

AGS TECHNOLOGY CASE STUDY: HOW TO SURFACE WHEN A PART IS “UNDERWATER”



PRODUCT PROFILE

Industry: Automotive (Interior)
Applications: Chrysler Lid Substrates-Console Center
Material Description: ABS+PC Blend to Meet Chrysler MSDB 195 Type A
Requirements:

- Heat Resistance
- Impact Strength
- Dimensional Stability

CUSTOMER ISSUE

A Tier 1 supplier to Chrysler for center console assemblies was “underwater” on LX and LC22 lid substrates that were part of a package transferred from a troubled supplier.

AGS INJECTION MOLDING SOLUTION

AGS Technology replaced the virgin ABS+PC blend with Injectoblend™ FABSPC003 and utilizing the AGS injection molding process resulted in piece part cost savings exceeding 30%. The Injectoblend™ material meets all requirements of Chrysler MSDB195 Type A, complies with FMVSS302, and was formally approved by Chrysler Material Engineering based on part specific outside design and development (ODD) performance criteria.



LX LID SUBSTRATE COST SAVING EXAMPLE

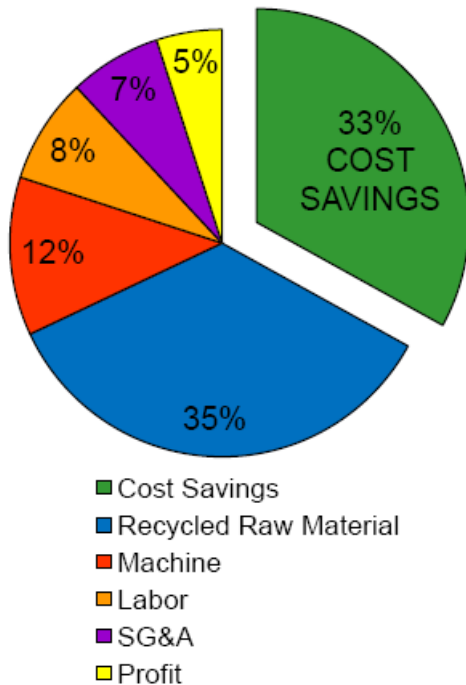
Piece Part Cost Savings = \$0.99

Annual Volume = 160,000

Annual Cost Savings = \$158,400

Percent Cost Savings = 33%

LX Lid Substrate Piece Part Price
AGS Injectoblend™ FABSPC003



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.