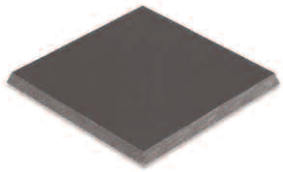
NORPLEX MICARTA

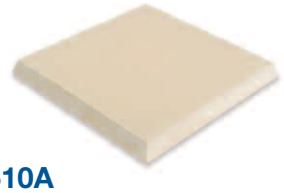
High Performance Thermoset Composites

High Performance Thermoset Composites For Heavy Industry

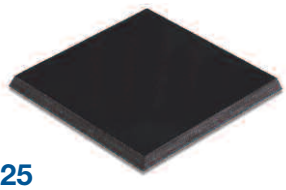
RT511
Excellent flexural strength at high temperatures



NP315
Non-abrasive cotton-phenolic; ideal for explosion-proof environments



NP510A
Consistent electrical properties in dry or humid conditions



NP325
Easy to machine for small or intricate component manufacturing

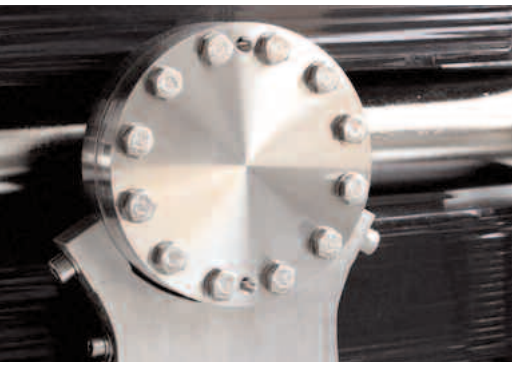
Heavy industry relies on high performance thermoset composites for thermal and electrical insulation, particularly under high compressive loads. Norplex-Micarta offers a full line of these composite materials in sheet, tube, rod, and pre-preg forms that are certified to meet the most challenging requirements. From cryogenic insulation and support components to ball bearing retainers and journal bearings, Norplex-Micarta is the preferred high performance composites manufacturer for OEMs and fabricators around the world.

Norplex-Micarta composites provide excellent thermal insulation in both high- and low-temperature environments. This is critical for materials used in steel mills, where rolling equipment operates at temperatures as high as 200°C. Thermoset materials are used to insulate employees from the high heat needed to form and roll metal, but also to maintain high operating temperatures without wasting excess heat. Equally challenging is a cryogenic storage facility for liquified gases that needs to be maintained at temperatures as low as -273°C. In these facilities, thermoset materials are used to prevent equipment and structures from icing, as well as to prevent heat transfer that would adversely affect the storage and transfer processes and waste energy.

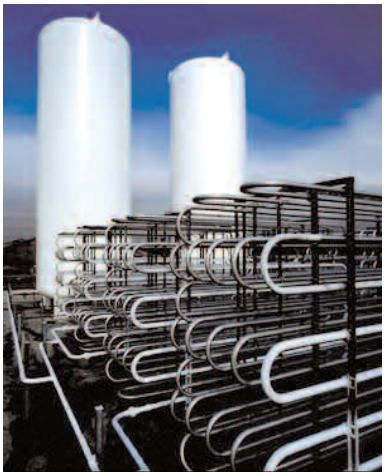
Insulating components also serve as an electrical barrier between metal parts. Electricity that flows between metal parts in contact with each other can cause components to corrode, requiring more frequent repairs and part replacement.

Compressive, tensile, shear, and flexural strength are all required in heavy industry applications. Not only do components need to support the weight of large structures and machinery, but they need to withstand movement caused by the expansion and contraction of metal structures during temperature shifts.

Ball Bearing Retaining Cages withstand extreme heat and pressure.



Metal parts, such as **Washers, Bolts, and Flanges**, need to be separated from each other by composite components to prevent wear and corrosion.



Cryogenic Storage facilities need to be maintained at temperatures as low as -273°C.

Bearings

Thermoset composites are used to replace metal bearings to eliminate bonding that occurs between the metal bearing and shaft under extreme heat and pressure. In addition to improving abrasion resistance, Norplex-Micarta materials exhibit excellent PV (Pressure and Velocity) loading capability.

Washer, Bolt, and Flange Insulation

Norplex-Micarta thermoset composite materials are ideal for insulating between metal structural components, such as washers, bolts, and flanges. Not only do they effectively separate metals from contact and subsequent wear, but they also provide excellent mechanical strength. Creep resistance is also important because insulating materials need to maintain their shape and position to protect surrounding materials and maintain structural integrity.

Cryogenic Insulation and Support

Maintaining mechanical strength in extreme temperature environments is a challenging but critical property for materials used in cryogenic transportation and storage facilities. Norplex-Micarta high performance materials are used for both insulation and structural support in cryogenic environments ranging from room temperature down to near absolute zero (-273°C).

Specialty Components

Because of their thermal/electrical insulation and mechanical strength properties, Norplex-Micarta thermoset composite materials are used in a wide variety of heavy industrial applications. Contact our engineering department to discuss your specific requirements.

NORPLEX MICARTA
High Perfomance Thermoset Composites

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