
RELIABLE. RESILIENT. REMARKABLE.
ILLINOISCRANE
AGS
TECHNOLOGY

AGS Basics

Basics

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AGS is a 30+ year custom injection molding company specializing in the use of engineering grade materials both in virgin and certified recycled plastics.



AGS has positioned itself to be a reliable, low-cost producer for OEM's and Tier 1 companies in North America for structural plastic components. Our goal is to make great parts, offer sustainable options and save you money!

Basics

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Location

Batavia, IL — 30 minutes west of Chicago

Machinery

23 injection molding machines with 7 robots with a tonnage range from 90-940

Engineering, tooling, and assembly expertise

IATF 16949:2016 registered and certified minority business

Internal laboratory to certify Injectoblend™ material

100% USMCA compliant = 100% sourced/made in USA



World Class Customers

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World Class Results to a World Class Customer Base

	2020	2021	2022	2023	2024	2025
External PPM	2.0	2.0	1.1	1.3	1.4	1.3
On-time Shipping	99.3%	99.0%	98.5%	99.5%	99.1%	99.8%
Top 3 Supplier Score	100%	100%	100%	100%	100%	100%

HUNTER Engineering Company

AFX INDUSTRIES, S.A. DE C.V.

INOAC

YAPP

Yanfeng USA Automotive Trim Systems, Inc.

LUCID

DRIV

HFI

MAGNA

JOHNSON CONTROLS

GM

CATERPILLAR

duravent

Awards

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- 2023 Advanced Filtration Systems, Inc. Supplier of the Year
- GM Supplier Quality Excellence Awards 2013, 2016, 2022, 2023, and 2024.











Sales & Capacity

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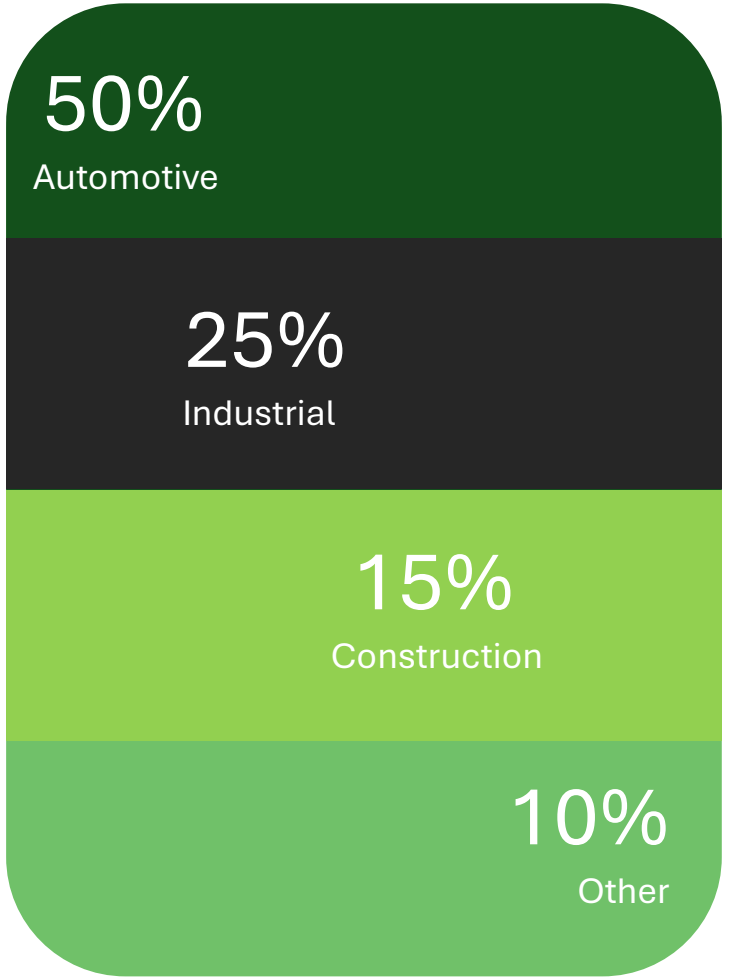
- Open capacity for growth with current capital equipment
- Space for 4+ injection mold additional presses in current footprint
- Option for expanded footprint on current site
  - Up to 50% manufacturing floorspace expansion



