



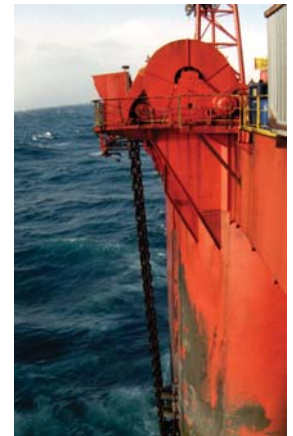
# Offshore Oil & Gas

**CIP Composites** are laminated polymer materials made by impregnating textiles with thermosetting resins. Solid lubricants are added to the resin to provide evenly dispersed lubrication throughout the material, inherently eliminating the need for external lubrication. CIP offers customers an array of different textile, lubricant and resin combinations. We determine the best combination based on application criteria and environment. Our focus is on replacing lubricated metallic bearings.



## Applications

- Buoy Anchor Pin Bearings
- Stinger Rollers
- Mooring Systems
  - CALM Buoy
  - Turret
- Tanker Mooring Systems
- Anchor Windlass
- Jack Lift Bearings
- Drill String Support Pivots
- Fairleads
- Sheaves
- Hawser Chain Guards
- Skidding Systems
- Riser Tensioners
- Launch and Recovery Systems



**Benefits:** environmentally friendly • self lubricating • non-conducting • manufactured to specification • light weight • low coefficient of friction • stable in many chemical solutions • common installation (press, glue, freeze, or fasten) • easy to machine • extended operating life • low thermal expansion rate • negligible water swell • non-metallic • eliminates greasing systems • wet or dry running • manufactured in the United States

## One Group, One Location, Reaching Globally

[www.CIPComposites.com](http://www.CIPComposites.com)

## Standard Shapes

### Tubes

Minimum Bore	1/2 in. (12.7 mm)
Maximum Bore	60 in. (1524 mm)
Standard Lengths	16 in. – 24 in. – 32 in. (406 mm – 609 mm – 812 mm)

### Sheets

Minimum Thickness	1/8 in. (1.6 mm)
Maximum Thickness	6 in. (1,524 mm)
Standard Widths	16 in. – 24 in. – 32 in. (406 mm – 609 mm – 812 mm)
Standard Lengths	24 in. – 36 in. – 48 in. – 60 in. (609 mm – 914 mm – 1219 mm)

### Custom Products

CIP offers a fully equipped machine shop on location ready to meet your needs. Components can be manufactured to customers' drawings. Spherical bearings with stainless steel balls, threaded components and many other custom products can be fabricated.



### Physical Properties

#### Compressive Strength

Ultimate	50,000 PSI (345 MPa)
Yield	15,000 PSI (103 MPa)
Tensile Strength	11,000 PSI (75 MPa)
Rockwell Hardness	100 M
Density	.047 lbs/in <sup>3</sup> (1.3 g/cm <sup>3</sup> )
Water Swell	<0.15%

#### Operating Temperatures

CIP 100/200 Series	-40° to 200°F (-40° to 93°C)
CIP 300 Series	-40° to 400°F (-40° to 204°C)



CIP is dedicated to providing the highest quality products with a focus on exceeding requirements. We strive for complete customer satisfaction through continuous improvement in service and quality.

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