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SUBMITTAL SHEET

JOB NAME	ITEM TAG
JOB LOCATION	PART NUMBER
CONTRACTOR	DATE
ENGINEER APPROVAL	DATE

HyperPure™

Potable Water PE-RT Tubing

Manufactured using HyperTherm® 2399 NT Bimodal PE-RT (Polyethylene Raised Temperature), by The Dow Chemical Company.

100-year limited warranty.

Packaged in UV-blocking clear plastic wrap to protect the tubing from UV-light oxidation.*

Available in nominal tubing sizes:
1/4", 3/8", 1/2", 3/4", 1", 1¼", 1½", and 2".

Available in colors: Red, Blue and Natural.

HyperPure is not manufactured or formulated with Bisphenol A.

Rated Pressure & Temperature

200 psi @ 73°F

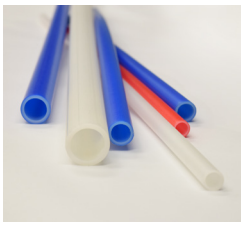
100 psi @ 180°F

Linear Expansion Rate : 1.1"/ 10°F / 100 ft.

- National Plumbing Codes IPC 2012 and UPC 2012.
- ICC-ES Listing: in compliance with 2015, 2012 & 2009 IPC, IRC & UPC. Per report PMG-1363
- ASTM F2769 - Standard specs for PE-RT in hot & cold water distribution systems (equivalent to ASTM F876 & 877 for PEX)
- CL-5 - 100% exposure at 140° F.
- AWWA C901 - Polyethylene pressure pipe.
- CSA B137.18 - Requirements for PE-RT made in SDR-9.
- Fitting Standards: ASTM F 1807, F 2159, F 2098, F 2080 & ASSE 1061.
- SDR-9 - CTS pipe size.
- ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials (FS/SD – 25/50).
- CAN/ULC S102.2 – Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Covering, and Miscellaneous Materials and Assemblies (FS/SD – 25/50)

c NSF us-pw

Pictured: HyperPure™ Coils



Pictured: HyperPure™ Sticks

MATERIAL SPECIFICATION

PART	MATERIAL	SPECIFICATION
PE-RT Tubing	Dow HyperTherm 2399NT	ASTM F2769

DIMENSIONS

Nominal Tubing Size	OD	Average wall thickness	Available coil lengths	20' Stick	Weight (lb) / 100'	Capacity (Gal) / 100ft
1/4"	0.375"	0.064"	100'	No	2.5	
3/8"	0.500"	0.070"	100'	No	4.2	0.50
1/2"	0.625"	0.070"	100', 300', 500' & 1000'	Yes	5.5	0.92
3/4"	0.875"	0.097"	100', 300', 500' & 1000'	Yes	10.5	1.82
1"	1.125"	0.125"	100', 300' & 500'	Yes	17.3	3.04
1¼"	1.375"	0.153"	-	Yes	25.6	4.52
1½"	1.625"	0.181"	-	Yes	35.5	6.30
2"	2.125"	0.236"	-	Yes	60.2	10.80

**PE-RT must be stored indoors not exposed to direct sunlight.*

TECHNICAL INFORMATION

HYPERTHERM™ 2399 NT
High Density Polyethylene Resin

HYPERTHERM™-2399 NT BIMODAL POLYETHYLENE Resin is a Polyethylene resin with raised temperature capability produced using UNIPOL II process technology. This product is intended for use in piping systems where high temperatures and aggressive oxidation conditions exist. Suitable applications include hot and cold potable water.

Industrial Standards Compliance:
ASTM D 3550: cell classification PE445574A
Plastics Pipe Institute (PPI): TR-4

- Natural Pipe - HYPERTHERM™ 2399 NT BIMODAL POLYETHYLENE Resin
  - ASTM PE4710 pipe grade - 1600 psi HDB @ 23° C
  - ASTM PE4710 pipe grade - 800 psi HDB @ 82.2° C

NSF International

- Natural Pipe - HYPERTHERM™ 2399 NT BIMODAL POLYETHYLENE Resin
  - Standard 14 and 61

Meets requirements of

- ASTM F2769, F2623, & F1281

Additives

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	**Nominal Value**	**Test Method**
Density (Natural)	0.950 g/cm³	ASTM D1505
Base Density [1]	0.950 g/cm³	Dow Method
Melt Mass-Flow Rate 190°C/2.16 kg 190°C/21.6 kg	 0.10 g/10 min 7.0 g/10 min	ASTM D1238
Mechanical	**Nominal Value**	**Test Method**
Tensile Strength [2] (Yield)	> 3500 psi	ASTM D638
Tensile Elongation [2] (Break)	> 500 %	ASTM D638
Flexural Modulus [3, 2]	152000 psi	ASTM D790B
Resistance to Rapid Crack Propagation, Pc- S-4 [4] 32°F (0°C)	> 174 psi	ISO 13477
Resistance to Rapid Crack Propagation, Tc- S-4 @ 145 psi (10 bar) [4]	< 2° F	ISO 13477
Slow Crack Growth PENT - @ 2.4 MPa [2] 176°F (80°C) 194°F (90°C)	 > 12000 hr > 6000 hr	ASTM F1473
Impact	**Nominal Value**	**Test Method**
Notched Izod Impact [2] (73°F (23°C))	9.1 ft-lb/in	ASTM D256A
Thermal	**Nominal Value**	**Test Method**
Brittleness Temperature [2]	< -103° F	ASTM D746A
Melting Temperature (DSC)	269° F	Dow Method
Thermal Stability	> 428° F	ASTM D3350
Additional Information	**Nominal Value**	**Test Method**
Chlorine Resistance Level	5.00	ASTM F2023/F2769
Extrusion	**Nominal Value**	
Melt Temperature	380 to 450° F	

Note: *These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.* [1]*Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.* [2]*Compression molded parts prepared according to ASTM D 1928 Procedure C. Properties will vary with changes in molding conditions and aging time.* [3]*Method 1 (3 point load).* [4]*Pipe diameter of 10 inch IPS (25.4 cm) and Diameter Ratio (SDR) 11.*