Industries Served

Automotive Applications

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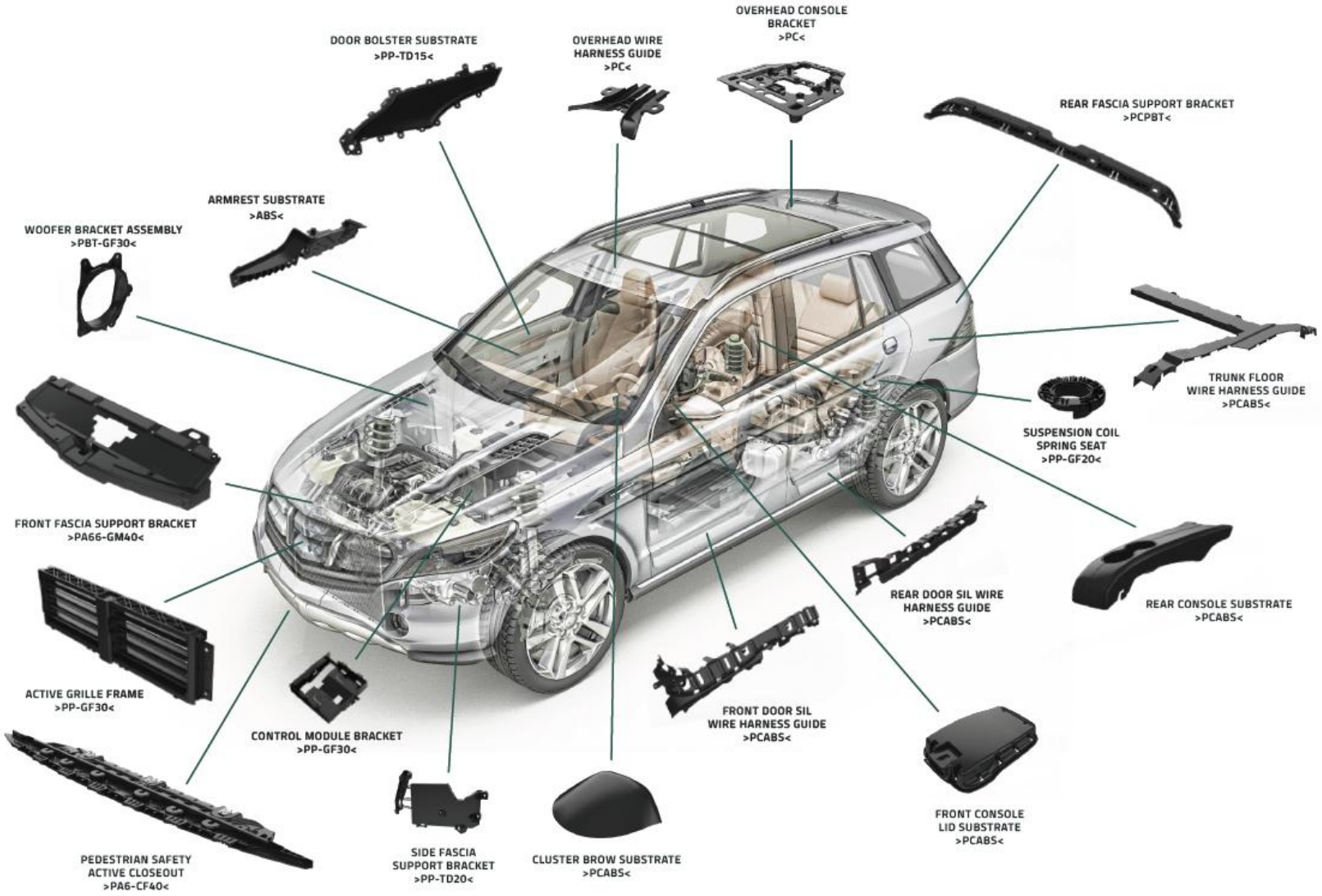

World-Class Injection Molders

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30 Years of Innovation and Improvements

At our core, AGS deeply understands material applications and properties whether the material is virgin, compounded, or recycled.



Adjustments to machinery to improve processing:

- Heavy duty vacuum loaders from bulk material handling industry
- Oversized dying hopper increases residence time—hygroscopic
- High heat desiccant dryer maximizes removal of moisture
- Longer L/D barrel with custom mixing screw maximizes distribution
- Proprietary nozzle filter screens unmelt and improves dispersion
- iMFLUX® processing technology automatically adjusts to viscosity

AGS invests in training in our plant to exceed expectations: Promolder® trained supervisors and operator training

What is Injectoblend?

About Injectoblend

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While AGS has decades of processing material from virgin or reprocessed suppliers, AGS also has a proprietary option. Customers seeking recycled content, cost savings, or both; Injectoblend™ may be the answer.

AGS can produce an Injectoblend™ for you! In production, we 100% certify every production lot to your unique specifications in our internal laboratory.

Over half of AGS customers utilize Injectoblend™ and many of them consider it a competitive advantage.

