

AGS TECHNOLOGY CASE STUDY: PUTTING LIFETIME GIVEBACKS IN THE REAR VIEW MIRROR



PRODUCT PROFILE

Industry: Automotive (Interior)
Applications: General Motors GMT900 DVD/HVAC Back Plates–2nd & 3rd Row
Material Description: ABS+PC Blend to Meet General Motors GMP.ABS+PC.002
Requirements: • Heat Resistance • Impact Strength • Dimensional Stability

CUSTOMER ISSUE

A major Tier 1 supplier to General Motors for interior headliner components was expected to provide annual lifetime productivity givebacks without sacrificing GM's rigorous material and part performance specifications.

AGS INJECTION MOLDING SOLUTION

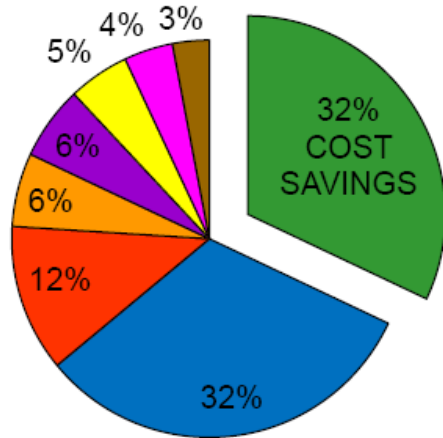
AGS Technology replaced virgin ABS+PC with Injectoblend™ FABSPC003 and utilizing the AGS injection molding process resulted in piece part cost savings exceeding 30%. The Injectoblend™ material is approved to General Motors GMP.ABS+PC.002, complies with FMVSS302, and passed all GMT900 component validation testing requirements.



BACK PLATE-2nd ROW DVD COST SAVING EXAMPLE

Piece Part Cost Savings = \$0.50
 Annual Volume = 375,000
 Annual Cost Savings = \$187,500
 Percent Cost Saving = 32%

**GMT900 Back Plate-2nd Row DVD Piece Part Price
 AGS Injectoblend™ FABSPC003**



- Cost Savings
- Recycled Raw Material
- Machine
- Labor
- SG&A
- Profit
- Components

AGS Technology Inc.

To find out more about how you can take advantage of AGS Technology's unique injection molding capability using Injectoblend™ materials call (847) 534-6600.

Typical Properties of AGS Thermoplastics

INJECTOBLEND™ FABSPC003

ABS/PC Blend

FABSPC003 is available with internal and external lubricants, UV stabilized and other modifications.

Further information and details are available upon request

Properties	Test Method	English (U.S.)	Units (System)	Metric (S.I.)	Units (System)		
PHYSICAL							
Specific Gravity, solid	D 792	-	1.13	-	1.13		
Mold Shrinkage, 0.125" (3.2mm)	D 955	%	0.5-0.8	%	0.5-0.8		
Water Absorption, 73°F (23°C), 24 hrs	D 570	%	0.10	%	0.10		
MECHANICAL							
Tensile Strength @ Yield, 73°F (23°C)	D 638	psi	7,200	MPa	50		
Tensile Elongation @ Break, 73°F (23°C)	D 638	%	75	%	75		
Flexural Strength, 73°F (23°C)	D 790	psi	11,000	MPa	76		
Flexural Modulus, 73°F (23°C)	D 790	psi	275,000	MPa	1,898		
Izod Impact, notched, 73°F (23°C), 0.125" (3.2mm)	D256	ft-lb/in	11.0	J/m	587		
Izod Impact, notched, -22°F (-30°C), 0.125" (3.2mm)	D256	ft-lb/in	8.0	J/m	427		
Izod Impact, notched, 73°F (23°C), 4 mm	ISO 180	-	-	kJ/m ²	46		
Instrumented Impact Total Energy, 73°F (23°C), 0.125" (3.2mm)	D 3763	ft-lb	40	J	54		
Instrumented Impact Total Energy, -22°F (-30°C), 0.125" (3.2mm),	D 3763	ft-lb	44	J	60		
THERMAL							
Deflection Temperature, unannealed	D 648		264 psi (1.82 MPa), Load	°F	234	°C	112
			66 psi (0.45 MPa), Load	°F	259	°C	126
CLTE, -40 °C - +80 °C (-40 °F - +176 °F)	D 696	in/in/°F	4.0 E-5	m/m/°C	7.2 E-5		
Vicat Softening Temperature, 50N	ISO 306	°F	268	°C	131		
FLAMMABILITY							
UL 94 Flame Class, 0.058" (1.47mm)	UL 94	-	HB	-	HB		

The values shown on the data sheet are typical values that have been obtained on typical AGS materials, are not intended for specification purposes and are provided without any warranty or guarantee. Each user of the material should make his own test to determine the suitability of the material for his use. Therefore, it is understood and agreed that the customer assumes and hereby releases AGS Technology, Inc. from all liabilities, incurred in connection with the use of AGS products, technical assistance and information.