

FIBERGLASS ENCLOSURES AND ACCESSORIES

Applications and Capabilities Guide



**ALLIED
MOULDED
PRODUCTS, Inc.**

We'll Work With You.

Our responsiveness to you goes beyond offering a quality product line. Valuing the relationships we have built with each customer, we work with you as partners to solve your protection requirements.

From product design to quick, on-time delivery, Allied Moulded provides fast, efficient service to meet your specific needs.

Give us a try—we'll work with you.

**Allied Moulded Products—
we've got you covered!**



**Research and
Development**



Inventory



**Innovative
Design**



**Quality
Standard
Excellence**



**Customer
Service**



• We're Committed.

• Founded in 1958 and backed by 50 years of knowledge and experience molding fiberglass reinforced materials, Allied Moulded Products is well established within the electrical industry. We've got you covered because we have what it takes to prevent damaging elements such as water, salt, chemicals and UV from threatening your equipment. Our line of NEMA Type 4X, IEC Type IP66 fiberglass enclosures provides maximum protection where you need it most.

• Centrally located in the heart of the country, Allied Moulded is unique among enclosure manufacturers as we are vertically integrated from mold design and fabrication to product delivery. With one of the newest production facilities in the United States dedicated to

manufacturing fiberglass enclosures, we formulate our own Ultraguard® fiberglass reinforced polyester material, which allows us to control quality and costs. On-site molding, assembly and warehousing enables us to produce a high quality product while delivering quick turnaround on standard orders. We can also provide timely delivery on complete modification work, including holes, cutouts and special colors.

Together with our sales agents throughout the country, the Allied Moulded inside sales and engineering team is readily available to assist you with sales and technical support. Whether you need standard or modified product, Allied Moulded is truly a one-stop shop for your fiberglass enclosure and accessory needs.

We'll Protect You.

When you need durability, ease of handling and customizing options, we've got you covered. Our impact resistant, maintenance-free fiberglass enclosures are designed to protect against the toughest elements in the harshest environments. Compared to other metals, such as carbon and stainless steel, fiberglass also offers the following advantages:

- Lightweight and easy to handle, yet strong enough to hold up under extreme conditions
- Corrosion and chemical resistance well exceeding that of carbon steel and very similar to stainless steel
- Non-conductive electrical insulator rather than electrical conductor
- Easily punched, drilled or sawed for simpler modifications
- Fiberglass enclosures offer significant savings vs. stainless steel both in material and shipping costs

You can also count on Allied Moulded fiberglass enclosures to deliver high performance versus other non-metallic enclosures. Allied Moulded enclosures provide superior protection properties against chemicals such as strong alkalis, organic acids, and ultraviolet rays. Our fiberglass enclosures resist extremes in temperature and are flame retardant resulting in a very capable product for indoor or outdoor applications. Fiberglass reinforced polyester also exhibits excellent rigid/stiffness characteristics allowing the enclosures to be well suited for conduit installation through their walls.

Compare fiberglass with other metallic and non-metallic materials. Our fiberglass enclosures assure proven quality performance while offering considerable advantages over other enclosure alternatives. Review the comparisons and you'll find Allied Moulded fiberglass enclosures are the best choice for your application.



	Fiberglass	Stainless Steel	Carbon Steel	PVC	Polycarbonate
Corrosive Resistance	Excellent	Excellent	Poor	Excellent	Fair
Chemical Resistance	Excellent	Excellent	Poor	Very Good	Good
Relative Cost	Low	High	Low to Moderate	Low	Low to Moderate
Drilling, Punching & Cutting	Very Easy	Extremely Hard	Hard	Very Easy	Easy
Dielectric Strength	Electrical Insulator	Electrical Conductor	Electrical Conductor	Electrical Insulator	Electrical Insulator
Weight	Light	Heavy	Heavy	Light	Light

WIDE RANGE OF INDUSTRIAL APPLICATIONS

Allied Moulded fiberglass enclosures can be found in a multitude of industrial applications all over the world. The rigid design of compression molded fiberglass together with its inherent corrosion resistance, provides a solution to a wide array of enclosure problems. The list below outlines some of the more popular industries and applications where Allied Moulded fiberglass enclosures can be found:

Waste Water Treatment

- Odor control
- Grinder pump controls
- Chemical injectors
- Sludge conditioners
- Desalination controls
- Wireless communications
- SCADA systems

