

Basic Installation

Thermal Insulation for
Underground Pipes, Tanks &
Structures 35°F - 800°F



Gilsulate® 500_{XR}

Gilsulate
International
Incorporated 

Prior to jobsite start-up you should arrange to have the following delivered to the jobsite

Special items, companies and contact information

BITUMASTIC

Special coating

Childers CP 79 • 800-231-9541 • fosterproducts.com
Carboline 50 • 800-848-4645 • carboline.com

ROD TYPE VIBRATOR

1-1/2 - 1-7/8 head & 115V power supply
Wacker • 800-770-0957 • wackergroup.com

FIBERGLASS/MINERAL WOOL PIPE INSULATION

Handles expansion at loops & bends

Delta®PF • 800-874-7625 • deltain insulation.com
JM Micro-Lok® • 800.654.3103 • jm.com

FIBERGLASS ROPE/MECHANICAL SEALS

Wall Entries/Risers

Flexicraft • 800-533-1024 • flexicraft.com
Link Seal • 800-423-2410 • linkseal.com
Newtex • 800-836-1001 • newtex.com

Obtain the following items from any hardware store

FORMING MATERIALS, TEMPORARY SPACERS & SUPPORTS

Forms - 5/8" x 4' x 10' Drywall - cut size will vary
Spacers - 3/4" x 4" x 8' Drywall - cut size will vary
Supports/Rebar - 1/2" - 3/4" - appropriate length to support side forms
Supports/Wooden - 1" - 2" Wooden Stakes 2" Drywall Screws
Screw Gun

TOOLS REQUIRED

Utility Knives Small Sledge Hammer 2" paint brushes
Round Nose Shovels Square Nose Shovels Towels

MISCELLANEOUS ITEMS

Structural steel and concrete for anchors, guides & temporary pipe supports
Dust Mask 3M 8710
Tyvek Breathable Suits - optional depending upon site requirements

Important Installation Notes

1. Pack wall entries as specified (See Design Manual).
2. Remove standing water prior to installation of insulation. Check soil permeability. Section 4.0
3. Clear all "foreign" objects from insulation envelope to provide a "seamless" covering and eliminate "short circuits".
4. Clean pipes of all dirt, scale and other foreign materials.
5. JUST PRIOR TO PLACEMENT of Gilsulate® 500XR COAT anchors, guides, wall entries, etc. with bitumastic to provide a seal. Bitumastic is to be "TACKY."
6. Consolidate Gilsulate® 500XR with rod-type concrete vibrator to 40 - 42 lb./cf. density. Walk on top of envelope. Density has been achieved if footprints are less than 1" deep.
7. Bulkhead uncompleted end and backfill top with 4" to 6" of soil backfill at the end of each day to protect insulation envelope until work resumes.
8. If conditions cause excessive dusting, use NIOSH/MSHA approved face mask dust respirator. A material safety data sheet is available by calling (800) 833-3881.
9. Underground areas with flowing water or a positive underground water source should be avoided when designing or installing an underground piping system. For specific project recommendations, contact Gil.

SEE MANUAL FOR COMPLETE INSTALLATION DETAILS

GILSULATE® 500XR is manufactured for use by experienced and knowledgeable contractors or maintenance personnel. For complete design and installation details please consult Gilsulate International at (800) 833-3881.

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Required System Components

You are about to install G500XR

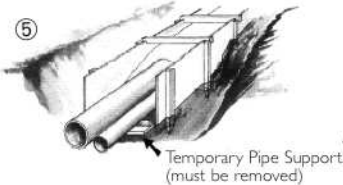
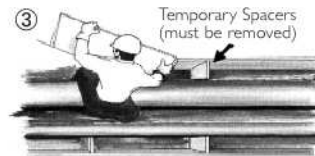
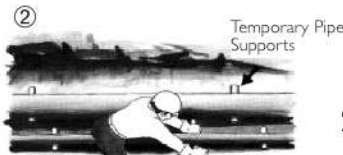
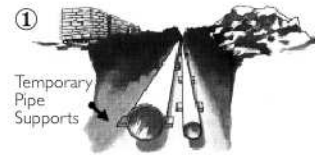
You are about to install Gilsulate®500XR underground insulation. The unique patented formulation is made from inert, non-toxic, inorganic materials. When you consolidate the multisized granular particles they will form a tight matrix which meets the load bearing capabilities required by soil engineers.