AGS has off-the-shelf recycle options:

- Injectoblend 20 — 20% Recycled Content
- Injectoblend 35 — 35% Recycled Content
- Injectoblend 50 — 50% Recycled Content
- Injectoblend 100 — 100% Recycled Content



About Injectoblend

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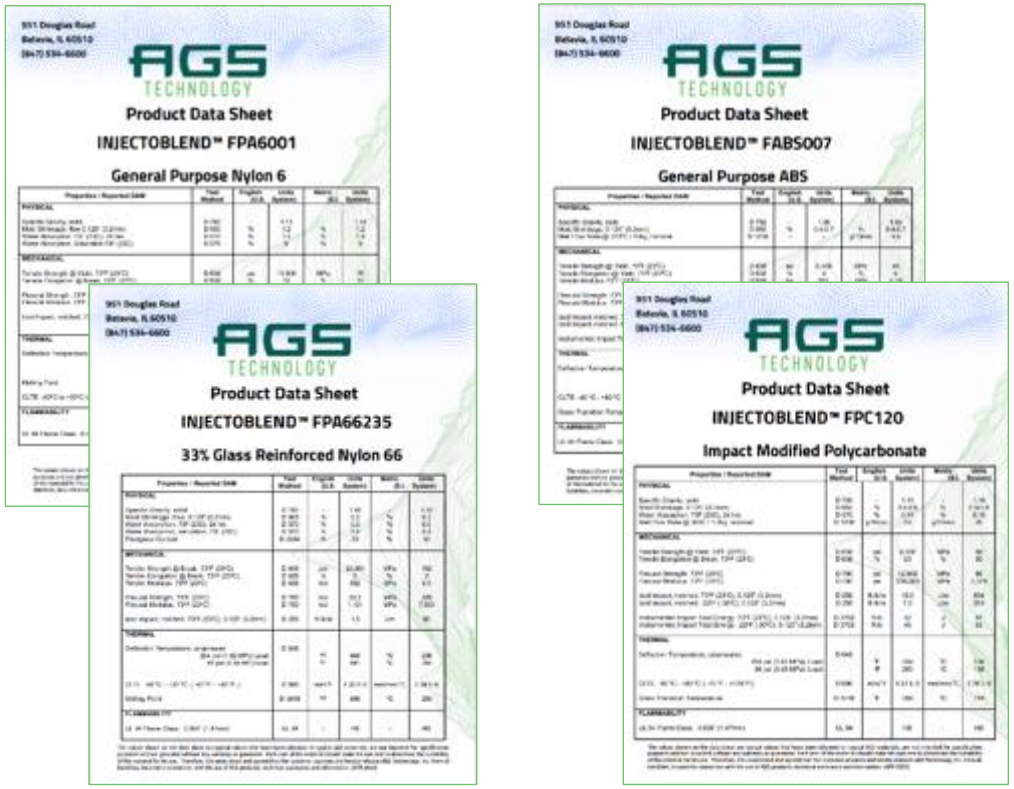
Many certified Injectoblend™ materials:

- ABS
- PC/ABS
- Polycarbonate
- Nylon PA66 or PA6
- Polypropylene
- Polystyrene
- Acetal
- Polyethylene (HD or LD)
- Any of the above with glass or talc

Which material is right for your application?
Work with AGS to find the right material OR have us design an Injectoblend ™ just for you.



Potential Cost Savings with Injectoblend™

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A real-life example of options to a key customer

Virgin 33% Glass Filled Nylon 66	
Tensile Strength Avg	175 Mpa
Tensile Strength Min	150 Mpa
Flex Strength 73°	36,000 psi
Izod Impact 73°	2 ft-lb/in
Resin Cost Per Part	$0.66

Injectoblend 20 20% Recycled 33% Glass Filled Nylon 66	
Tensile Strength Avg	175 Mpa
Tensile Strength Min	150 Mpa
Flex Strength 73°	36,000 psi
Izod Impact 73°	2 ft-lb/in
Resin Cost Per Part	$0.616

Injectoblend 50 50% Recycled 33% Glass Filled Nylon 66	
Tensile Strength Avg	165 Mpa
Tensile Strength Min	140 Mpa
Flex Strength 73°	34,700 psi
Izod Impact 73°	1.8 ft-lb/in
Resin Cost Per Part	$0.555

Injectoblend 100 100% Recycled 33% Glass Filled Nylon 66	
Tensile Strength Avg	155 Mpa
Tensile Strength Min	130 Mpa
Flex Strength 73°	33,200 psi
Izod Impact 73°	1.5 ft-lb/in
Resin Cost Per Part	$0.44



