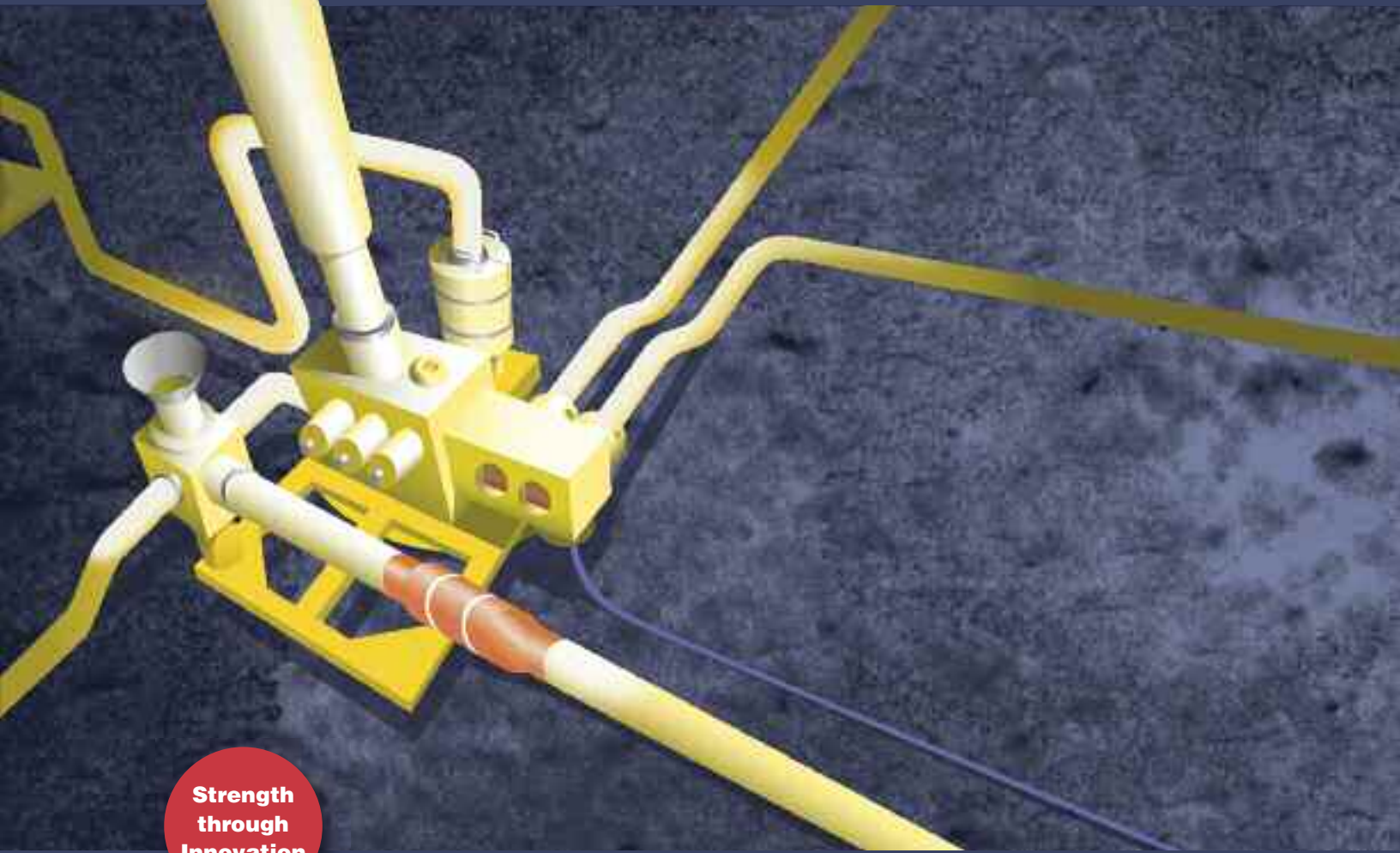


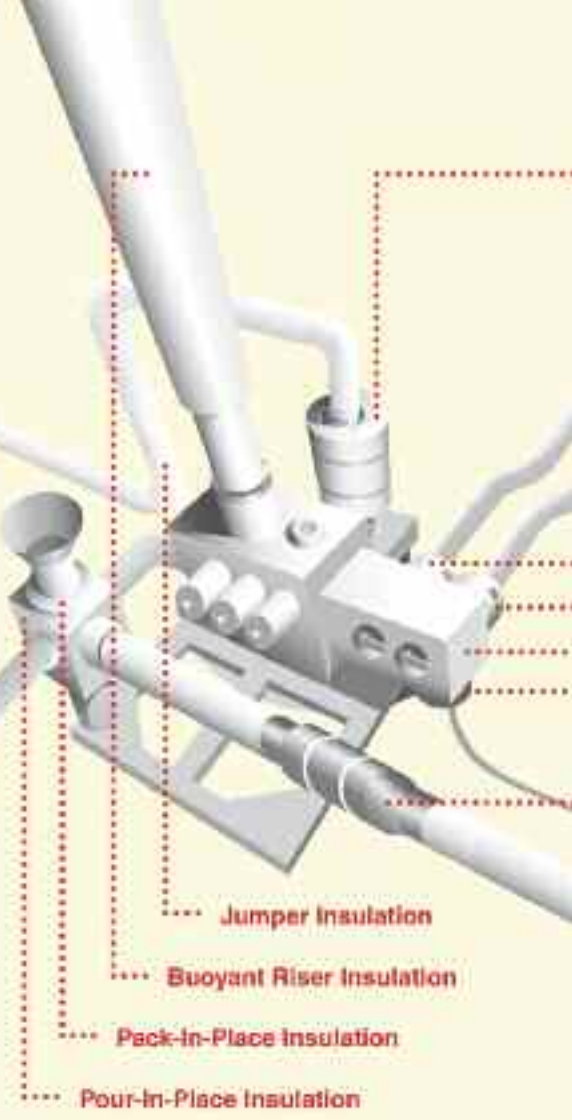
CATALOG 600

C-THERM **INSULATION PRODUCTS**



**Strength
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Innovation**

**CUMING
CORPORATION**



PRECAST INSULATION

Epoxy syntactic foam in precast standard blocks, sheets, sleeves, half shells, and other shapes for assembly on subsea equipment

C-THERM Designation	Maximum Service Temperature, °F (°C)	Maximum Service Depth, ft (m)	Thermal Conductivity, (Note 1)	Specific Heat, (Note 2)	Nominal Density, (Note 3)
C-THERM FPC-STD	212 (100)	10,000 (3049)	0.08 (0.14)	0.38 (1.58)	47.5 (760)
C-THERM FPC-HT	250 (121)	10,000 (3049)	0.08 (0.14)	0.38 (1.58)	48.0 (769)
C-THERM FPC-HTHP	270 (132)	10,000 (3049)	0.08 (0.14)	0.38 (1.58)	50.0 (801)
C-THERM FPC-VHT	302 (150)	10,000 (3049)	0.09 (0.16)	0.40 (1.63)	52.5 (841)
C-THERM FPC-UHT	350 (177)	10,000 (3049)	0.09 (0.16)	0.40 (1.63)	53.0 (849)

For more information, see: Technical Bulletin 625-1 and Data Sheets 625-1-1 through 625-1-5

POUR-IN-PLACE INSULATION

Epoxy syntactic foam delivered to the worksite in two-part liquid form for mixing and casting in molds around subsea equipment

