

DriTherm®: Pour In Place Insulation

Product Overview



Created: July 16, 2008

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DRITHERM
INTERNATIONAL INC.

*"The longest Continuously Manufactured
Underground Pipe Insulation on the Market"*

About Us

- DriTherm International Inc. was founded in 1991 as a manufacturer of pour in place underground insulation.
- In 1991 DriTherm International Inc. acquired the proprietary Protexulate formula manufactured since 1967 is and rebrands it as ***DriTherm®***.
- Over the next 4 years DriTherm International Inc. developed 5 manufacturing locations and enough capacity to supply North America and began exporting to South America, the Middle East, the Caribbean, Europe, North Africa, and Japan.
- Since 1991 DriTherm International Inc. has grown to become one of the largest distributor of pour-in-place insulation in the US with a customer base which includes 4 federal agencies, Colleges, Universities, Municipalities, Hospitals, and Heavy Industry.
- DriTherm maintains a global sales network with over 45 agencies.
- **Mission Statement:** To provide customers with the service they deserve, a product that meets their expectations, and in the most professional and expedient manner possible.



www.DriTherm.com



Product Overview

- The function of DriTherm® is to provide both insulation and corrosion protection in a field applied system. DriTherm is installed directly from its packaging around underground piping to form a dense, closed cell, barrier between the piping and the surrounding soil. Once installed to specified dimensions, the product self compacts with the weight of backfill to form a strong (12,000 PSF) block of cohesively bonded particles that retard air, water, moisture, passage to the carrier piping.
- Typical DriTherm® applications include High Pressure Steam/Condensate, Hot & Chill Water piping, and many unique applications where DriTherm's unique combination of hydrophobicity and insulating properties may be utilized.
- When compared to traditional products, a DriTherm system can be as much as 40% less in total installed cost, with no compromise in thermal efficiency or longevity.



Product Overview cont.

- DriTherm is packaged in either 50 lb. bags or 40 cubic feet (2400 lbs) super sacks. Product packaged in 50 lb. bags are shipped on pallets (45 bags per pallet/ 37.5 CF). Palletized 50 lbs bags are typically used for small or hard to reach jobs where as the super sacks are used for larger jobs with access to moving equipment.
- DriTherm® is manufactured and stocked at (5) facilities located in California, Georgia, Illinois, Massachusetts, and Texas. Typically a truckload of material can be shipped within 24 to 48hrs notice.
- Most common method of shipping is via flatbed trucks with LTL shipments typically going in closed van type trucks.
- DriTherm is completely **Nontoxic and environmentally safe**. Its primary ingredients are commonly used in food and medicine



DriTherm Features

- DriTherm is a dry, free flowing manufactured product that is formulated from a single inorganic compound and surface treated to allow each particle to become completely waterproof. It is inert, non-toxic, non-flammable, and completely free of asbestos. It does not require any mixing or curing whatsoever. It is completely compatible with all materials used typically for piping in the service range of **cryogenic (-273°) to + 480° F.**
- Once installed and backfilled DriTherm becomes a **unique**, closed cell, barrier between the piping system and surrounding soil which effectively prevents water/moisture/air passage through it. Underground pipes/tanks are placed in a dry, stable environment.



DriTherm Features cont.

- DriTherm is meets United Facilities Guide Specifications (UFGS) for new construction on US Military bases and Federal Institutions:

Corps of Engineers

Naval Facilities Engineering Command

Department of the Air Force

Veterans Administration

NASA

- High Thermal Efficiency 80 - 90% BTU retention.
- 25 to 40% lower system installed cost.
- Completely Nontoxic and Environmentally Safe.
- 100% self compacting: No mechanical compaction required.
- Over 4 million cubic feet of same formula (DriTherm) product has been satisfactorily installed in North America since 1967 (40+ years)
- Only pour in place insulation of its kind to absorb less than 0.02% moisture after a 14 day 10 ft head of water test.





Installation Procedure

Preparation:

1. Excavate trench to minimum dimensions.
2. Install sub-drainage if specified.
3. Install anchors, guides, and temporary supports as required.
4. Install piping & test for leaks.
5. Compact and stabilize base of trench to assure support system.
6. Verify dimensional spacing to ensure proper envelop size.





Installation Procedure cont.

Forming:

1. Remove any temporary standing water in trench.
2. Prepare side forms to vertical height requirement of specifications.
3. Install and secure forms rigidly to horizontal width requirement of specifications.
4. Apply Bitumastic and mineral wool where required
5. Verify dimensional spacing to ensure proper envelop size.





Installation Procedure cont.



Installation:

1. Pour DriTherm to appropriate dimensions.
2. If necessary, knife DriTherm to eliminate all voids beneath pipes.
3. Cover DriTherm with polyfilm.
4. Carefully place empty bags/sacks over polyfilm.