Certifying Recycled Material

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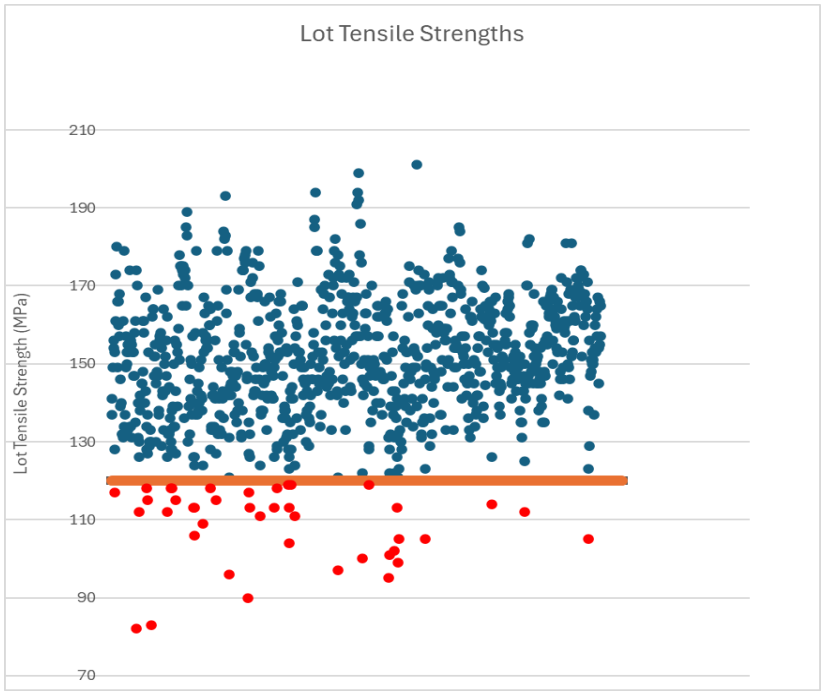
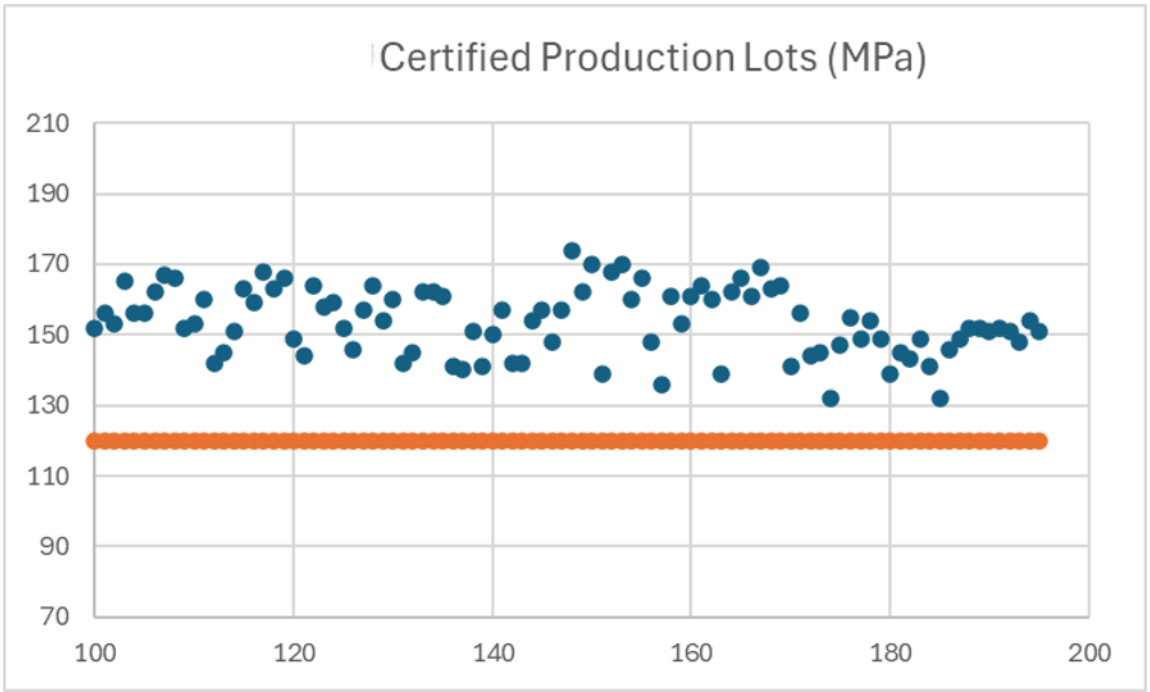
AGS pulled the data for 33% glass-filled Nylon 66 from 300 potential supplier samples. We purchased, cleaned, blended, tested, and certified 240 lots as Injectoblend™ FPA66235 for use in in our injection molding process.



