

AGS TECHNOLOGY CASE STUDY: BASELESS VIRGIN MATERIAL PRICE INCREASES

PRODUCT PROFILE

Industry: Water Tank Systems (Commercial and Residential)
Applications: Tank Bases
Material Description: ABS+PC Blend
Requirements: • Impact Strength • Heat Resistance • Corrosion Resistance • Dimensional Stability

CUSTOMER ISSUE

An OEM of water tank systems was receiving major price increases on the virgin, high impact ABS used for tank bases molded in-house.

AGS INJECTION MOLDING SOLUTION

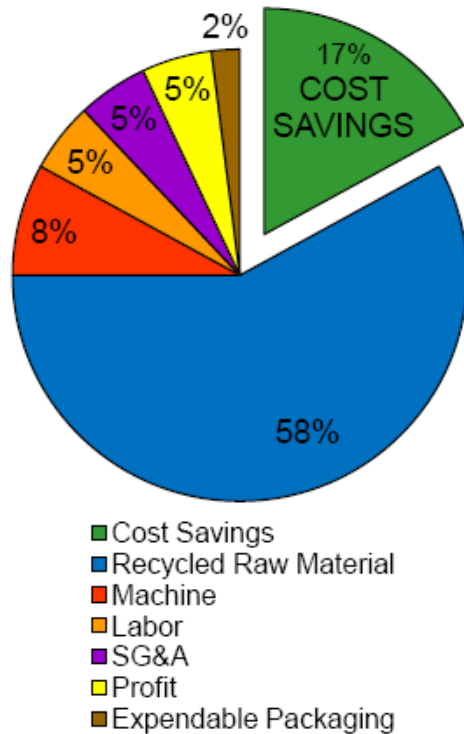
The OEM outsourced the injection molding of their tank bases to AGS Technology. By replacing virgin high impact ABS with Injectoblend™ FABSPC003, AGS Technology was able to provide piece part cost savings exceeding 12%. This savings takes into account specific gravity differences between the two materials. In addition, the OEM improved the field performance of their product given the higher heat resistance and toughness of the Injectoblend™ ABS+PC when compared to the virgin high impact ABS.



24" DIAMETER TANK BASE COST SAVING EXAMPLE

Piece Part Cost Savings = \$1.00
 Percent Cost Savings = 17%

24" Diameter Tank Base 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.