ALLIED MOULDED PRODUCTS, Inc.

YOUR TRUSTED SOURCE

NONMETALLIC ENCLOSURES & ACCESSORIES

Material Comparison
Fiberglass vs Polycarbonate

Choosing the Right Material for Industrial Enclosures

When selecting enclosures for industrial use, the material they're made from plays a crucial role—especially in challenging environments. The performance and lifespan of an enclosure can be significantly affected by exposure to harsh conditions like corrosive chemicals or salty, humid air. While both products are UL and NEMA 4X listed, selecting the appropriate material is key to maximizing the longevity and performance of your application.

Fiberglass: Durable and Chemically Resistant

Fiberglass enclosures deliver exceptional durability and long-term perfomance in the harshest environments. Similar to stainless steel, fiberglass resists corrosion against a wide range of chemicals and acids and will not rust or pit over time.

Additionaly, Allied Moulded's exclusive Ultraguard® fiberglass goes a step further by offering enhanced UV protection, making it an excellent choice for the toughest outdoor applications such as:

- Solar
- Water / wastewater
- Telecom
- Carwash
- Mining

Or any other environments that are highlighly corrosive/ extreme UV exposoure.

"Fiberglass material is ideal for rugged industrial or outdoor applications."

Fiberglass Advantages

- UV protection with Ultraguard®
- Outstanding chemical and corrosion resistance
- Non-conductive
- Lightweight & strong, rigid construction
- High flame resistance

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CORROSION RESISTANCE GUIDELINES

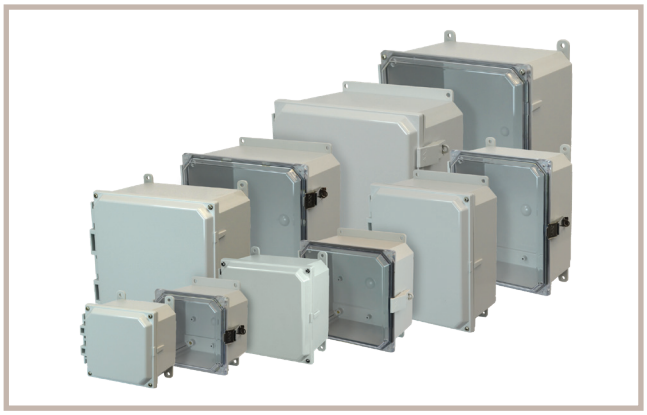
	Solvents	Alkalis	Mild Acids
Examples	Cleaning solvents Carbon Tetrachloride Isopropyl Alcohol Perchlorethylene Toluene Xylene	Ammonium Chloride Ammonium Nitrate Calcium Hydroxide Calcium Hypochlorite Magnesium Hydroxide Sodium Hypochlorite	Aluminum Chloride Boric Acid Calcium Chloride Potassium Nitrate Sea Water Sodium Nitrate Zinc Chloride
Recommended	**Compression Fiberglass** 304 / 316 Stainless Steel Aluminum	304 / 316 Stainless Steel	**Compression Fiberglass** Gelcoat Fiberglass **Polycarbonate** 304 / 316 Stainless Steel
Satisfactory	Painted Carbon Steel Gelcoat Fiberglass	**Polycarbonate** **Compression Fiberglass** Gelcoat Fiberglass	Painted Carbon Steel
Limited Use	**Polycarbonate**	Painted Carbon Steel Aluminum	Aluminum

POLYCARBONATE: LIGHTWEIGHT AND ADAPTABLE

Polycarbonate enclosures offer a flexible and cost-effective alternative to metallic and fiberglass enclosures. Known for their excellent impact resistsance and lightweight body style, they are well suited for NEMA 4X applications where corrosion isn't a major concern, such as:

- Automation
- Instrumentation
- Pump Controls
- Security & Communication
- Electronics

Allied Moulded polycarbonate enclosures carry an F1 rating for UV exposure, making them ideal for many indoor/ outdoor applications.



POLYCARBONATE ADVANTAGES

- **High impact resistance**
- **Lightweight**
- **Easy modification**
- **Available in clear or opaque cover styles**
- **High flame resistance**