INDUSTRIAL

HIGH-PERFORMANCE MATERIALS FOR INDUSTRIAL APPLICATIONS

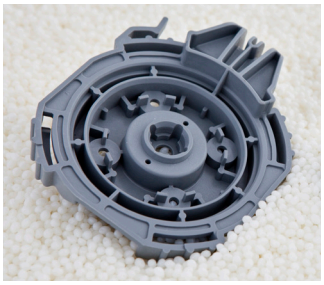
Engineered Compounds for Demanding Requirements

www.Americhem.com

americhem
PERFORMANCE | SOLUTIONS | TRUST

Engineered Compounds for Demanding Applications

Industrial applications require innovative materials that can perform in a broad range of demanding environments, including elevated temperatures, aggressive chemicals, and extreme loading conditions. For over a quarter century, manufacturers of industrial products have relied on Americhem's Engineered Compounds to reliably supply a broad range of materials to meet their performance and economic requirements.



UNLIMITED COMPOUND TECHNOLOGY FOR INNOVATIVE PRODUCTS

Design flexibility, increased safety, weight reduction, parts consolidation, longer life, and expanded operating conditions are all advantages of using engineered compounds in industrial applications. We are methodical in our approach to developing compounds for applications with a focus on understanding customer performance requirements and economic constraints.

Americhem's engineers can formulate compounds based on virtually any commercially available base resin and utilize their deep knowledge of polymer morphology and structure to select the best base resin for your application. These resins typically fall into four broad categories and are combined with reinforcements, flame retardants, fillers, additives, stabilizers, and pigments to meet specific functional and regulatory requirements:

Type	Advantages	Resins
Amorphous	Low mold shrink Reduced part warpage Good impact strength Can be transparent	ABS, ASA, Nylon (Amorphous) PC, PS, HIPS, PMMA PEI, PES, PSU, PPSU*
Semicrystalline	Chemical resistance Good wear and thermal properties Maximizes the effect of fiber reinforcement	Acetal, PE, LDPE, HDPE, PP, CoPP PBT, PET, PK, Nylon (6, 6/6, 6/12) PFA, *PVDF, ETFE, PPA, PPS, PAEK, PEEK
Blend/Alloy	Combines the inherent advantages of two polymers, which may be amorphous or semicrystalline Improved chemical resistance, weatherability, strength, warpage, and thermal performance	PC/ABS, PC/ASA, PC/PBT, PC/PET, Ionomer/Nylon, PC/PSU, PEI/PC, PES/PSU
Elastomer	Soft touch materials with a wide range of hardness, flexibility, and elongation	SBS, SEBS, TPO, TPV CoPA, TPU

*High Temperature

INCREASED SPEED TO MARKET

You can count on Americhem to support you throughout the product development cycle and full-scale production. Our capabilities include:

- Fully equipped in-house color and testing labs, including accelerated weatherability testing.
- Deep engineering capabilities to rapidly develop and sample compounds.
- No minimum order quantities and flexbile lead times.

americhem
PERFORMANCE | SOLUTIONS | TRUST

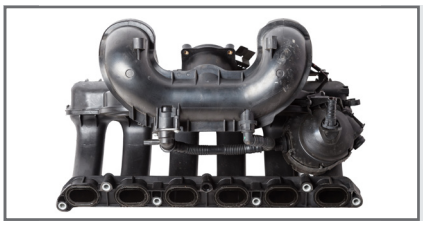
2000 Americhem Way
Cuyahoga Falls, OH, 44221 USA

Phone: +1.888.337.3226
Web: www.Americhem.com

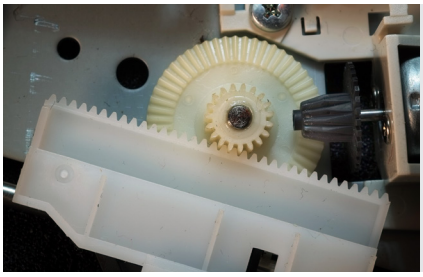
01/2026

AMERICHEM PRODUCT FAMILIES

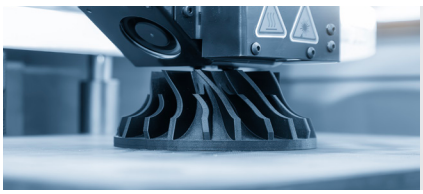
Four global plants to support full-scale manufacturing requirements in the U.S., Europe, and Asia.