300 Potential AGS Raw Material Lots



240 Final Blended Lots of Certified Injectoblend™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AGS Laboratory

AGS Laboratory

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Equipment:

- Impact – Izod, Charpy, Gardner
- Tensile – Strength, Elongation %
- Flexural – Modulus, Strength
- Heat Deflection Temperature
- Viscosity – MFR, RV
- Specific Gravity – Density
- Ash Filler Content
- Color Booth and Color Spectrophotometer
- Desiccant Conditioning Chamber
- 3D Measurement Scanner
- Differential Scanning Calorimeter (DSC)

AGS Lab Can Test 100% Key Performance Specs



AGS Laboratory

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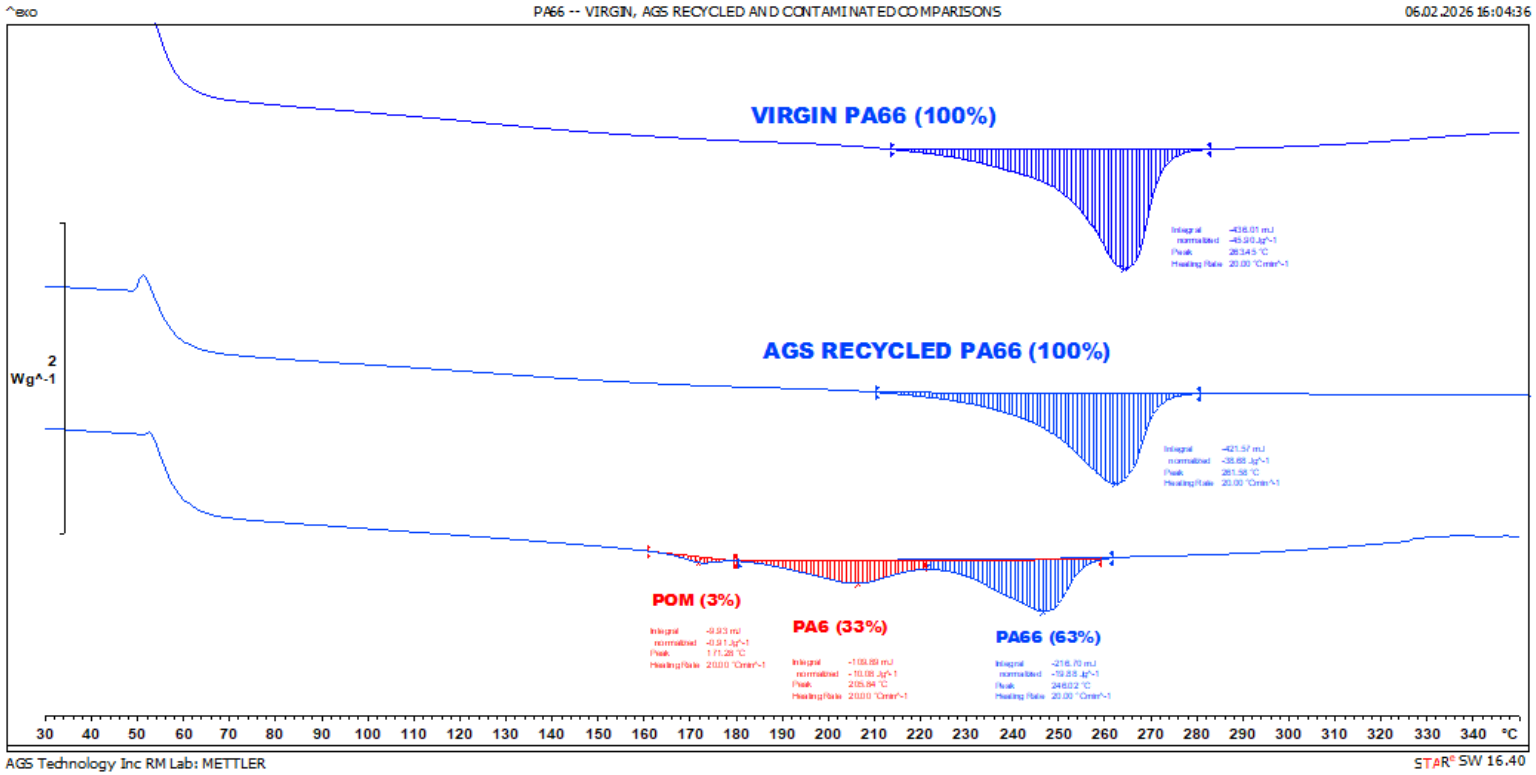
Lab equipment highlight:
Differential Scanning Calorimeter (DSC)

Three different materials analyzed by the DSC to the right: the top is virgin resin, the middle is AGS recycled material, and the bottom is mixed material/rejected.





