



Protecting Under Pressure

GROUND BASED RADOMES



sheergard.com



Protecting Under Pressure

SHEERGARD® is the engineered solution for high performance ground based radomes

SHEERGARD® radomes for the ground based market are manufactured with one of two techniques.

Flexible composites are used in air supported and tensioned radomes and provide high strength and excellent EM performance.

Rigid composites are used in sandwich radomes and provide a self-supporting structure tuned for a specific frequency.

FEATURES

- **EXTREME ENVIRONMENTAL PROTECTION**
SHEERGARD® PTFE coated fabrics have been analyzed and tested for structural application to all environmental conditions.
- **UNSURPASSED EM PERFORMANCE**
The EM impact of all radomes is analyzed and tested across the desired frequency range to ensure that the lowest transmission loss in class is provided.
- **LOW LIFE-CYCLE COST**
The PTFE coating of SHEERGARD® materials provides superior life-long hydrophobic performance, so no reapplication of surface finish is ever required.
- **PROVEN RELIABILITY**
Saint-Gobain has been servicing the radome market for 70+ years and has original systems active and fully operational to this day.
- **COMPLETE VERTICAL INTEGRATION**
SHEERGARD® incorporates vertical integration of all elements in the composite manufacturing process.



AIR SUPPORTED RADOMES

SHEERGARD® air supported radomes protect antenna systems while providing the industry's best electromagnetic transmission performance throughout a broad range of frequencies. Air supported radomes are constructed using PTFE coated, high performance fabrics designed to provide a robust construction that can withstand the toughest environmental conditions. Fully redundant pressurization systems give SHEERGARD® air supported radomes extremely high reliability and long-term durability.



SPECIAL CONFIGURATIONS

Although radomes are often spherical in shape, Saint-Gobain can provide custom design and engineering solutions for the specific needs of each customer.

SANDWICH RADOMES

SHEERGARD® sandwich radomes are rigid self-supporting structures designed to protect antenna systems while providing excellent electromagnetic transmission.

Saint-Gobain's innovative Transonite™ panels incorporate 3D fibers that pass through the sandwich core to prevent panel delamination. These radomes include the permanent PTFE outer surface that eliminates the need of surface maintenance dramatically reducing life-cycle costs.

This advancement to the radome marketplace was developed through the U.S. Air Force's SBIR program and the technology has successfully completed its Phase 3 requirements.



ANTENNA COVERS

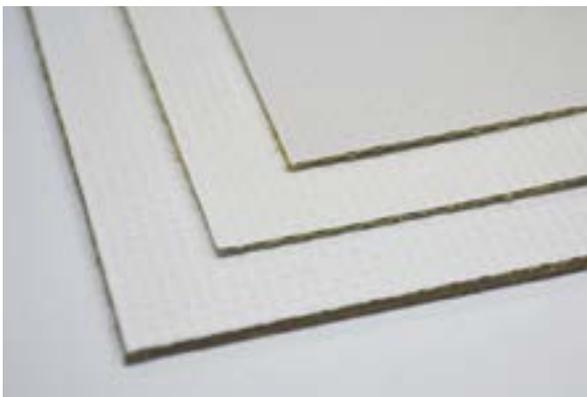
SHEERGARD® antenna covers and shelters are designed to provide protection and concealment for antennas where a conventional spherical radome is not appropriate.

Often referred to as 'planar radomes', they both prevent the collection of snow, water and ice and reduce the wind load on the mounting structure itself.



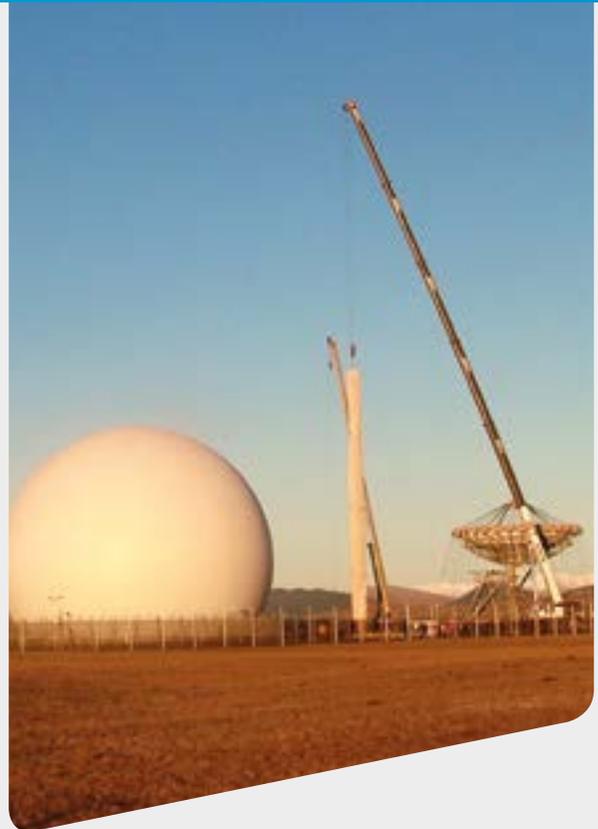
ELECTROMAGNETIC WINDOWS

SHEERGARD® electromagnetic windows are engineered to conceal and protect sensitive communication equipment. They are virtually transparent to electromagnetic energy and are designed to fit any architectural requirements.



COMPOSITES MATERIALS

The SHEERGARD® family of microwave transmissive PTFE composites combines PTFE with specially woven structural fabrics that utilize fiberglass, aramid (Kevlar®) and similar high strength, high temperature resistant yarns. Our composite fabrics are supplied as precut pieces and include any required mounting holes.



INSTALLATION

Saint-Gobain offers worldwide installation support for our SHEERGARD® radome products. These services range from providing technical advisors to full installation crews and include the supply of any required local equipment.



INSPECTION

Saint-Gobain radome experts can provide services to inspect existing radomes. Performing periodic inspections of the system can help obtain maximum reliability and the longest possible life span of the radome.



70 YEARS OF EXPERIENCE

Designing, manufacturing and servicing radomes

PRODUCTS

AIR-SUPPORTED RADOMES

Large flexible composite radomes

SANDWICH RADOMES

Rigid self-supported radomes

SPECIAL CONFIGURATIONS

Non-spherical radomes (i.e.: CN tower ring)

ELECTROMAGNETIC WINDOWS

Pre or post tensioned EM transparent windows

ANTENNA COVERS

Protection for exposed point-to-point antennas

COMPOSITE MATERIALS

PTFE coated fabrics, cut to size and ready to mount

SERVICES

INSTALLATION

Support services for our radome products.

INSPECTION

We can help you obtain maximum reliability

MAINTENANCE

Designs that require minimal maintenance.



ONE OF THE

100

MOST INNOVATIVE
COMPANIES
IN THE WORLD

PRESENCE IN
66
COUNTRIES

945
PRODUCTION
SITES

8
MAJOR R&D
CENTERS

1 IN 4
SAINT GOBAIN
PRODUCTS SOLD
TODAY WAS
DEVELOPED IN THE
LAST FIVE YEARS

SAINT-GOBAIN PERFORMANCE PLASTICS

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