Instruc® Structurally Reinforced Compounds: Glass and carbon fiber reinforced compounds for high strength, stiffness, and heat deflection temperature for metal replacement applications. Flame-retardant grades to meet UL flammability requirements.



InLube™ Wear-Resistant and Internally Lubricated Compounds: Internally lubricated compounds for low friction and high wear resistance for increased service life, reduced noise, and maximum durability. PFAS-free alternatives to standard PTFE-containing wear and friction packages.



InElec® Electrically Active Compounds: Antistatic, dissipative, and conductive compounds to provide electrostatic discharge protection and EMI shielding.

Surlyn Reflection Series® Compounds and iONYX High-Gloss Weatherable Compounds: Proprietary Ionomer alloys with an unmatched balance of Class A appearance, low temperature impact, weatherability, scratch/mar, and chemical resistance.

ColorFast® Precolored Compounds: Engineered to deliver consistent, high-performance color across applications. Precolored trade-name and proprietary compounds. Weatherable pigment and stabilizer packages to maximize outdoor performance.

americhem
PERFORMANCE | SOLUTIONS | TRUST

2000 Americhem Way
Cuyahoga Falls, OH, 44221 USA

Phone: +1.888.337.3226
Web: www.Americhem.com

01/2026

COMPOUNDS TO ADDRESS SPECIFIC INDUSTRY NEEDS

Products	Market Segment	Application	Technologies	Benefit
InStruc® ETFECF15	Fluid Handling	Pump containment shell	Carbon fiber reinforced ETFE	Extreme chemical resistance, metal replacement
InElec® PPCF20	Fluid Handling	Pump center block	Carbon fiber reinforced PP	Chemical resistance, static dissipation
iONYX NY15030HF-10T	Heavy Equipment	Access panel	Precolored talc-filled ionomer alloy	Weatherable, scratch/mar resistant; Class A finish without painting
Instruc® PPAGF30IM2HS	Heavy Equipment	Hose coupling	Glass-reinforced, impact-modified PPA	High strength, impact resistance, and heat performance
InLube™ POMHTF13Si2	Material Handling	Bushing	PTFE and silicone lubricated Acetal	Outstanding wear and friction; extended bushing life
InLube™ PA66GF20TF10	Material Handling	Conveyor Guide	Glass reinforced, PTFE lubricated Nylon 6/6	High strength and reduced wear and friction in conveyor systems
Instruc® PA66GF15FRHS	Instrumentation	Controller housing	Precolor, glass-reinforced, flame-retardant Nylon 6/6	V0 flammability; high strength; safety yellow
Instruc® FRPBTGF30	Instrumentation	Switch housing	Precolor, glass-reinforced, flame-retardant PBT	5VA flammability; high strength; safety red
Sevrene® 4000-65A	Safety Equipment	Mask	Precolored elastomer overmold	Soft-touch, branded color; PP bondable
Instruc® PA66CFM10	3D Printing	Filament	Milled carbon fiber-filled Nylon 6/6	High strength, dimensional stability, print-friendly
EcoLube™ PCHFMRMS	Building/Construction	Window blind actuator, cord assembly	PFAS-free wear and friction PC	Longer life, quieter operation; PFAS-free
EcoLube™ POMHLA1	Agriculture	Irrigation valve	PFAS-free wear and friction Acetal	Improved wear resistance; extended valve life
iONYX™ NY15030HF	Transportation	Body Panels	Ionomer alloy	Class A finish; paint elimination; weatherable and scratch/mar resistant
iONYX NY15030HF/ Instruc® PA6GF15	Transportation	Handle	Ionomer alloy overmold on glass-reinforced Nylon 6 substrate	Same as above; overmolded on reinforced substrate
InElec® PPGF5	HVAC	Motor Fan	Glass-reinforced, conductive PP	ESD protection; high mechanical strength
ColorFast® PCT-2011 UV Yellow	Instrumentation	Gas detector housing	PC-PBT alloy precolored safety yellow	UV stable; low-temp impact; chemical resistance
ColorFast® PPSU H200 Orange	Instrumentation	Temperature monitor housing	High temp PPSU in safety orange	Extreme heat resistance; VO flammability; high impact
Instruc® POK SSP18 Blue	Material Handling	Conveyor linkage	Stainless steel powder-filled Polyketone precolored blue	Metal detectable; high wear/ impact/chemical resistance; FDA compliant
InElec® PPSCF20	Fluid Handling	Impeller	Carbon fiber reinforced PPS	High strength, chemical resistance, and thermal performance