How is AGS Different?

How AGS is Different

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Compounder

”Traditional Recyclers”

Process:

- Plastic regrind feedstocks
- Processed in extruder
- Reprocessed pellets end-product

Not what AGS does







How AGS is Different

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What AGS Does

”The Future of Recycling”

Process:

- Plastic regrind feedstocks
- Processed in injection molding machine
- Molded parts are the end-product

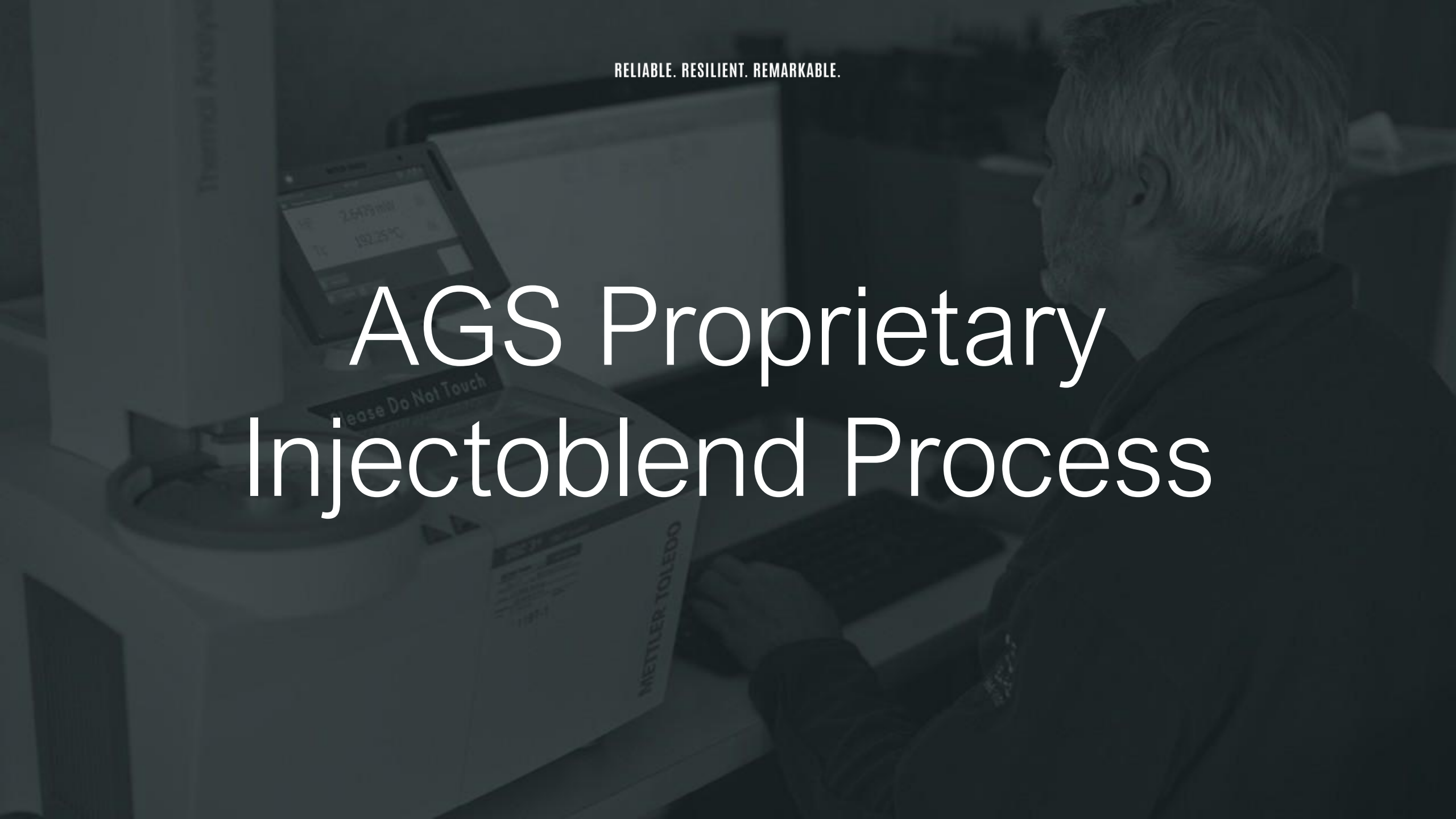
Benefits:

- Eliminates a manufacturing step
- Eliminates a heat history
- Eliminates finger pointing









AGS Proprietary Injectoblend Process

AGS 6-Step Process

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1

Step 1:
Sourcing

Develop long-term sourcing strategy for every resin, secure material, visit suppliers, and provide feedback. Seek suppliers in PIR/PCR that add value. All materials are sampled.