C-THERM Designation	Maximum Service Temperature, °F (°C)	Maximum Service Depth, ft (m)	Thermal Conductivity, (Note 1)	Specific Heat, (Note 2)	Nominal Density, (Note 3)
C-THERM FPP-STD	212 (100)	10,000 (3049)	0.09 (0.16)	0.40 (1.63)	57.5 (921)
C-THERM FPP-HT	250 (121)	10,000 (3049)	0.09 (0.16)	0.40 (1.63)	57.7 (925)
C-THERM FPP-HTHP	270 (132)	10,000 (3049)	0.09 (0.16)	0.40 (1.63)	57.8 (926)
C-THERM FPP-VHT	302 (150)	10,000 (3049)	0.10 (0.18)	0.40 (1.63)	58.0 (930)
C-THERM FPP-UHT	350 (177)	10,000 (3049)	0.10 (0.18)	0.40 (1.63)	58.5 (942)

For more information, see: Technical Bulletin 625-2 and Data Sheets 625-2-1 through 625-2-5



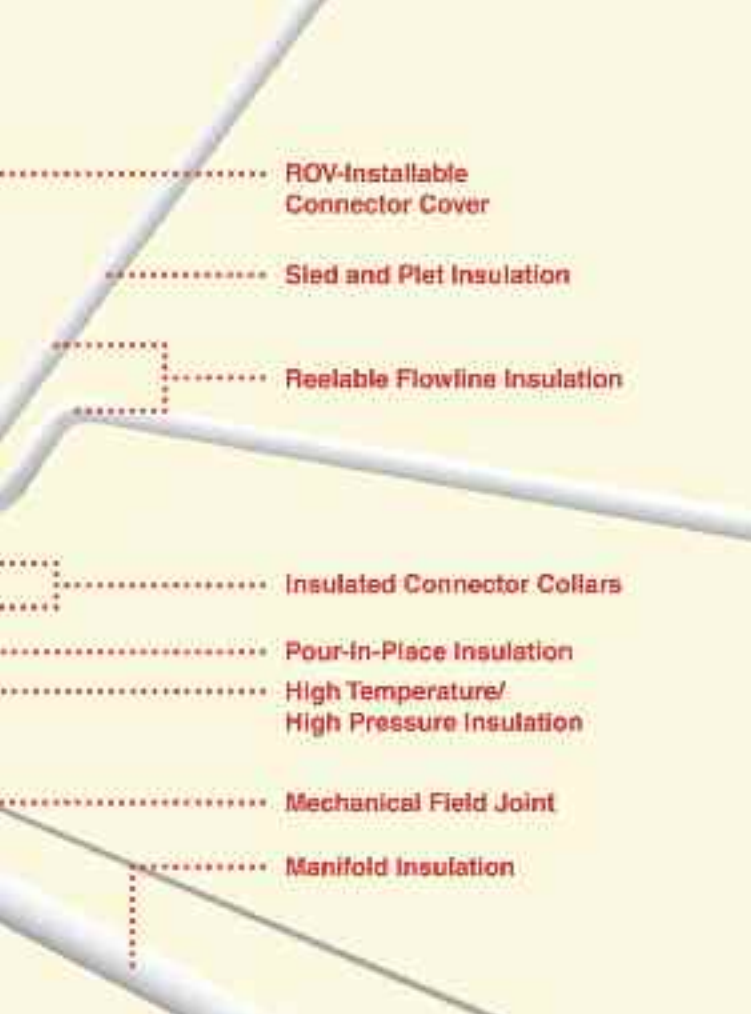
**Strength
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Innovation**

PACK-IN-PLACE INSULATION

Epoxy syntactic foam delivered to the worksite in two-part puttylike form for hand application without molds to subsea equipment

C-THERM Designation	Maximum Service Temperature, °F (°C)	Maximum Service Depth, ft (m)	Thermal Conductivity, (Note 1)	Specific Heat, (Note 2)	Nominal Density, (Note 3)
C-THERM FPG-STD	212 (100)	10,000 (3049)	0.08 (0.14)	0.42 (1.77)	45.0 (720)
C-THERM FPG-HT	250 (121)	10,000 (3049)	0.09 (0.16)	0.42 (1.77)	47.0 (753)
C-THERM FPG-HTHP	270 (132)	10,000 (3049)	0.09 (0.16)	0.42 (1.77)	48.0 (770)