Car Wash Industry

- Chlorinators
- Water recycling
- Air door controls
- Washing equipment
- Control panel systems

Pump Original Equipment Manufacturers

- Flow controls
- Flow metering
- Liquid level controls
- Equipment recorders

Utilities/Solar/Wind

- Gas detectors
- Coal analyzers
- Air pollution monitors
- Petrochemical analyzers
- Wireless communications
- SCADA systems
- Solar panel battery storage
- Solar DC combiner boxes
- Wind turbine control panel
- Data logging wind application

Mining

- Radio phones
- Elevator controls
- Air monitoring analyzers
- Emergency lights and sirens

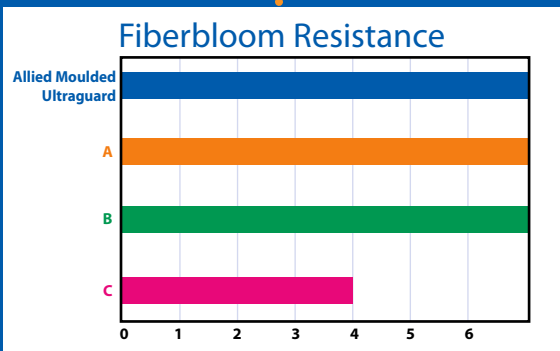
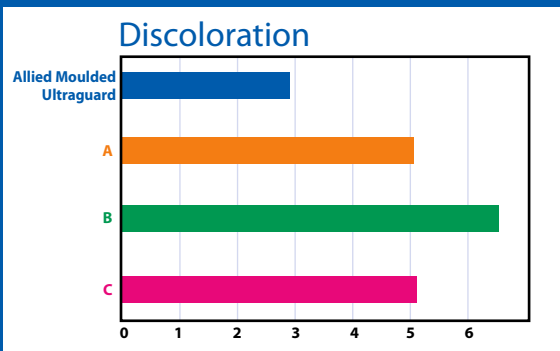
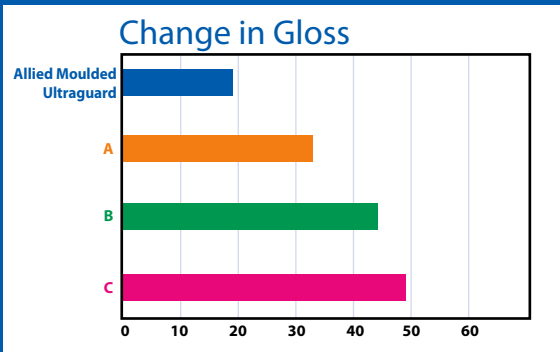
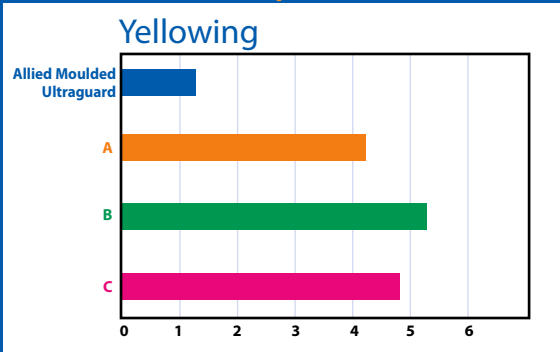


Allied's new Ultraguard® formulation outperformed materials used by three leading fiberglass enclosure manufacturers. The following four key areas were benchmarked, with Ultraguard® easily coming out on top:

ULTRAGUARD®

Fiberglass Material • Superior Protection • From Allied Moulded Products 

Ultraguard® — Allied Moulded's new proprietary fiberglass reinforced polyester material formulation. Allied's Materials Research and Development laboratory successfully optimized ingredients to create a formulation with the ability to resist the effects of UV degradation. The formulation was developed through the effective use of UV absorbers that provide protection by physically absorbing light in specific ranges of wavelengths, HALS (Hindered Amine Light Stabilizers), and antioxidants. Together, all three classes of stabilizers provide specific protection to modes of failure associated with outdoor exposure.



