

AGS TECHNOLOGY CASE STUDY: OPEN THE DOOR TO RECYCLED AND CLOSE THE DOOR ON COST

PRODUCT PROFILE

Industry:

Heavy Duty Truck (Interior)

Applications:

Door Grip Substrates

Material Description:

30% Glass Reinforced Polypropylene

Requirements:

- Tensile Strength
- Rigidity
- Heat Resistance
- Dimensional Stability

CUSTOMER ISSUE

A Tier 1 supplier for interior door panels was looking for cost saving ideas prior to the launch of the next generation Kenworth heavy duty truck. Door Grip Substrates were identified as good candidates for recycled material since they are overmolded to meet aesthetic requirements of the door panel.

AGS INJECTION MOLDING SOLUTION

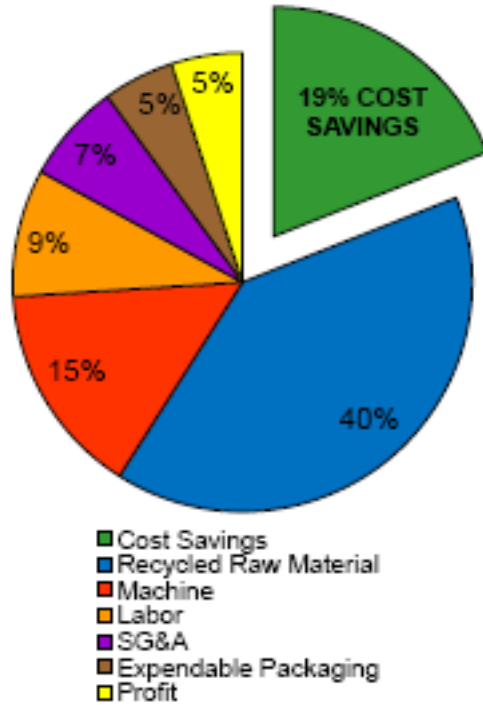
AGS Technology recommended Injectoblend™ FPP230 and the injection molded parts resulted in 19% piece part cost savings. The Injectoblend™ material performance is equivalent to virgin 30% glass reinforced polypropylene materials and AGS injection molded parts meet or exceed all Kenworth door panel validation testing requirements.



DOOR GRIP SUBSTRATE COST SAVING EXAMPLE

Piece Part Cost Savings = \$0.13
 Percent Cost Saving = 19%

Door Grip Substrate Piece Part Price
 AGS Injectoblend™ FPP230



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™ FPP230

Polypropylene Copolymer, 30% Glass Fiber Reinforced

FPP230 is available with internal and external lubricants and other modifications.
 Further information and details are available upon request

Properties / Reported DAM	Test Method	English (U.S.)	Units (System)	Metric (S.I.)	Units (System)
PHYSICAL					
Specific Gravity, solid	D 792	-	1.12	-	1.12
Mold Shrinkage, 0.125" (3.2mm)	D 955	%	0.3 – 0.6	%	0.3 – 0.6
Fiberglass Content	D 2584	%	30	%	30
MECHANICAL					
Tensile Strength @ Yield, 73°F (23°C)	D 638	psi	10,000	MPa	69
Tensile Elongation @ Break, 73°F (23°C)	D 638	%	5	%	5
Flexural Strength, 73°F (23°C)	D 790	psi E3	15	MPa	103
Flexural Modulus, 73°F (23°C)	D 790	psi E3	710	MPa	4,900
Izod Impact, notched, 73°F (23°C), 0.125" (3.2mm)	D 256	ft-lb/in	1.1	J/m	60
Gardner Impact 73°F (23°C), 0.125" (3.2mm)	D 3029	in-lb	7	J	0.8
THERMAL					
Deflection Temperature, unannealed	D 648	264 psi (1.82 MPa), Load	°F	293	°C
		66 psi (0.45 MPa), Load	°F	310	°C
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.