2

Step 2:
Processing

Material is negotiated and shipped to AGS, where material is cleaned, sorted, mixed/homogenized, and tested. Test results must meet or exceed sample from step one.



AGS 6-Step Process

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3

Step 3:
Characterizing

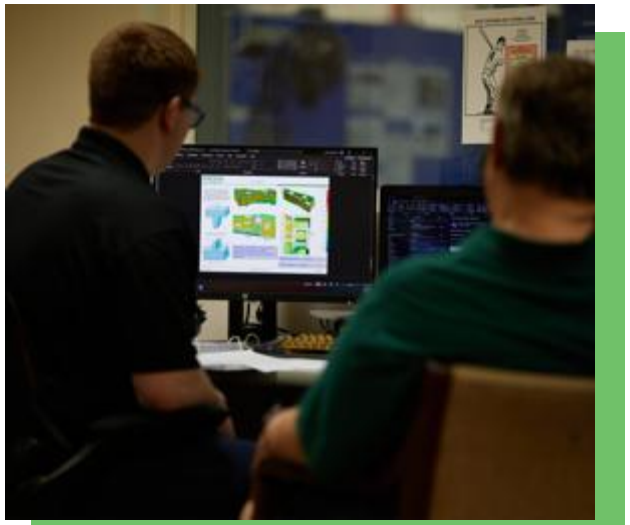
We review the material test results and prepare the material for formulation based on internal performance specifications.



4

Step 4:
Formulating

Formulations are created using approved lots of characterized material to meet customer end-use specifications. Certified Injectoblend™ material is approved for molding.



AGS 6-Step Process

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5

Step 5:
Molding

Specially modified equipment; blenders, dryers, injection molding machines, and predictive software consistently deliver precise, shot-to-shot repeatability of molded parts.



6

Step 6:
Quality Control

Final parts are inspected to customer specifications before shipment. AGS has full lot traceability from part back to the material source.




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Optimizing Value

Optimizing Value

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The Ideal Scenario

Injectoblend™ Candidate ≥ $1.00/lb
Engineering resins like PA6, PA66, PP, PC/ABS, ABS, PC, POM, etc. Adding glass or talc to any resin as well.

Cross-polymer Substitution
AGS can help you consider options depending on your application and our knowledge of available streams.

Material Intensive Parts/Molds
The more material AGS uses, the higher the cost savings to you. Large parts or high cavitation are best.

Closed-loop Recycling Candidates
For those wanting to use their own material back into their own parts, we have closed-loop options to help.



Case Studies

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Material Intensive Example: Water Tank Base

Application

Tank base held heavy metal water tank



The Customer Challenge:

4-pound tank base was failing in high-heat ABS because of heat deflection in extreme heat environments with filled water tanks. The resin supplier was also implementing a price increase.

AGS Solution:

AGS Engineers, working closely with the customer determined that certified recycled Injectoblend™ PC/ABS would be a better alternative and implemented this cross-polymer substitute.

The Bottom Line:

- $25,000 savings due to $1 per part saving
- Injectoblend™ PC/ABS was 12% less expensive
- Eliminated field failure with PC/ABS
- Feed stream was recycled auto bumper scrap
- Avoided increased price of high-heat ABS

Case Studies

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Injectoblend™ Savings: Spring-seat Support

Application

General Motors' high-volume part in the suspension system



The Customer Challenge:

The launch team was seeking VA/VE cost savings in program targeted this part using Asahi Kasei's virgin homopolymer 20% glass-reinforced polypropylene.

AGS Solution:

AGS provided multiple options of material with multiple streams of sources and four percentages of recycled content. VA/VE Engineers agreed Injectoblend 100 FPP220-200 was perfect for these parts and application which provided100% recycled content.

The Bottom Line:

- Tier One was able to save 25% on this part
- AGS makes millions of these parts annually
- No reduction in part performance
- Recycling credit for 800,000+ lbs/year

Case Studies

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Closed-loop Recycling: Stone Shield

The Customer Challenge:

The Tier One customer had a surplus amount of fuel tank regrind being generated from its blow molding operation.