INNOVATIVE MATERIAL DESIGN

Allied Moulded's new Ultraguard® formulation, while retaining its already robust structural integrity, now has an enhanced surface finish with improved aesthetics. Based upon customer feedback, Allied Moulded recognized an increased number of customer applications requiring outdoor capability and the related challenges to non-metallic enclosure designs. This is why Allied Moulded chose to invest in continuous improvement of our material formulations. Customer applications often require enclosures to be mounted on expensive systems where aesthetic appearance is critical. Changes in enclosure color, texture, and gloss in these applications are not acceptable. Fiberbloom, for example, not only is aesthetically unattractive, but can also be an issue if people come in physical contact with the enclosure surface. Literally defined, fiberbloom is degradation of the polyester compound surface during long-term outdoor exposure, resulting in the eventual exposure of glass fibers. Superficial fiberbloom does not affect the structural integrity or NEMA rating of the enclosures.



We've Got You Covered.

With sizes ranging from our 7" x 4" x 3" junction box to the impressive, 72" x 49" x 25" double door freestanding cabinet, we've got a full product line in a wide variety of choices. All fiberglass enclosures carry NEMA, UL, and CSA Type 4X and IEC 60529 Type IP66 ratings. Some JIC products secured with 4 screw down covers carry Type 6P/IEC 60529 IP68 ratings.



AM Small Junction Boxes

are designed for rugged surface mount applications and remote pendant applications. These enclosures range in size from 7" x 4" x 3" (178mm x 102mm x 6mm) up through 9" x 4" x 3" (229mm x 102mm x 6mm) and are often used as a junction box for power or with pushbutton controls installed. Allied Moulded small junction box enclosures come standard with back panel bosses and inserts for back panel installations.

- "Tongue and groove" type closed-cell neoprene gasket
- Stainless steel captive cover screws and mounting feet
- Threaded inserts installed for optional back panel

AM Pushbutton Series Enclosures

were developed for system control interface applications where multiple pushbutton control devices are used in various control applications. Enclosure sizes range from 7" x 4" x 3" (178mm x 102mm x 6mm) one hole design up through 18" x 16" x 8" (457mm x 406mm x 203mm) forty-two hole design and they come standard with 30.5 mm holes or optional 22.5 mm holes.

- 30.5 millimeter hole cut-out standard
- "Tongue and groove" type closed-cell neoprene gasket
- Stainless steel captive cover screws
- 13 hole configurations available



We've Got You Covered.

AMU Series **ULTRALINE** Enclosures

are the newest Allied Moulded enclosures developed primarily for OEM panel builder applications also requiring JIC sized enclosures. Ultraline® enclosures offer additional features including patent pending multi-mounting capability, field installable HFP (Hinge Front Panel) accessories, and clear polycarbonate covers for instrumentation applications. Ultraline® has a more modern exterior design in a flush cover-to-base contour which many system integrators prefer for improved system aesthetics. Available sizes include 6" x 6" x 4" (152mm x 152mm x 102mm) up through 20" x 16" x 10" (508mm x 406mm x 254mm)



- Clear polycarbonate cover
- Multi-mounting capable
- Flange retrofit competition
- Flush cover to base design
- "Tongue and groove" neoprene gasket design



AM Series Flat & AM-R Raised Cover JIC Enclosures

have been designed for UL listed panel builder OEM (Original Equipment Manufacturer) customers. These JIC (joint industrial council) sized enclosures cover a range of 6" x 6" x 4" (152mm x 152mm x 102mm) up through 20" x 16" x 8" (508mm x 406mm x 203mm). AM series enclosures can be found in many corrosive environment applications, indoor and outdoor, where they are exposed to extreme temperatures, UV rays and other corrosive chemicals. The lightweight FRP (fiberglass reinforced polyester) material formulation offers many advantages over stainless steel and other thermoplastic constructed enclosures. Raised cover AM series enclosures offer the panel builder an additional 1 3/4" (44.5mm) height for more space around the HFP (hinged front panel) accessories. AM Series enclosures also come with optional viewing windows for applications requiring instrumentation devices.

AM-R Control Series Enclosures

were designed for wall mount applications where system integrators require the enclosure to house and protect many critical control components. Open space inside the Allied Moulded control enclosures has met the demand for innovative panel designs in various industrial applications including waste water treatment, oil & gas, solar & wind power, chemical formulation and general communications. Control series enclosures have a uni-body design with compression-molded bases and covers for an economical solution for larger scale wall mount applications. Available sizes range from 24" x 20" x 8" (610mm x 508mm x 203mm) up through 30" x 24" x 10" (762mm x 610mm x 254mm) and come standard with a raised cover allowing for HFP installation and an additional 1 3/4" (44.5mm) height for more space under the cover.