The name Gilsulate® was trademarked over sixty years ago. Over the past six decades, the product has been continually improved to meet the customers ever changing needs. It is designed to resist water, insulate and protect underground pipes, tanks and structures for applications where product temperatures range from 35°F - 800°F. Our system has proven itself under the MOST adverse conditions.

Your attention to a FEW SIMPLE DETAILS will ensure the same success. **Please review our illustrations and notes. More complete information is contained in our "Design & Installation Manual."** Each project is unique and have "extraordinary" conditions that may not be covered here or elsewhere. For additional information and support please contact us at 800-833-3881 or www.gilsulate.com

Advance planning and preparation will make your job easier and eliminate unnecessary field problems or delays.

Review the GII "Design & Installation Manual", Technical Data Sheet G2.00 & MSDS.



Installation Sequence

Excavate trench as required for piping and insulation and preferably pile all backfill on one side. Install pipes with required guides, supports and anchors. Perform pressure testing. Locate pallets of GILSULATE® 500XR on the side opposite the backfill.

2. Grade and compact trench under pipes leaving required space for specified thickness of GILSULATE® 500XR. Clean dirt off pipes.

3. Side forms are recommended. Side forms cut from gypsum board and left in place are *less expensive and easy to use*. Forms are held away from pipes by *temporary spacers which must be removed*. Side forms left in place must not extend above the finished compacted level of the insulation envelope. Forming is always the preferred technique.

4. Check all measurements for the correct insulation coverage. These are given in the plans and specifications or maybe found in the GII "Design & Installation Manual". Backfill behind forms to pipe height.

5. **PREFERRED FORMING TECHNIQUE.** This forming technique does not require side block spacers inside the form walls which then must be removed. Precut gypsum board with attached spacers on the exterior may be driven into place quickly. Horizontal spacer is used to determine envelope width. Backfill behind the forms to pipe height. Leave forming in place. *Calculate volume required per lineal foot of trench. One bag equals 1 cu. ft. at use density (following consolidation).*

INSTALLER: SEE TECH DATA SHEET G2.00 FORMING TECHNIQUES

6. GILSULATE® 500XR is a light colored dry granular material. To minimize dust, empty bags on pipes with as little "free fall" as possible. Fill trench to mid pipe height and consolidate. *Remove spacers and*

temporary pipe supports as work progresses. Coat anchors, guides, supports, wall entries with bitumastic as specified just prior to placement of GILSULATE® 500XR.

7. Add additional layers of GILSULATE® 500XR and consolidate to specified thickness and density. A rod-type concrete vibrator with a 1-7/8" or smaller diameter head is the best and quickest means of consolidating GILSULATE® 500XR. Insert the head of the vibrator *horizontally and pull along slowly*. *Larger pipes require consolidation in two or more lifts of material.*

8. Walk on consolidated GILSULATE® 500XR envelope to ensure use density, footprints less than 1" deep are required.

9. Complete placement of backfill behind forms. Place layer of flattened empty bags on top of the GILSULATE® 500XR envelope. Hand place 4" to 6" of soil (no stones) on top of empty bags to protect from damage. Complete backfilling to grade level as soon as possible. *Mechanical compaction of backfill is desired and follows good engineering and construction practice.*

**SEE GILSULATE INTERNATIONAL, INC'S.
"24 PAGE DESIGN & INSTALLATION MANUAL"
FOR COMPLETE DETAILS**