AGS Solution:

AGS worked closely with the customer to develop a program with customer supplied fuel tank regrind is cleaned, blended, and tested to verify conformance to specifications. AGS utilized 100% of the supplier regrind. AGS also re-verifies toughness with Gardner drop impact tests on samples of molded parts throughout each production run.

Application

General Motors needed to add a stone protection shield with an integrated handle on its 26- and 34-gallon tanks



The Bottom Line:

- AGS utilized customers' scrap material
- Customer reduced part cost on finished part

Case Studies

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Sustainability Goals Met: Wire Channel Guides

Application

Wire channel guides made from
100% recycled material

The Customer Challenge:

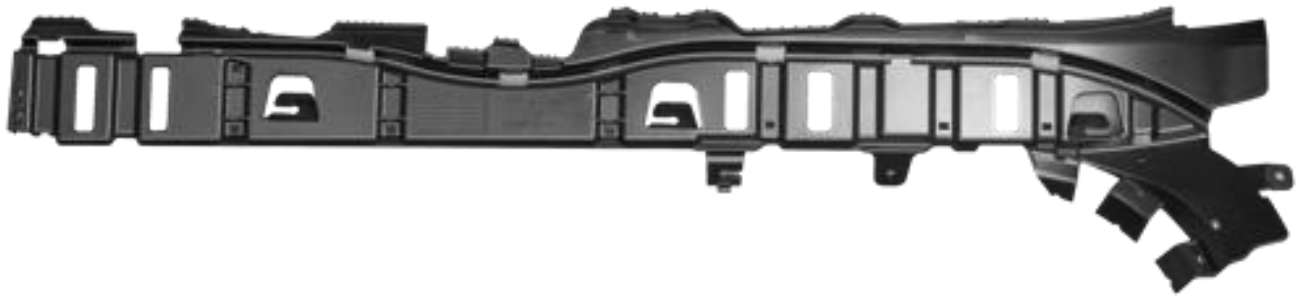
An upstart automotive-battery electric vehicle (BEV) company wanting sustainable material, was looking for a molder with experience with recycled material.

AGS Solution:

Knowing this customer was insistent on maintaining properties for performance, AGS Engineers worked with the BEV team to find a material with ample supply, performance, and improved cost to virgin resin. Injectoblend100 FABSPC003 was perfect for this application.

The Bottom Line:

- Properties of impact strength and heat resistance were met
- 100% recycled material was secured from multiple sources
- Costs were reduced by nearly 10%



Case Studies

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Injectoblend™ Savings: Filter Cores

The Customer Challenge:

A global world-class filtration customer was facing cost pressure on their assembled product.

AGS Solution:

AGS Technology replaced virgin PA66 with 33% glass with Injectoblend25 FPA66235 which resulted in immediate cost savings on transferred tools.

Application

High volume filter cores for large industrial filtration assemblies

The Bottom Line:

- Costs initially were reduced by 10%.
- Over the years, the customer has moved to Injectoblend 100, which has allowed them to reduce costs another 10-20% on top of the original savings.
- Exceeding vigorous performance specifications remains the same with over 10 million filters shipped a year.



Case Studies

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Meeting LTA Cost Downs: Overhead Console

Application

Overhead console for General Motors (GM)



The Customer Challenge:

A major Tier 1 supplier to GM was expected to provide annual lifetime productivity givebacks (LTA) without sacrificing performance.

AGS Solution:

AGS Engineers worked closely with the Tier 1 Engineers to replace virgin PC/ABS with Injectoblend100 FABSPC003. The material is approved under GMP.ABS+PC.002, complies with FMVSS302, and passed all component validation testing requirements.

The Bottom Line:

- Cost savings of 30% were achieved
- Material exceeds heat resistance and impact testing
- Part ran with this Tier 1 for over 10 years

Case Studies

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Emergency Launch Saved: Wrapped Substrate

The Customer Challenge:

A major Tier 1 supplier to Stellantis was in the middle of launching with their customer. The virgin 40% long glass fiber polypropylene that was specified in the print was failing cross-load strength test requirement during product validation.

AGS Solution:

AGS Engineers worked closely with the Tier 1 Engineers to substitute the original material with Injectoblend100 FPA66235. By using ASTM D4000 callout by Stellantis Engineering, the inherently stronger material was 100% recycled 33% glass-filled PA66 that easily passes the product validation tests.

Application

A wrapped armrest core for the Chrysler Pacifica bucket seats



The Bottom Line:

- Cross-polymer substitution to stronger material with no cost penalty
- Customer was kept launch schedule without having to make new tools due to similar shrink values
- Stellantis was awarded an SPE Innovation Award in the Environmental category


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