americhem
PERFORMANCE | SOLUTIONS | TRUST

2000 Americhem Way
Cuyahoga Falls, OH, 44221 USA

Phone: +1.888.337.3226
Web: www.Americhem.com

01/2026

IN ADDITION TO COLOR DESIGN AND COMPOUND DEVELOPMENT, AMERICHEM OFFERS THE FOLLOWING SUPPORT SERVICES:

- Analytical testing (Flammability, physical and thermal property analysis, weatherability testing)
- Regulatory documentation and support
- Manufacturing locations in the U.S., Europe, India, and China
- Toll compounding
- No minimum order size
- Injection molding and extrustion technical support

CUSTOM-ENGINEERED COMPOUNDS START WITH A PROVEN DEVELOPMENT PROCESS

From resin selection to regulatory compliance, Americhem's formulation process ensures your product performs where it matters.

Define Application Requirements

- Temps
- Chemicals
- Loading
- Impact
- Wear
- Conductive
- Flammability

Base Resin Selection

- Amorphous
- Semicrystalline
- Alloys
- Elastomers

Reinforcement, Modifier, Additive, and Color Selection

- Glass Fiber
- Carbon Fiber
- PTFE
- Silicone
- Carbon Black
- Flame Retardants
- Minerals
- Pigments/Dyes
- Impact Modifiers

Compounding Process Development

- Blending/ Feeding
- Side feeders
- Single Screw
- Twin Screw
- Screw Design

QC, Testing and Packaging Requirements

- Required testing
- Certification
- Release criteria
- Specification development
- Documentation

Final Product

Americhem's engineering process starts with understanding your specific performance needs, application environment, and cost parameters. From there, we select the optimal base resin — whether amorphous, semicrystalline, alloy, or elastomer — and formulate with functional additives, reinforcements, and stabilizers.

Every compound undergoes rigorous internal testing and compliance reviews before entering production. Our deep resin expertise, fast prototyping, and vertically integrated support mean you get exactly what your product needs faster and with fewer risks.

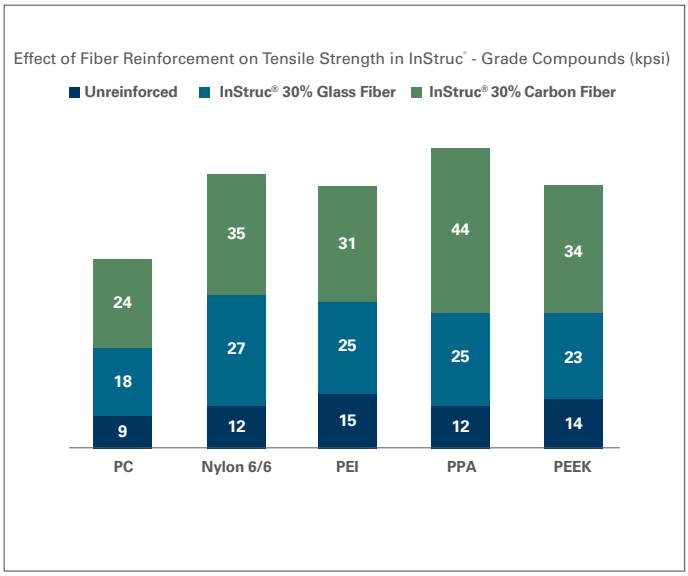
americhem
PERFORMANCE | SOLUTIONS | TRUST