For more information, see: Technical Bulletin 625-3 and Data Sheets 625-3-1 through 625-3-5



CAST-ON-PIPE INSULATION

Epoxy syntactic foam cast in factory onto pipe by patented process for insulation of subsea flowlines and risers for J-Lay and S-Lay

C-THERM Designation	Maximum Service Temperature, °F (°C)	Maximum Service Depth, ft (m)	Thermal Conductivity, (Note 1)	Specific Heat, (Note 2)	Nominal Density, (Note 3)
C-THERM CSM-STD	212 (100)	5,000 (1524)	0.08 (0.14)	0.42 (1.77)	30.0 (481)
C-THERM CSG-STD	212 (100)	10,000 (3049)	0.08 (0.14)	0.42 (1.77)	49.0 (785)
C-THERM CSM-HT	250 (121)	5,000 (1524)	0.08 (0.14)	0.42 (1.77)	32.0 (513)
C-THERM CSG-HT	250 (121)	10,000 (3049)	0.09 (0.16)	0.42 (1.77)	50 (801)
C-THERM CSG-HTHP	270 (132)	10,000 (3049)	0.09 (0.16)	0.42 (1.77)	52 (833)

Construction Note:

CSM materials are composites containing both glass microspheres and larger hollow fiberglass microspheres, whereas CSG materials are generally heavier and contain only glass microspheres in an epoxy resin binder.

For more information on these products, see: Technical Bulletin 610 and Data Sheets 610-1 through 610-5

For the address of the sales office nearest you, go to www.cumingcorp.com or call 281-591-1069 in Houston, Texas, USA

Note 1: Btu/hr-ft-°F (W/m-°K)

Note 2: Btu/lb-°F (J/g-°C)

Note 3: lbs/ft³ (kg/m³)

All values nominal and approximate.



REELABLE INSULATION

Epoxy syntactic foam cast in factory onto pipe by patented process for insulation of subsea flowlines and risers for Reel-Lay

C-THERM Designation	Maximum Service Temperature, °F (°C)	Maximum Service Depth, ft (m)	Thermal Conductivity, (Note 1)	Specific Heat, (Note 2)	Nominal Density, (Note 3)
C-THERM CSF-STD	212 (100)	10,000 (3049)	0.08 (0.14)	0.42 (1.77)	48.0 (769)
C-THERM CSF-HT	250 (121)	10,000 (3049)	0.09 (0.16)	0.42 (1.77)	50 (801)
C-THERM CSF-HTHP	270 (132)	10,000 (3049)	0.09 (0.16)	0.42 (1.77)	52 (833)

For more information, see: Technical Bulletin 620 and Data Sheets 620-1 through 620-3

INSULATION PRODUCTS AND MATERIALS

C-THERM Designation	A sampling of composite and syntactic foam products and materials designed to supplement thermal insulation on flowlines, risers, and a wide variety of subsea equipment
C-THERM Mechanical Field Joint	Rugged, easily installed field joints with thermal properties equal to the insulated pipeline
C-THERM Connector Cover	ROV-installable and removable thermal housings for insulating subsea pipeline connectors
C-THERM FPR	Highly flexible epoxy syntactic foam insulation for jumpers and other stressed parts
C-THERM GSP	Flexible polyurethane/glass syntactic foam insulation for subsea equipment
C-THERM KPF	Thermally conductive epoxy filler for ensuring proper heat transfer in subsea equipment
C-THERM 360	Epoxy primer ensures excellent bond between thermal insulation and steel substrate
C-THERM 440	Overwraps, both flexible and rigid, to protect and preserve insulation on subsea equipment
C-THERM 520	Strong epoxy adhesive for attaching insulation and overwrap to subsea equipment

For more information on these products, see the "R-Series" Technical Bulletins and Data Sheets

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See the website for a complete listing of our worldwide network of sales representatives.

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