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Corplex UK Technical Information

Introduction

The name Correx® applies to a range of extruded corrugated plastic sheet based on a propylene ethylene copolymer. The natural polymer is chemically inert and is generally recognised by legislative authorities as being non-toxic and safe to use in contact with foodstuffs. The polymer has been safely used in large quantities in all the normal thermoplastic conversion processes. Correx® sheet has been marketed since 1972. This Technical Datasheet has been prepared to provide general technical information relating to Correx® sheet and the standard formats in which the sheet is supplied.

Effect of heat

Correx® can be handled at normal processing temperatures. Small quantities of fumes are evolved at about 220°C due to a partial volatilisation of some stabilisers and/or of lower molecular weight hydrocarbons. These gradually increase until at about 300°C decomposition and oxidative pyrolysis proceeds at an appreciable rate.

Burning behaviour

Typical thermal properties for polypropylene copolymer are as follows:

Softening temperature (BS 2782: 102D, ISO R306)	144°C
Crystalline melting point	165 – 175°C
Flash ignition temperature	ca 350°C
Self-ignition temperature	Ca 380°C
Calorific value	11000 cal. kg
Specific heat	0.46 cal gm °C
Limiting oxygen index (ASTM D2863)	0.174 – 0.180
Burn rate - Correx sheet (FMVSS 302)	5.3 – 8.2cm/min



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Correx® twinwall polypropylene sheet is produced in four different die profiles which offer a wide variety of possible configurations. The table below shows some standard production profiles which represent the ideal ration between thickness and GSM to provide the best possible combinations of upright rigidity and surface quality.

	3mm Die Flute Spacing 3.2mm	4mm Die Flute Spacing 5.6mm	8mm Die Flute spacing 6.5mm	10mm Die Flute Spacing 10.2mm
g/m²	Thickness	Thickness	Thickness	Thickness
300	2.0mm			
350	2.0mm			
400	2.6mm			
450	2.8mm			
550	3.0mm			
600	3.5mm			
650	3.5mm			
700	3.5mm			
1000		5.0mm		
1050	5.0mm			
1200			7.0mm	
1250		5.5mm		
1350			7.5mm	
1450	5.5mm	6.0mm		
1700			8.0mm	
1800			8.0mm	10.0mm
1950				10.0mm
Maximum width without corona treatment	3080mm	1250mm	2530mm	1250mm
Maximum width with corona treatment	3048mm	1220mm	2500mm	1220mm
Minimum width	135mm	400mm	400mm	400mm
Minimum length	500mm	600mm	580mm	600mm
Maximum length	6000mm	6000mm	4500mm	3000mm