2000 Americhem Way
Cuyahoga Falls, OH, 44221 USA

Phone: +1.888.337.3226
Web: www.Americhem.com

01/2026

FIBER REINFORCEMENT UNLOCKS STRUCTURAL PERFORMANCE FOR METAL REPLACEMENT

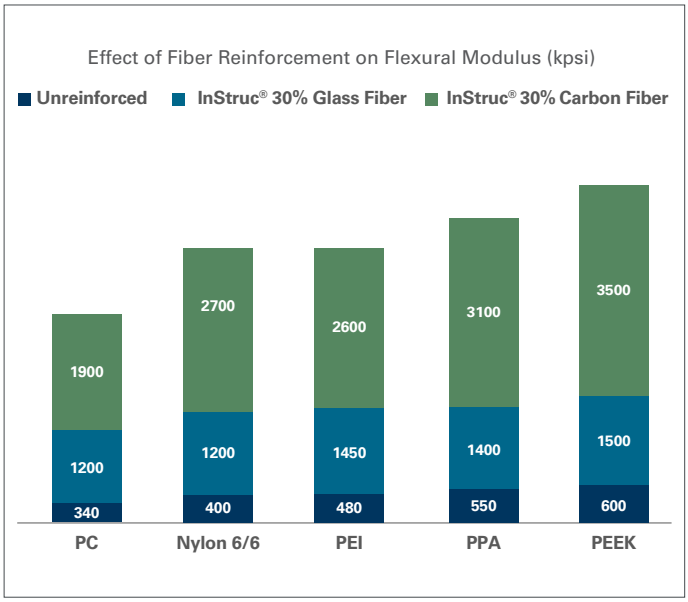


Instruc® compounds are formulated with glass or carbon fiber to deliver lightweight, high-strength materials that can replace metal in demanding applications.

Carbon fiber reinforcement produces the greatest tensile strength gains, while glass fiber is more cost effective.

Tensile strength improves by 2 to 3.5× over unfilled base resins, with semicrystalline polymers showing the greatest benefit.

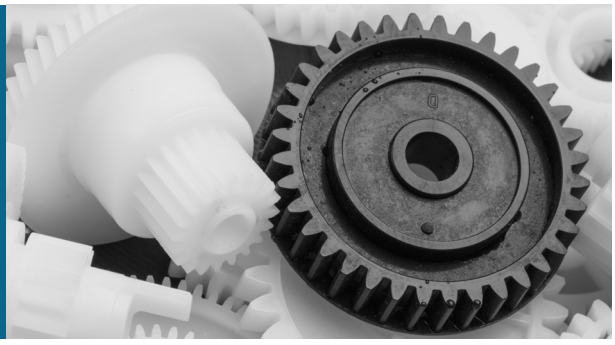
30% carbon fiber reinforced PPA achieves 44 kpsi tensile strength, comparable to general-purpose zinc die-cast alloys.



Flexural modulus improves by up to 6× with 30% carbon fiber reinforcement compared to unfilled base resins.

High stiffness supports metal replacement, lightweighting, parts consolidation, and the elimination of secondary operations in complex assemblies.

