



Tandem 350

Product Data Sheet

Tandem 350 is a *thermoformable non-woven blanket* comprised of *mechanically bound* (containing no additional resins or adhesives) glass fibers *individually coated* with polypropylene. Product might be used in combination with outer layers comprised of films such as adhesive, barrier, PP; and/or scrims, non-wovens, or no layer. **Tandem 350** is suited for applications requiring superior acoustic, thermal, and extremely high *strength to weight* ratios.

Tandem 350 Advantages over Sheet Goods

- ✓ *Non-woven form provides the capability to form-fit to any shape right out of the box*
- ✓ *Uniform fiber integrity vs. inconsistent fiber dispersion in blended substrates*
- ✓ *Ability to be stretch fit*
- ✓ *Glass fiber content 20-30% higher, translating to increased durability of composites*
- ✓ *Customized thicknesses from 1/8" eliminating the need to laminate layers of sheets*
- ✓ *Varying densities available to suit specific strength, acoustic, and/or thermal requirements*

Tandem 350 Key Properties

- ✓ *Structural integrity derived from mechanically bound fibers, not from polypropylene*
- ✓ *Non-Woven form exhibits superior acoustic properties*
- ✓ *Individually coated fibers provide consistent fiber coating across fiber surface area*
- ✓ *Resistant to mold, moisture, chemicals and alkalis*
- ✓ *Stretch ability allows relief on dimensional tolerances and less installation effort*

Example Applications

Automotive, including panels, door panels, consoles, pillar trim, headliner, sunshades/visors, parcel shelves, battery trays, bumper beams, compressor brackets, grill opening reinforcements, HVAC Bases, load floors, noise shields, running boards, seat bases, skid plates / gas tank shields, spare wheel covers and wells. Other composite components requiring superior strength, acoustic, and insulation characteristics.

Chemical Composition

- Polypropylene (35-30% wt.): long chain polymer composed of at least 85% by weight of ethylene, propylene, or other olefin units
- E-glass (65-70% wt.):


UOM	SiO ₂	Al ₂ O ₃	B ₂ O ₃	Na ₂ O	K ₂ O	CaO	MgO	BaO	ZnO
%	55	13	6	<0.6	<0.1	20	<5.0	< 0.01	< 0.01

Product Characteristics

Physical Properties:	Polypropylene	E-glass
Specific Gravity	0.90	2.47
Moisture Content (%)	<0.05	<1.0
Moisture Regain (%)	<1.0	<1.0

Melting Point (° F)	325-335	1224
Physical Sizing	---	Silane
Nominal Fiber Diameter (μ)	12-18	
Mat Thickness (in.)	¼, ½, ¾, 1	
Density	6 pcf	
Burning Characteristics:		
Approaching Flame	Fuses, shrinks and curls from flame	Will not burn
In Flame	Melts, burns slowly	Softens, glows red to orange, changes shape
After Removal From Flame	Continues to burn	Hardens
Odor	Chemical odor	None
Residue	Hard, tough, tan bead	Hard, white bead
Chemical Reactivity		
	Excellent resistance to acids and bases (alkali)	Excellent resistance to bases (alkali)

Other Advantages

- Offers ability to solve thermal issues at the lowest cost
- Made in the **USA** allowing rapid response to custom requirements and short delivery lead-times.
-  can provide pre-cut parts