



# San Miguel Yamamura Woven Products Sdn. Bhd.

[Formerly known as San Miguel Woven Products Sdn. Bhd.]  
A Subsidiary of San Miguel Yamamura Packaging International Ltd.

## PRODUCT DATA SHEET

Customer Name	:	<b>RHINO PLASTICS (PTY) LTD</b>
Product Type	:	<b>6-LAYER PAPER FOIL</b>
Product Name	:	<b>ENVIRO-TUFF SUPREME 203 FR</b>
Product Design	:	<b>AL / PE TIE LAYER / PAPER / REINFORCEMENT + PE TIE LAYER / AL</b>

	CHARACTERISTIC	TEST METHOD	UNIT (SI)	SPECIFICATION
Laminated Roll Spec	Width	In-house	mm	1250 ± 5
	Length	In-house	m	≥ 40
	Grammage	In-house	g/m <sup>2</sup>	267 ± 10%
	Resistance to Dry Delamination <i>at elevated ambient temperatures</i>	SABS 1381-IV:1985	-	No delamination
	Resistance to Corrosion Wet delamination <i>at elevated ambient temperatures</i>	SABS 1381-IV:1985	-	No corrosion No delamination
	Shrinkage MD CD	SABS 1381-IV:1985	%	< 1.5 < 1.5
	Emissivity	SABS 1381-IV:1985	Index	≤ 0.05
	Water Vapour Permeance	ASTM E96	g/(s.MN)	≤ 0.002
	Surface Fire Index	SABS 0177	Class	1
	Fire Performance Classification	SANS 428 (SANS 10177 Parts 5,9,10,11)	Class	Class B / B1 / 2 / H
	Tensile Breaking Strength MD CD	SABS 1381-IV:1985	kN/m	> 10 > 5
	Bursting Strength	ISO 2758	kPa	> 700
	Puncture Resistance	SABS 456	mJ	> 700
	Edge Tear Resistance MD CD	SABS 1381-IV:1985	N	> 60 > 60
	System Thermal Resistance <i>With two air gaps – heat flow down</i>	ISO 8301 : 1991	m <sup>2</sup> K/W	> 1.20

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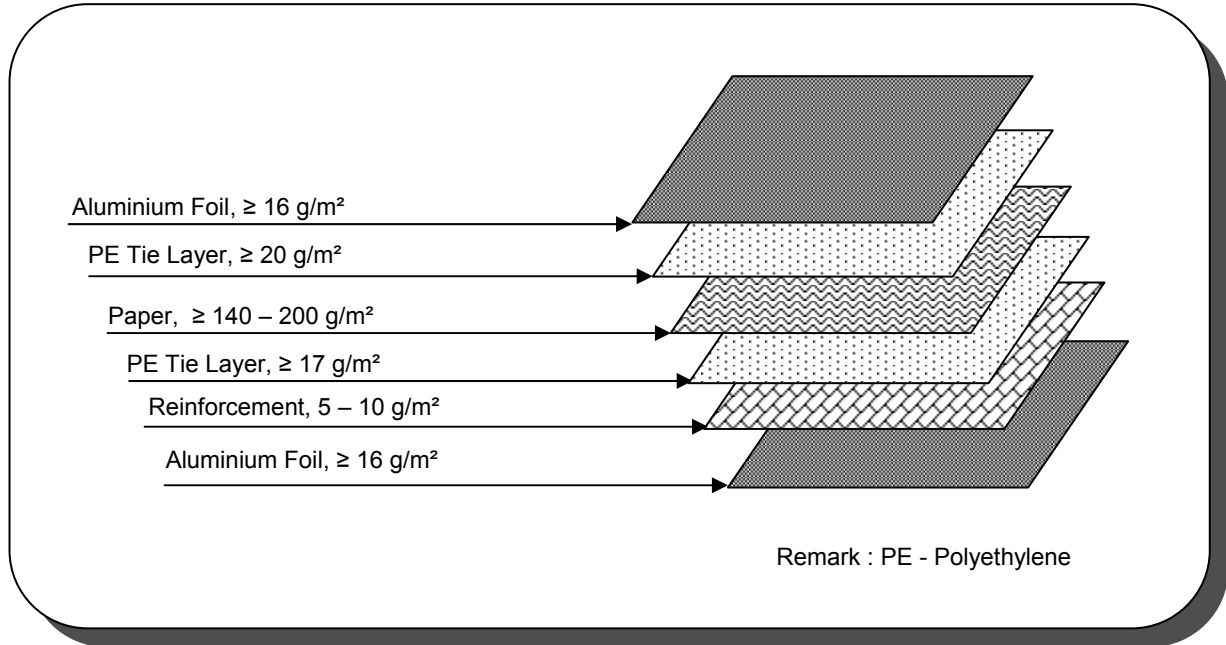


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## CONSTRUCTION OF ENVIRO-TUFF™ SUPREME 203 FR (SANS 1381- 4 CLASS A)



System Thermal Insulation Grade	Unit	Foil Side Facing Hot Plate
Average Thickness PF Sample (Inclusive of Airspaces)	M	0.08
Mean Temperature	°C	22.77
Temperature	°C	- 2.22
System Thermal Resistance	M <sup>2</sup> .K/W	1.2
Surface Fire Classification	Classification	Class 1

### Warnings

There are special circumstances where unless special precautions are taken, the atmosphere in the roof can cause corrosion of the laminate that will directly affect its emissivity and therefore its thermal insulation properties. Air space is vital between insulation foil and battens.

Under certain circumstances the aluminum foil may not be resistance to tarnishing and hence its reflective and emissive properties may be affected. Such conditions may include condensation, acidic vapors of sea salts and mists of corrosive liquids.

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