

Zeston® Heat Transfer Compounds

Application Instructions

A heat tracing system should be installed in accordance with the heat tracer manufacturer's specification.

Surface Preparation and Curing

The surface of the pipe or process equipment on which Zeston Heat Transfer Compound is to be applied should be essentially free of all loose foreign matter such as rust, dirt, scale or scale paint.

Removal of these materials is accomplished by wire brushing.

All grease or oil films are to be removed with a suitable solvent. Mill varnish or protective coatings which will not withstand the operating temperatures of the pipe or equipment must be removed with strippers, sandblasting, or a rough disk sander.

The three grades of Zeston Heat Transfer Compound are water soluble—Z-10 Standard Grade, Z-20 Fine Grained Grade, Z-30 High Temperature (1250°F [677°C]) Grade—and require water protection. Application of the Heat Transfer Compounds, insulation required and weatherproofing over them should be installed simultaneously. If this is not possible, the applied Heat Transfer Compounds should be temporarily protected from rain and water with a polyethylene film or aluminum foil, etc. until such time that they can be insulated and weatherproofed permanently.

Start-up curing for Grades Z-10, Z-20 and Z-30 is 4 to 24 hours at 180°F to 200°F (82°C to 93°C). Care should be taken not to exceed 212°F (100°C) or boiling occurs and the heat transfer compound must be reworked and reapplied. Then apply heat for equal periods of time at 220°F to 250°F (104°C to 121°C). No cure is needed if end use is below 212°F (100°C), but if aluminum tracers are used, curing is recommended.

Note: For applications such as large plate coils where the evaporation of water from the compound is restricted, the period at 180°F to 200°F (82°C to 93°C) should be increased to at least 96 hours to assure proper drying prior to completing the cure schedule.

Do not store below 32°F (0°C) or above 140°F (60°C). Can be transported by carriers at temperatures below freezing. Thaw out slowly if frozen. Must be completely thawed out before application.

Material Requirements

Zeston Heat Transfer Compound is applied to plate coils using a mason's steel trowel as shown in Figure 1. It is applied to the thickness desired. Extra compound should be applied along the centerline of the plate coil to avoid "cold spots" when the plate coil is positioned on the equipment. During the positioning of the plate coil, excess compound is squeezed into low spots when the coil is bolted into place. Dip trowel in water to assist spreading the compound.

Grades Z-10, Z-20 and Z-30

For steam tracer or electric heat cable applications, Zeston compounds should cover tracers with a minimum of ¼" (6.4 mm) and be troweled onto the process pipe at a contour angle so that the base of the contour is three times the diameter of the tracer as shown in Figure 2.

Figure 1. Typical Plate Coil Installation

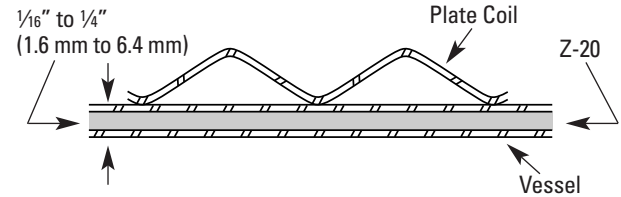
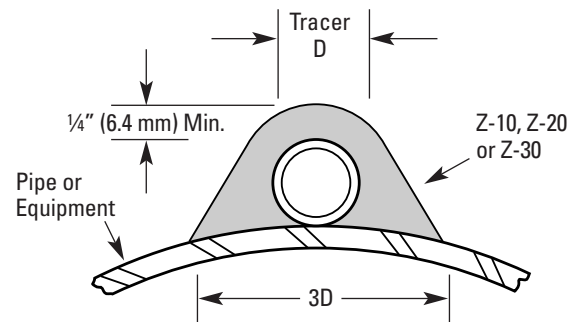


Figure 2. Typical Tracer or Heating MI Cable Installation Using Zeston Z-10, Z-20 or Z-30.



Tracer Size in	mm	Process Line Size I.P.S.		Compound Required Feet of Tracer/Gal. (Meters of Tracer/Liter) Z-10, Z-20 and Z-30	
		in	mm		
Outside Diameter of Copper Tracers					
1/8	3	1/4 - 24	6 - 610	95	7.7
1/4	6	1/2 - 24	13 - 610	50	4.0
3/8	10	1 - 24	25 - 610	40	3.2
1/2	13	1 1/4 - 24	32 - 610	30	2.4
5/8	16	1 1/2 - 24	38 - 610	22	1.8
3/4	19	2 - 24	51 - 610	18	1.5
1	25	3 - 24	76 - 610	12	1.0


Iron Pipe Tracers

1/4	6	1 1/4 - 24	32 - 610	27	2.2
3/8	10	2 - 24	51 - 610	20	1.6
1/2	13	2 1/2 - 24	64 - 610	15	1.2
3/4	19	3 - 24	76 - 610	10	0.8
1	25	3 1/2 - 24	89 - 610	6	0.5

Note: It is suggested that 10% be added to calculated amount for spillage and waste. For estimating compound requirements for valves, multiply the sizes of valve by 0.2. For example, a 4" (102 mm) valve would be 4 x 0.2 or 0.8 gal. (3.03 liters) of compound required.

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The physical and chemical properties of Zeston® Heat Transfer Compounds represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Numerical flame spread and smoke developed ratings are not intended to reflect hazards presented by this or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you to assure current information. **All Johns Manville products are sold subject to Johns Manville's Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville Limited Warranty and Limitation of Remedy, call the 800 number below.** For information on other Johns Manville thermal insulations and systems and a copy of the Spec-Line® CSI formatted specification, call **1-800-654-3103**.