- One piece body construction for dimensional stability
- Matching raised cover for additional depth
- Closed-cell neoprene gasket encased in continuous channel
- Stainless steel hinges, lockable latches and mounting hardware
- Accessories include back panels, hinged front panels, and polycarbonate viewing windows



AM Empire Series Wall Mount Enclosures

have been designed for rugged, industrial, large scale wall mount applications where contractors are looking for an enclosure that is lighter in weight for easier installation and simple to access cabinet doors for easier service capability. Empire enclosures require as little as three twist latches or a 3-point latching system for accessible service. This design also covers the sealing requirements to achieve NEMA 4X ratings and rain tight applications. Empire enclosure sizes range from 36" x 30" x 12" (914mm x 762mm x 305mm) up through 60" x 36" x 16" (1524mm x 914mm x 406.4mm) and come standard with twist latch or 3-point latching cabinet doors. Empire wall mount enclosures are manufactured with an RTM (Resin Transfer Molding) process for both their bodies and doors.



- Cabinet doors come standard with 300 series stainless steel twist latches or 3-point latching system
- Aesthetically pleasing flush mount door
- Durable, all fiberglass construction
- Heavy duty, continuous stainless steel hinge
- Optional carbon steel back panels fully interchangeable with other specified enclosures

AM Empire Freestanding Enclosures

have been designed for large cabinet installations for major industrial power and communication applications. Freestanding cabinet sizes available are single door 72" x 25" x 25" (1829mm x 635mm x 635mm) and double door 72" x 49" x 25" (1829mm x 1245mm x 635mm). Freestanding Empire enclosures come standard with an innovative lockable 3-point latching door handle system for easy cabinet entry and sufficient sealing to achieve NEMA 4X rain tight applications. Empire freestanding enclosures are manufactured with a hand lay-up process for the body and an RTM process for their doors.



- Durable, all fiberglass construction
- Heavy duty, continuous stainless steel hinge
- Freestanding units have stainless steel 3-point latching handles
- Optional carbon steel back panels fully interchangeable with other specified enclosures
- Mounting struts available for system integration

We'll complement you.

Enclosure Complementary Accessories:

Allied Moulded is pleased to offer a variety of the most often requested enclosure accessory products. We take pride in the quality of each fiberglass reinforced polyester enclosure we manufacture and are committed to providing our panel builder customers additional accessories required to complete their innovative integrated systems.



Back panels
(Carbon steel,
aluminum, frp,
galvannealed)



**Hinged
front panels**
(Aluminum)



**Pole
Mount
Kits**



**Pull Type
Handle**



Ventilator kits



Exhaust filter kits



Keylock kits



Print pocket



Cord grip

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CONFORMANCE TO INDUSTRY STANDARDS

Industrial enclosures manufactured by Allied Moulded Products and bearing the UL and CSA labels have been tested and certified to the following standards:

UL 50 Enclosures For Electrical Equipment

UL 50E Enclosures For Electrical Equipment, Environmental Considerations

UL 508A Industrial Control Panels

UL 746C Polymeric Materials – Use In electrical Equipment Evaluations

CSA-C22 No. 14 Industrial Control Equipment

CAN/CSA-C22 No. 94 Special Purpose Enclosures

Allied Moulded Products enclosures series AMU, AM and AM-R maximum size 30 x 24 x 10 are certified:

UL types 1, 2, 3, 4, 4X, 12 and 13

CSA types 1, 2, 3, 3R, 4, 4X, 12 and 13

NEMA types 1, 2, 3, 3R, 4, 4X, 12 and 13

AM and AM-R JIC flat and raised cover models sizes 14 x 12 x 6 and smaller (excluding AM743 and AM943) and all AMU models utilizing solid opaque or clear covers (excluding window covers) secured with four mounting screws are UL and CSA listed Type 6P.

Allied Moulded Products enclosures series AM sizes 36 x 30 x 12 and larger are certified:

UL types 1, 4 and 4X

CSA types 1, 4 and 4X

NEMA types 1, 4 and 4X

AM and AMU series meet IEC60529 type IP66. Models rated NEMA 6P meet IEC60529 type IP68 submersible up to 24 hours at a depth of 6 feet (1.8m).

CONTACT INFORMATION

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