion Resistance                | Excellent                                  |
| Chemical Resistance                | Good                                       |
| Continuous Operating Temperature   | -40 to +125C (-40 to +257F) Min. 3000 Hrs. |
| Short Term" Operating temperatures | -40 to +149C (-40 to +300F) Max. 168 Hrs   |

| Typical Physical Properties         | Test Method | Value     | Units |
|-------------------------------------|-------------|-----------|-------|
| Specific Gravity/Density            | ISO 1183    | 1.07      | -     |
| Elongation @ Break                  | ISO 527     | 70        | %     |
| Elongation @ Yield                  | -           | -         | -     |
| Tensile Strength @ 25C              | ISO 527     | 51        | MPa   |
| 2% Secant Modulus                   | -           | -         | -     |
| Flexural Modulus                    | ISO 178     | 1710      | MPa   |
| Melting Point                       | ISO 11357   | 424 (218) | °C    |
| Notched Izod Impact Test            | ISO 180     | 100       | KJ/m2 |
| Heat Deflection Temperature @66psi  | -           | -         | -     |
| Heat Deflection Temperature @264psi | -           | -         | -     |

### Material Certifications

|                         |                                                                                                                                                                                                                                                                                                              |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Delphi / Packard        | -                                                                                                                                                                                                                                                                                                            |
| Ford                    | -                                                                                                                                                                                                                                                                                                            |
| General Motors          | -                                                                                                                                                                                                                                                                                                            |
| Chrysler                | -                                                                                                                                                                                                                                                                                                            |
| ASTM                    | -                                                                                                                                                                                                                                                                                                            |
| Underwriters Laboratory | -                                                                                                                                                                                                                                                                                                            |
| FMVSS 302               | -                                                                                                                                                                                                                                                                                                            |
| Other                   | The resin used to manufacture this product has the stabilizer supplier recommended percentage for a 3 Year weather a product. The validation testing for this material was performed following the SAE J1960/ J2527 (3000 hr's). Please note, this validation testing yields an estimated UV life span only. |

## PRODUCT DIMENSIONS



| Inside Diameter | Dimension "A" Inside Diameter |                   | Dimension "B" Outside Diameter |                   | Dimension "C" Wall Thickness | Dimension "E" (Corr Ht. Ref.) |
|-----------------|-------------------------------|-------------------|--------------------------------|-------------------|------------------------------|-------------------------------|
|                 | Min                           | Max               | Min                            | Max               |                              |                               |
| 1/4" (6 mm)     | 0.237" (6.02 mm)              | 0.266" (6.76 mm)  | 0.372" (9.45 mm)               | 0.4" (10.16 mm)   | 0.004" (0.10 mm)             | 0.067" (1.70 mm)              |
| 3/8" (9 mm)     | 0.341" (8.66 mm)              | 0.38" (9.65 mm)   | 0.496" (12.60 mm)              | 0.526" (13.36 mm) | 0.005" (0.13 mm)             | 0.075" (1.90 mm)              |
| 7/16" (10 mm)   | 0.399" (10.13 mm)             | 0.437" (11.10 mm) | 0.569" (14.45 mm)              | 0.597" (15.16 mm) | 0.005" (0.13 mm)             | 0.083" (2.11 mm)              |
| 1/2" (13 mm)    | 0.471" (11.96 mm)             | 0.515" (13.08 mm) | 0.645" (16.38 mm)              | 0.681" (17.30 mm) | 0.005" (0.13 mm)             | 0.085" (2.16 mm)              |
| 5/8" (16 mm)    | 0.595" (15.11 mm)             | 0.633" (16.08 mm) | 0.732" (18.59 mm)              | 0.77" (19.56 mm)  | 0.005" (0.13 mm)             | 0.069" (1.75 mm)              |
| 3/4" (19 mm)    | 0.707" (17.96 mm)             | 0.759" (19.28 mm) | 0.95" (24.13 mm)               | 0.989" (25.12 mm) | 0.005" (0.13 mm)             | 0.118" (3.00 mm)              |
| 7/8" (22 mm)    | 0.848" (21.54 mm)             | 0.898" (22.81 mm) | 1.107" (28.12 mm)              | 1.151" (29.24 mm) | 0.005" (0.13 mm)             | 0.128" (3.25 mm)              |
| 1" (23 mm)      | 0.897" (22.78 mm)             | 0.949" (24.10 mm) | 1.077" (27.36 mm)              | 1.109" (28.17 mm) | 0.006" (0.15 mm)             | 0.085" (2.16 mm)              |
| 1-1/4" (30 mm)  | 1.199" (30.45 mm)             | 1.257" (31.93 mm) | 1.446" (36.73 mm)              | 1.5" (38.10 mm)   | 0.006" (0.15 mm)             | 0.123" (3.12 mm)              |
| 1-1/2" (40 mm)  | 1.566" (39.78 mm)             | 1.647" (41.83 mm) | 1.867" (47.42 mm)              | 1.947" (49.45 mm) | 0.006" (0.15 mm)             | 0.15" (3.81 mm)               |
| 2" (51 mm)      | 1.969" (50.01 mm)             | 2.038" (51.77 mm) | 2.285" (58.04 mm)              | 2.388" (60.66 mm) | 0.011" (0.28 mm)             | 0.167" (4.24 mm)              |

## Base Material Chemical Resistance Summary

| Material / Chemical | Rating            |
|---------------------|-------------------|
| Engine Coolant      | Good              |
| Brake Fluid         | Excellent         |
| Diesel Fuel         | Excellent         |
| Gas                 | Excellent         |
| Methanol            | Good              |
| Transmission Fluid  | Excellent         |
| Power Steering      | Excellent         |
| Engine Oil          | Excellent         |
| Engine Cleaner      | Good              |
| Antifreeze          | Good              |
| Windshield Washer   | Good              |
| De-Icer / Road Salt | Excellent         |
| Battery Acid        | Poor              |
| Salt                | Excellent         |
| Isopropyl           | Good              |
| Algae               | No Data Available |
| Chlorine            | Poor              |
| Salt Water          | Excellent         |
| Fresh Water         | Excellent         |

| Rating              | Effect Description                                                                                                                                                          |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Excellent Resistant | Possible slight absorption / changes to weight, dimensions, properties. According to current knowledge, no irreversible damage. Negligible effect on mechanical properties. |
| Good                | Minor Effect. Slight change in properties. Small reduction in mechanical properties likely.                                                                                 |
| Fair                | Moderate Effect. Limited resistance. Softening, loss of strength. Prolonged exposure may cause irreversible damage. Material will have limited life.                        |
| Poor                | Severe Effect. Irreversible damage. Material may decompose or dissolve.                                                                                                     |
| No Data Available   | No performance data available for this chemical / material combination.                                                                                                     |