



Product data sheet, November 2007

Bayblend® T65

PC/ABS blend sheet



Features:

- extreme impact strength in a broad temperature range
- good thermoforming properties

Bayblend® T65 is a PC-ABS blend sheet, with high impact resistance down to -30 °C. **Bayblend® T65** resin has been developed for the automotive industry – including commercial vehicles – and has been approved by several original equipment manufacturers. The material's specific properties mean it suitable for both interior and exterior applications. **Bayblend® T65** combines high heat resistance and extreme impact strength in a wide temperature range (-30°C up to +100°C). The sheets can be thermoformed and are easy to machine. **Bayblend® T65** is available in several colours and with several textures.

Applications

Bayblend® T65 is particularly suited to thermoform:

- motor hoods, fenders, bumpers and side panels for tractors, trucks, agriculture and construction machinery
- interior liners and covers for above mentioned vehicles and machinery
- transport and travel cases

	Test Conditions	Typical Values	Unit	Test Method
PHYSICAL				
Density		1.13	g/cm ³	ISO 1183
Moisture absorption	saturated at 23 °C/50 % RF	0.20	%	ISO 62, method 4
	saturated in water of 23 °C	0.70	%	ISO 62, method 1
MECHANICAL				
Tensile stress	at yield	52	MPa	ISO 527-2/1B/50
Elongation	at yield	4.2	%	ISO 527-2/1B/50
Tensile strength			MPa	ISO 527-2/1B/50
Elongation	at break	> 50	%	ISO 527-2/1B/50
Elastic modulus		2200	MPa	ISO 527-2/1B/1
Limiting flexural stress			MPa	ISO 178
Impact strength	Charpy unnotched		kJ/m ²	ISO 179/1fU
	Charpy notched		kJ/m ²	ISO 179/1 eA, thickness ≥ 4 mm
	Izod notched @ 23°C	45	kJ/m ²	ISO 180/1A
	Izod notched @ -30°C	41	kJ/m ²	ISO 180 1A
THERMAL				
Vicat softening temperature	Method B50	120	°C	ISO 306
Thermal conductivity			W/m K	DIN 52612
Coeff. of linear thermal expansion		0.080	mm/m °C	DIN 53752-A
Heat deflection temperature under load	Method A: 1.81 MPa	100	°C	ISO/R75 ISO 75
ELECTRICAL				
Dielectric strength		35	kV/mm	IEC 60243-1
Volume resistivity		10 ¹⁴	Ohm-cm	IEC 60093
Surface resistivity		10 ¹⁶	Ohm	IEC 60093
Dielectric constant	at 10 ³ Hz	3.1		IEC 60250
	at 10 ⁶ Hz	3.0		IEC 60250
Dissipation factor	at 10 ³ Hz	0.0003		IEC 60250
	at 10 ⁶ Hz	0.00085		IEC 60250

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BAYBLEND®



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i-line

Ideas, innovative, intelligent, interesting...

Bayer Sheet Europe i-line represents the next generation of quality products. This seal guarantees innovative and intelligent first-class solutions at all times for a multitude of requirements.

Fire rating

Application domain	Standard	Country	Rating
Road transport	Directive 95/28 ECC	Europe	pass

Long term service temperature:

Max. service temperature in air	105°C
Min. service temperature	-30°C

Availability

Bayblend® T65 is available in different surface patterns. Colour samples can be provided on request. All grades can be produced with UV protection for outside use.

Sizes

Surface structure	max.extrusion	thickness
C* & G	1650 mm	2 - 6 mm
Smooth both sides	2050 mm	2 - 6 mm

*as of January 2008

Machining

Bayblend® T65 sheet is easy to machine with everyday tools. Sawing, drilling, routing, shearing and punching can be done. Always use sharp tools suited for machining plastics.

Thermoforming

Thorough pre-drying of **Bayblend® T65** sheets is essential for all thermoforming techniques where the sheet temperature will rise above 160°C. The recommended procedure is to use an air circulating oven set at 120°C for 4 to 24 hours, depending on sheet thickness.

Bayblend® T65 sheet can be vacuum-formed at temperatures of 180 – 190°C. Use temperature controlled (95°C) aluminium or steel moulds. A good release from the mould can be obtained by providing a draft angle of 4 to 6°.

Assembling

Parts made of **Bayblend® T65** can be assembled with other plastics, metals and other materials by means of glueing, welding and several mechanical fastening techniques.

Painting and printing

Bayblend® T65 sheets can be painted or printed with several standard techniques. No preliminary surface treatment is necessary, except for cleaning. To avoid compromising the impact strength of **Bayblend® T65** sheets, paints must be suitable for use on polycarbonate. Products can be obtained from several manufactures of inks and paints. Their instructions must be carefully followed.

Chemical resistance

Bayblend® T65 sheets have good resistance to highly concentrated mineral acids, many organic acids, oxidising and reducing agents, mineral and animal greases and oil, neutral and acid salt solutions, saturated aliphatic and cycloaliphatic hydrocarbons and alcohols (except methyl alcohol). They are partially soluble in aromatic hydrocarbons and soluble in many halogenated hydrocarbons (methylene chloride and ethylene dichloride are good solvents). Strong alkaline substances such as ammonia and amines decompose it. **Bayblend® T65** sheets will resist most detergent-based household cleaners.