Americhem offers a full portfolio of internally lubricated materials under the InLube™ and PFAS-free EcoLube™ product families. These wear- and friction-resistant compounds are formulated with advanced lubricants and reinforcements to extend part life, reduce noise, and eliminate the need for greases and oils.



americhem
PERFORMANCE | SOLUTIONS | TRUST

2000 Americhem Way
Cuyahoga Falls, OH, 44221 USA

Phone: +1.888.337.3226
Web: www.Americhem.com

01/2026

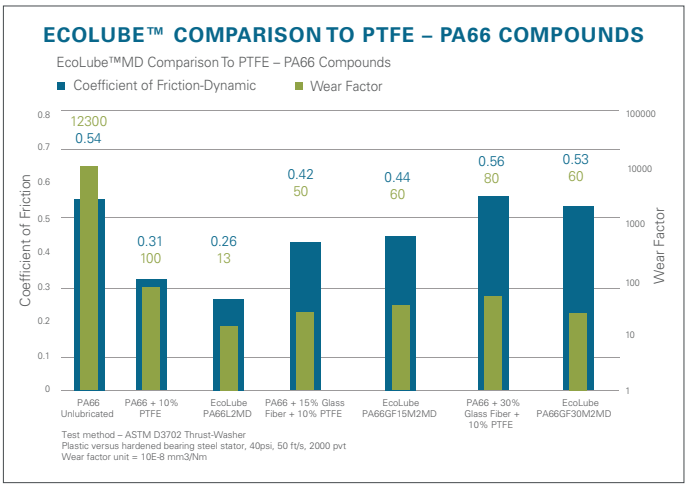
ENGINEERED COMPOUNDS THAT PERFORM UNDER HEAT, LOAD, AND FRICTION

Glass fiber reinforcement improves heat deflection temperature (HDT) by up to 2.5× over unfilled base resins, with the largest gains observed in semicrystalline polymers.

Instruc® formulations can combine reinforcement with flame retardant additives to meet requirements for demanding UL environments.

Common applications include impellers, housings, brackets, frames, and structural bases.

Glass and carbon fiber reinforcement yield similar thermal performance, allowing cost or weight trade-offs without sacrificing HDT.



EcoLube™ PA66 grades deliver the same improvements in wear resistance and reduced friction as PTFE-filled nylons, without PFAS. These internally lubricated compounds extend part life, reduce noise, and eliminate the need for external lubricants in sliding and moving components.

WEAR AND FRICTION TECHNOLOGIES FOR LONGER LIFE AND PFAS-FREE COMPLIANCE

Common Base Resins:

- PEI
- POM
- PP
- PBT
- PC
- Nylon 6/6
- PPA
- PEEK

Lubrication Technologies:

- Silicone
- MoS_2
- Graphite
- PFPE
- PFAS-Free Systems
- Carbon Fiber
- Glass Fiber
- Aramid Fiber

Application Advantages:

- Extend component life in high-wear applications
- Reduce friction, noise, and vibration
- Eliminate need for external lubrication
- Ensure PFAS-free compliance
- Improve part consistency and motion control
- Enable design freedom where reduced friction is a priority

