

CUMMING

TECHNICAL BULLETIN 625-2

225 Bodwell Street Avon, MA 02322.1148
1.800.432.6464
Fax 508.580.0960 www.cumingcorp.com

C-THERM FPP POUR-IN-PLACE SYNTACTIC INSULATION

INTRODUCTION

Cuming Corporation's **C-THERM** product line of syntactic foam thermal insulation offers superior performance for deepsea oil and gas production. See Technical Note 600-1 for an overview of the entire product line. Bulletins on other materials in the **C-THERM** line of insulation systems for subsea equipment include 625-1, "pre-cast," and 625-3, "pack-in-place" materials.

SYNTACTIC FOAM

The basis of any **C-THERM** product is syntactic foam, an advanced composite material of glass or ceramic microspheres cast into a binder of semi-rigid epoxy plastic resin. The outstanding chemical, thermal, and mechanical properties of **C-THERM** materials are adaptable to almost all operating conditions.

FORMS AVAILABLE

C-THERM FPP pour-in-place syntactic foam is supplied in two-part liquid kits. The kits are intended to be mixed on site by factory-trained technicians for pouring into molds, typically on subsea equipment. Cuming Corporation provides the molds, manpower, and all equipment as part of a "turnkey" project. Mixing and pouring operations are best done under clean, dry, warm conditions (see "Preparation").

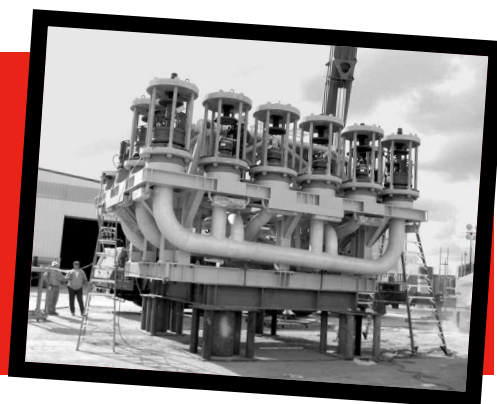
OPERATING LIMITS

C-THERM FPP pour-in-place syntactic foam is available in a variety of temperature ratings to suit a wide range of conditions, from 100° to 150 °C (212 – 302 °F). Typical depth rating for all grades is 3050 m (10,000 ft). See the current companion data sheet for a complete listing of all physical properties of the particular grade you need for your application.

SPECIAL HIGH ELONGATION

C-THERM FPP pour-in-place insulation is also available in a new series of "Third Generation" high elongation formulas with more flexibility. The new pour-in-place version is called FPP-HE. Elongation-to-break values of

This large subsea manifold is typical of offshore equipment insulated with **C-THERM** FPP pour-in-place syntactic foam.



30% are possible. Contact our engineers for the **C-THERM** data sheet that's right for you.

TOTAL COVERAGE

The **C-THERM** insulation system uses an "ensemble" of pre-cast panels, pour-in-place kits, and pack-in-place syntactic foam to achieve total safe and complete coverage of critical subsea equipment. Consult with our sales engineers for expert advice on insulation.

PREPARATION

The surfaces to be coated must be clean, dry, and within the range of 15°-32 °C (60°-90 °F). All grades of **C-THERM** FPP will adhere well to any metal or painted surface. A release agent must be applied to any surface where adhesion is not desirable. Thickness is custom designed to provide the amount of insulation specified, with 50-100 mm (2"- 4") being common. Cuming Corporation field technicians are skilled in the preparation, application, and quality control of **C-THERM** materials.

SAFETY AND HEALTH

These products present no unusual hazard under normal use; however, they are intended for use by trained professionals in accordance with all applicable regulations. Consult Material Safety Data Sheet 625-2 and file for reference.

Sales Offices Worldwide

See our website
www.cumingcorp.com
for the office nearest you.