Installation Procedure cont.

Backfilling:

1. Manually/ gently install first 6 to 10 inches of clean backfill from as close to pipe elevation as possible.
2. If compaction of backfill is required, install a minimum of 8 – 12 inches of clean backfill before using mechanical compaction equipment.
3. Remove temporary supports
4. Mechanically or manually complete backfilling to specified dimensions.



**DRITHERM IS SELF COMPACTING. DO NOT
MECHANICALLY COMPACT THE DRITHERM PRODUCT.**



FAQ's

How is thermal expansion handled in a DriTherm system?

Thermal expansion occurs at elbows, expansion loops, and z bends, is handled through the use of a 4 - 6 lb. density mineral wool product, wrapped around the pipe at the point of lateral growth.

Is DriTherm environmentally safe and non-hazardous to installers?

DriTherm is completely environmentally safe and will not damage eco-systems when installed properly. DriTherm is non hazardous to installers. PPE - dust masks are recommended to be worn when installing because fine particles can be irritating.

Can it be stored outdoors?

Super Sacks can, because they are made from a tough, water resistant, polypropylene material. DriTherm packaged in 50 lb. paper bags should not be stored outside unless no rain is expected.

How much weight will DriTherm support?

Once installed and backfilled, a DriTherm installation will support up to 12,000 PSF, which is greater than most, if not all, natural soils.





FAQ's cont.

Can DriTherm be used to repair other types of systems?

Yes. Consult DriTherm, Inc. for full details and information. Generally, on a pre-insulated type of system, the outer jacket is removed and the carrier pipe repaired. Then, with both ends plugged up with refractory cement, the DriTherm is installed over the carrier pipe to minimum dimensions, continuing over the outer jacket of the pre-insulated system for several feet.

Is Cathodic Protection required with a DriTherm system?

No. DriTherm has an Electrical Resistivity of 10 -14 OHMS/CM, which is the same value as most plastics used for electrical resistance. Because it is closed cell, no air, water, or moisture will pass through a properly installed DriTherm installation. Corrosion cannot occur in the absence of air, water, moisture, or electric current.

How much labor is required for a typical DriTherm installation?

Using 50 lb. bags a 3 - 4 man team can usually install 750 - 900 cubic feet of product per day, including the placement of the forms (dropped in place), polyfilm (rolled across top), and layer of empty bags. Using Super Sacks, a 2 man crew can install 1000 - 1200 cubic feet per day depending on site conditions and access.





Testimonials

- *1993 DriTherm has been installed on our underground hot oil, steam and condensate piping based on the recommendations of a corrosion engineer at a local firm. Prior to the installation of DriTherm, our underground piping was installed using pre-insulated systems, as well as field applied insulation, with mixed results. The Authority has installed over 20,000 CF of DriTherm on over 2,500 LF of piping since being introduced to the product. We feel that it is a product that will prevent corrosion and provide thermal efficiency when installed properly." **New York Power Authority – White Plains, NY***
- *"The excavated lines were installed about five years earlier using 'DriTherm' as the insulation/corrosion protection system. We were surprised, and delighted, to discover the condition was 'like new', with no surface corrosion on either line." **Sandia National Laboratories – Albuquerque, NM***
- *"We feel that the DriTherm system is cost effective as well as easy and fast to install. It has performed well on the installations that we have." **Department of the Army – Fort Knox, KY***





Testimonials

- *"We used about 10,000 cubic feet of Dritherm insulation supplied in super sacks at the ConocoPhillips Borger Texas Refinery. Changes in a process upgrade called for heat tracing of 70,000 feet of existing piping. Portions of this piping were underground—especially at road crossings. For the underground portions we had to uncover the existing lines, install and test the heat trace, then put on an insulation and backfill the trench. The Dritherm helped us immensely by limiting the amount of time we had to keep the trench open. We were able to schedule shipments so that the trucks would pull in right when we were ready to install the insulation. We simply swung the super sacks over the trenches and dumped in the Dritherm. Levelled off the top and laid the bags on top. Then we covered it up. The Dritherm proved to be a real cost saver for us. The time to install was much shorter than if conventional insulation was used. We also didn't have to worry about having the right size for the different pipe sizes as Dritherm is definitely one size fits all. I had never heard of Dritherm before this use. More or less stumbled on it during a web search. The local sales rep then came out and explained the material to us as well as the methods of installation. Using Dritherm was definitely a good move." **Scott Brinkmeyer, P.E. 2/8/08***





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End of Presentation

For more information please visit www.dritherm.com

Or call us direct at 1-800-343-4188



www.DriTherm.com