

PART 1 – GENERAL

1. SUMMARY

- 1.1. Section includes: Quilted blanket containing microporous insulation that includes the following applications.
- 1.2. High temperature pipe, vessel and equipment insulation.
- 1.3. Refining and petrochemical facilities.
- 1.4. Power plants.
- 1.5. Offshore oil production.
- 1.6. Marine applications.

2. REFERENCES

- 1.1. ASTM International
 - 1.1.1. ASTM C1676 - Standard Specification for Microporous Thermal Insulation.
 - 1.1.2. ASTM E84 - Test Method for Surface Burning Characteristics of Building Materials.
 - 1.1.3. ASTM C1511 - Liquid Water Retention After Submersion.
 - 1.1.4. ASTM C518 - Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter.
 - 1.1.5. ASTM C795/C871/C692 - Specification for Thermal Insulation for Use in Contact with Austenitic Stainless Steel.
 - 1.1.6. ASTM C1617 - Corrosion.
 - 1.1.7. ASTM C665 - Corrosion.
 - 1.1.8. ASTM C1104 - Water Vapor Sorption.
 - 1.1.9. ASTM C1338 - Fungi Resistance.
- 1.2. Mil Spec, Nuclear Regulatory Commission.
 - 1.2.1. MIL-I-24244 - Military Specification.
 - 1.2.3. NRC Regulatory Guide 1.36.

3. SUBMITTALS

- 3.1. Product Data: Submit Industrial Insulation Group, a Johns Manville Company, product literature, samples and installation instructions for specified insulation.

4. QUALITY ASSURANCE

- 4.1. Manufacturer Qualifications.
 - 4.1.1. Pipe Insulation shall be furnished in standard lengths with ends cut square.
 - 4.1.2. Insulation Materials shall be asbestos free.
 - 4.1.3. All insulating products shall have a 0/10 flame spread/smoke developed rating as tested in accordance with ASTM E84.
 - 4.1.4. Product will conform to the requirements of ASTM C1676 - Standard Specification for Microporous Thermal Insulation.

4.2. Installation Workmanship

- 4.2.1. All insulation to be installed by a qualified applicator and applied in accordance with the manufacturer's recommendation.
- 4.2.3. All work shall comply with all applicable federal, state and local codes and laws. This shall include, but shall not be limited to, the Occupational Safety and Health Act.
- 4.2.4. All work shall conform to accepted industry and trade standards for commercial and industrial insulations and shall conform to manufacturer's recommendations. Where available, it is recommended to use a National Insulation Association (NIA) certified (or other similarly certified) mechanical insulation inspector throughout the project to inspect and verify the materials and total insulation system have been installed correctly in accordance with the Johns Manville guide specifications.
- 4.2.5. Surfaces to be insulated shall be clean and free of dirt, scale, moisture, oil and grease.

5. DELIVERY, STORAGE AND HANDLING

- 5.1. Deliver all materials to the job site and protect the insulation against dirt, water, chemical and mechanical damage before, during and after installation. Do not install damaged insulation.
- 5.2. Deliver insulation, coverings, cements, adhesives, coatings etc. to the site in factory-fabricated containers with the manufacturer's stamp or label affixed showing fire hazard ratings of the products.
- 5.3. Installed insulation which has not been weatherproofed shall be protected from inclement weather by an approved waterproof sheeting installed by the contractor. Any wet or damaged insulation shall be removed and replaced.

PART 2 – PRODUCTS

1. MANUFACTURER

- 1.1. The Industrial Insulation Group, a Johns Manville Company, 717 17th Street, Denver, CO 80217, 303-978-5200, www.jm.com/industrial.
- 1.2. Pipe and Equipment Insulation.
 - 1.2.1. Type: Quilted high temperature thermal blanket conforming with ASTM C 1676, Type II, Grade II hydrophobic.
 - 1.2.2. Maximum Service Temperature 1200°F.
 - 1.2.3. Size: 5mm and 10mm thickness.

INSULTHIN™ HT PIPE & BLOCK INSULATION

I-SPEC CSI 3 PART SPECIFICATION SECTION 15080

- 1.2.4. ASTM E 84 Surface Burning Characteristics:
 - 1.2.4.1 Maximum flame spread: 0
 - 1.2.4.2 Maximum smoke developed: 10
- 1.2.5. ASTM C795 Corrosion - Passes.
- 1.2.6. ASTM C 518 k=0.189 at 100°F mean temperature.
- 1.2.7. ASTM C795/C871/C692 Corrosion - Passes.
- 1.2.8. ASTM C665 Corrosion - Passes.
- 1.2.9. ASTM C1104 Water Vapor Sorption - <5%, Passes.
- 1.2.10. ASTM C1617 - Corrosion, Passes.
- 1.2.11. ASTM C1338 - Fungi Resistance - Passes.
- 1.2.12. ASTM C1511 - Liquid Water Retention After Submersion - Passes.
- 1.2.13. MIL-I-24244 - Military Specification.
- 1.2.14. NRC Regulatory Guide 1.36.

PART 3 – EXECUTION

1. INSPECTION AND PREPARATION

- 1.1. Section includes: Quilted blanket containing microporous insulation that includes the following applications
 - 1.1.2. Examine substrates and conditions under which insulation work is to be performed. A satisfactory substrate is one that complies with requirements of the section in which substrate and related work are specified.
- 1.2.3. Verify piping systems and pressure vessels have been tested and inspected.

- 1.2.4. Obtain installer's written report listing conditions detrimental to performance of work in this section. Do not proceed with installation of insulation until unsatisfactory conditions have been corrected.
- 1.2.5. Clean substrates of substances harmful to insulation.

2. INSTALLATION - GENERAL

- 2.1. Comply with manufacturer's instructions for particular conditions of installation in each case.
 - 2.1.1. Quilted blankets are wrapped around pipes. The product can be installed around elbows, flanges and valves.

3. PROTECTION

- 2.1. Protect the insulation against dirt, water, chemical and mechanical damage before, during and after installation. Do not install damaged insulation and remove it from the project site. Insulation shall be protected from inclement weather by an approved waterproof sheeting installed by the contractor. Any wet or damaged insulation shall be removed and replaced.

ADDITIONAL INFORMATION AND SDS

Please visit our website at www.jm.com/industrial.



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Technical specifications as shown in this literature are intended to be used as general guidelines only. Please refer to the Safety Data Sheet and product label prior to using this product. The physical and chemical properties of the InsuThin™ HT listed herein 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. Any references to numerical flame spread or smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you for current information.

All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions, which includes a Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions or for information on other Johns Manville thermal insulation and systems, visit www.jm.com/terms-conditions or call (800) 654-3103.