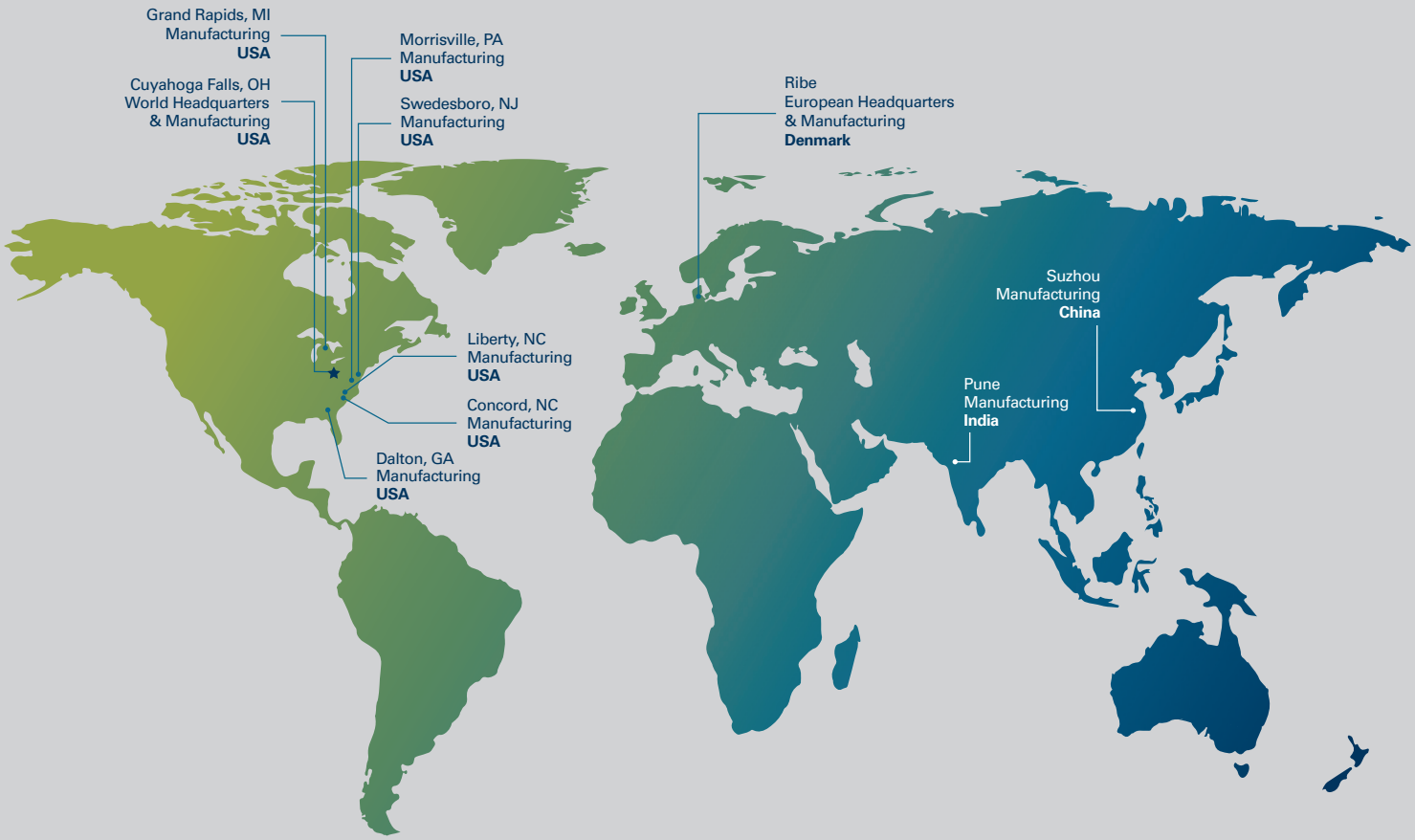
americhem
PERFORMANCE | SOLUTIONS | TRUST

2000 Americhem Way
Cuyahoga Falls, OH, 44221 USA

Phone: +1.888.337.3226
Web: www.Americhem.com

01/2026

A GLOBAL LEADER IN CUSTOM COMPOUNDING



BATCH TO BATCH.
MARKET TO MARKET.
CONTINENT TO CONTINENT.

From our headquarters in Cuyahoga Falls, Ohio, to our manufacturing locations and sales offices across the world, our expansive footprint provides global reach for your organization's needs. Not only are we dedicated to getting your materials where they need to be, when they need to be there, we work behind the scenes to reduce your supply risks. In addition to our network of plants, regulatory and compliance teams, we have contingency plans and support services in place to secure your product against unforeseen interruptions.

Explore our full capabilities at americhem.com

americhem
PERFORMANCE | SOLUTIONS | TRUST

2000 Americhem Way
Cuyahoga Falls, OH, 44221 USA

Phone: +1.330.929.4213
Web: www.Americhem.com

01/2026