

DRITHERM® SPECIFICATION DATA SHEET

1. PRODUCT NAME

DriTherm®

Underground Pipe Insulation/Corrosion Protection

2. MANUFACTURER

DriTherm Incorporated
375 Route 10 – Suite 100
Whippany, NJ 07981-2104

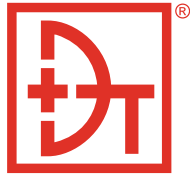
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3. PRODUCT DESCRIPTION

Basic Use: DriTherm is used to insulate/corrosion protect underground piping/tanks/structures. It is poured around underground pipes to isolate these from moist/wet soils while providing highly efficient thermal insulation. The DriTherm formula has been used successfully for District Heating/Cooling applications including: steam, condensate return, hot & chilled water, oil and chemicals, compressed air, etc. It is used for new construction projects and is ideally suited for repairing existing systems that have experienced increased energy loss/corroded piping.

Composition and Materials: DriTherm is manufactured using 100% Calcium Carbonate particles which have been chemically modified to completely repel water / moisture. Each particle contains a cohesive surface which allows for a complete and enduring bond once installed and backfilled. All DriTherm particles are less than 5 micron in size.

Product History: DriTherm is a uniquely formulated product/system that has been continuously manufactured using the same specification since 1967 without change. A long documented track record of customer satisfaction exists with the DriTherm product. Over 4.5 million cubic feet (equivalent to over 300 miles of piping) of DriTherm formula product have been installed almost exclusively in North America with installations in Caribbean countries, South America, Europe, North Africa, and Japan as well, with excellent results reported.

Limitations: DriTherm can only be used around underground pipes, tanks, and structures. It is not intended for use on above ground applications. It is recommended for application temperatures between -275°F and $+480^{\circ}\text{F}$ (higher temperatures possible – consult mfr.) and should not be used where moving or permanent water will be in direct contact with it unless sub-drainage is installed.

4. PHYSICAL PROPERTIES

- Thermal Conductivity: (ASTM C 177)
 $K=0.58$ btu/hr/ft² °F/in (100°F) and $K=0.68$ at 300°F
- Temperature Range: -273°F to 480°F (250°C)
- Bulk Density: 60 – 62 lbs. per cubic feet (CF) installed
- Load Bearing: up to 12,000 lbs. per square feet
- Electrical Resistivity: $R=10^{14}$ OHMS-CM
- Dielectric Constant: 2.7
- Friction Coefficient: 0.35 ± 0.04
- Water/Moisture Resistance: Withstands 10 ft. hydrostatic head of water for minimum of 14 days with moisture gain less than 0.02%
- Completely Non-Toxic – User Friendly
- Environmentally Safe

Product Features: One product insulates both hot and cold pipes. A free flowing, self-compacting material - pour from bag/sack and backfill. Completely inert - will not affect piping materials.

Each DriTherm particle is certified 100% Hydrophobic. DriTherm contains no fillers or Perlite – each bag/sack contains only 100% waterproof insulation.

No costly Cathodic or additional protection required to prevent pipe corrosion. When installed, individual particles form closed cell bonds with each other effectively preventing air, water, moisture penetration to piping system. No long term degradation from normal soil constituents.

Federal Approval: DriTherm has been approved for new construction on military bases and federal institutions by the following user agencies:

- Corps of Engineers
- Naval Facilities Engineering
- Department of the Air Force
- Veterans Administration

5. INSTALLATION

Preparation:

- Excavate trench to minimum dimensions.
- Install pipe anchors, guides, and supports as required.
- Install piping and test for leaks
- Remove any debris from trench base

Forming:

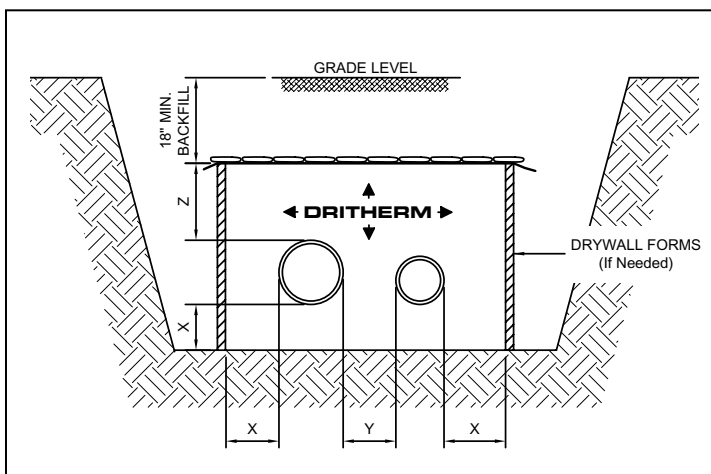
- Prepare drywall sideforms (if necessary) to specified vertical height.
- Install and secure forms rigidly to specified horizontal width.

Product Installation:

- Apply Bitumastic and mineral wool where required.
- Pour DriTherm to required dimensions.
- Cover DriTherm with 4-6 mil Polyfilm.
- Place empty bags / sacks over DriTherm.

Backfilling:

- Manually / gently install first 4 – 6" of clean backfill.
- Mechanically complete backfilling to project specs.



6. AVAILABILITY AND COST

Product Availability: Available from the following factory manufacturing locations:

Lucerne Valley, CA 92356 Fort Dodge, IA 50501
 Marblehill, GA 30145 Adams, MA 01220
 Quincy, IL 62301 Marble Falls, TX 78654

DriTherm is packaged in forty-five 50-lb. bags per pallet (37.5 CF) and shipped in full pallet lots only. It is also packaged in 40 CF Super Sacks which have a bottom discharge chute for quick dispensing. Product stock is maintained at all factory and distributor locations. Shipments are usually made within 24 hrs.

Costs: DriTherm is sold by the cubic feet (CF) and economically priced. Call (800) 343-4188 for current pricing.

7. WARRANTY

DriTherm, Inc. warrants for a period of (1) year after the date of delivery that the products sold by DriTherm, Inc. will be of like grade and quality to and in accordance with DriTherm, Inc.'s published data sheet for such products. Refer to engineering manual / technical brochure for warranty limitations and owner responsibility.

DRITHERM ENVELOPE DIMENSIONS IN INCHES															
Nom. Pipe Dia.	-100°F to 100°F			101°F to 230°F			231°F to 305°F			306°F to 400°F			401°F to 480°F		
	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z
1	3	2	4	3	2	4	3	2	4	3	2	4	4	2	5
2	3	2	4	3	2	4	3	2	4	4	2	5	4	2	5
3	3	2	5	3	2	5	4	2	5	4	2	5	4	2	5
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14	5	4	6	6	4	8	7	4	8	7	4	9	7	4	10
16	5	4	6	6	4	8	7	4	9	8	4	10	8	5	10
18	5	4	6	7	4	9	7	4	9	8	4	10	8	5	10
20	5	4	7	7	4	9	8	4	10	9	4	10	9	5	10
24	5	4	7	7	4	9	8	4	10	10	4	12	10	5	12

8. MAINTENANCE

None required.

9. TECHNICAL SERVICES

Complete engineering services are available including: system layout, component design (CAD drawings), volume calculations, computerized heat load calculations, and start up training of installation crew. No charge (ordinarily) for technical assistance to specifying engineers / customers.

Technical Sales Agents:

Over 20 representatives service all of North America. Call (800) 343-4188 for nearest agent.

10. AVAILABLE LITERATURE

- Product Brochure
- Engineering Manual
- Specifications from website / CD
- Cad drawings from website / CD
- Reference History Data