

INTERCOMPOSITE®

THE COMPOSITE LAMINATED SHIM

Presentation:

INTERCOMPOSITE®(1) is a unique patented LAMECO material made of a glycol polyethylene terephthalate film obtained by a slit-die extrusion process, followed by a double-drawing.

Advantages:

- ★ **Lightness** – As an answer to a weight saving requirement. INTERCOMPOSITE®* is one of the lightest of laminated materials.
- ★ **Good physical, mechanical, thermic and chemical characteristics** – see the tables of characteristics below and over.
- ★ **Adaptation to curved shapes** – INTERCOMPOSITE® has the property to immediately adapt itself to most curves profiles without any loss of precision. And this can be performed in site.
- ★ **Facility and rapidity of use** – You can peel INTERCOMPOSITE® with your forefinger (no tools being necessary).
- ★ **Low cost** – Intercomposite® is the least expensive of all our laminated materials.

Physical characteristics:

PROPERTIES	VALUES	UNITS	TEST CONDITIONS
SPECIFIC WEIGHT	1,395		ASTM 1505 - 60T
REFRACTION COEFFICIENT	1,64	nD	At 23°C
WATER ABSORPTION	< 0,5	% water weight	After prolonged immersion

Thermic characteristics:

PROPERTIES	VALUES	UNITS	TEST CONDITIONS
SOFTENING POINT	260	°C	Differential thermal analysis
MAXIMUM SERVICEABLE TEMPERATURE	220 short use	°C	
	130 (Classe B) prolonged use	°C	
MINIMUM SERVICEABLE TEMPERATURE	- 180	°C	In liquid nitrogen
SPECIFIC HEAT	0,3	cal. G. °C	
COEFFICIENT OF LINEAR EXPANSION	2. 10 ⁻⁵		Per °C
TEMPERATURE CONDUCTIVITY	3,5. 10 ⁻⁴	cal./cm. Sec. °C	

(1) INTERCOMPOSITE® - Trademark registered, Patent N°8416589



Laminated Shims

Mechanical characteristics:

PROPERTIES	VALUES	UNITS	TEST CONDITIONS
RUPTURE STRENGTH		Kg / mm ²	ASTM D 882
★ Longitudinal direction	32,00		
★ Transverce direction $\leq 23\mu$	20,00		
ELONGATION AT RUPTURE		%	ASTM D 882
★ Longitudinal direction	60		
★ Transverce direction $\leq 23\mu$	130		
TENSILE STRESS TO PROVOKE AN ELONGATION OF 5%		Kg / mm ²	ASTM D 882
★ Longitudinal direction	15,00		
★ Transverce direction $\leq 23\mu$	10,00		
MODULUS OF ELASTICITY AT 0,5% ELONGATION		Kg / mm ²	ASTM D 882
★ Longitudinal direction	700		
★ Transverce direction $\leq 23\mu$	380		
RESISTANCE TO SHOCK (DART TEST)	400	g. cm / cm	ASTM D 1709 - 62T 23 μ films
RESISTANCE TO TEAR PROPAGATION	16 to 20	g. cm / cm	ASTM D 1004 – 56 Elmendorf / 23 μ films
BURSTING STRENGTH	> 5	Kg / cm ²	Lhomargy / 23 μ films
FOLDING RESISTANCE	> 15 000	Foldings	125 μ films

Chemical Characteristics:

INERTNESS TO:		GOOD	AVERAGE	WEAK
ACIDS:	Hydrochloric	at 18%	at 35%	Concentrated
	Sulphuric	at 60%		
	Glacial acetic acid	X		Fuming
	Nitric		at 35%	
BASES:	Liquid ammonia		at 12%	Concentrated
	10% caustic potash solution			X
	10% sodium hydroxide solution			X
SOLVENTS:	Ethyl acetate	X		X
	Acetone	X		
	Benzene	X		
	Crezols			X
	Dioxane	X		
	Fraon	X		
	Phenols			
	Carbon tetrachloride	X		
	Trichlorethylene	X		
Xylene	X			
MISCELLANEOUS:	Oil – Grease	X		
	Impregnating varnish	X		
	Mould fungus	X		

Dimensions of INTERCOMPOSITE[®] products (MIL-S-22499 international norm):

Specific weight	Thicknesses of Laminations						
	.0005" 0,012 mm	.0007" 0,019 mm	.001 0,025 mm	.002" 0,050 mm	.003" 0,075 mm	.004" 0,100 mm	.008" 0,200 mm
1.395	X	X	X	X	X	X	X