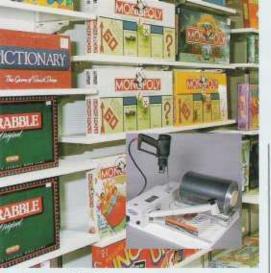
ILMS

of powers through the pack to a winning position in the 4th round of the 1997 state series.



Mario Caligari triumphs at Phillip Island -receives the Matthew Flinders Plate for the Venus Circuit Racing Team.

The complete guide to Venus films for packaging.



Venus LS44 PVC CENTREFOLDED SHRINK FILM

Venus LS44 is biaxially oriented 40% machine direction (MD) and 40% transverse direction (TD) to provide balanced shrinking and increased strength in both directions. Compared to all other shrink films, PVC (poly vinyl chloride) shrinks more quickly and at a lower temperature, and therefore consumes less energy. It seals almost instantly at temperatures from 93 to 177 deg. C making it the most effective film in the

Venus Mini shrink machines which shrink and seal at the same time. It has a high water vapour transmission rate; a high resistance to greases, impact and flame; and is self extinguishing. The excellent clarity and contour hugging softness of PVC shows off shrink packaged products such as textiles, stationery, hardware, toys, sporting goods, and housewares to best advantage.

19um thick 600m roll	Approx. weight per roll	25um thick 450m roll	Approx. weight per roll
Width, mm	kg	Width, mm	kg
400/200	5.9 - 6.2		
440/220	6.5 - 7.0		
500/250	7.4 - 7.9		
560/280	8.3 - 8.9		
660/330	9.6 - 10.4	660/330	9.6 - 10.4
700/350	10.2 - 11.1	700/350	10.2 - 11.1
800/400	11.7 - 12.6	800/400	11.7 - 12.6
900/450	13.1 - 13.9	900/450	13.1 - 13.9
1000/500	14.6 - 15.7	1000/500	14.6 - 15.7
1120/560	16.3 - 17.6	1120/560	16.3 - 17.6
1200/600	17.0 - 19.0	1200/600	17.0 - 19.0
1320/660	19.0 - 21.0	1320/660	19.0 - 21.0
		1400/700	20.4 - 21.9
12.5um thick			
950m roll			
560/280	8.3		
660/330	9.6		
700/350	10.2		
800/400	11.7		
1000/500	14.6		

MINI ROLLS: 200 metre mini rolls to suit the Venus Mini Mini shrink machine

Venus GIFT SHRINK Venus Polypropylene Gift Shrink is perfect for 'on the spot', Width Length Thickness Approx. weight per roll, kg in-store gift wrapping of videos, books, cosmetics and metres 2.65 3.18 - 3.47 food products. Choose from two styles: 690/345 690/345 *STRIPES, gold on blue. *PATTERN, gold and blue on red. Centrefolded 700/350mm wide, in 200 metre rolls. 19um thick. Weight per roll: approx. 3.28 kg. Suitable for the Venus Mini Mini shrink machine

Venus SHRINK FILMS

Venus POLYOLEFINS

Venus XOP 27 PP/PE AND XOP POL CENTREFOLDED SHRINK FILMS

Both centrefolded films have low permeability to water vapour, and high oxygen permeability. They are therefore particularly suitable for food products, such as fish and yogurt, that need to retain moisture but also need to "breathe" to retain maximum freshness and flavour. Compared to Venus PVC films, Venus XOP 27 and XOP POL have lower water vapour permeability, higher oxygen permeability and higher strength when frozen. Venus XOP 27 and XOP POL are environmentally friendly and unlike PVC produce no carbon-black emission during heaf-sealing.

XOP 27 PP/PE/PP

A co-extruded, 3 layer shrink film suitable for food, Venus XOP 27 is biaxially oriented 35% machine direction (MD) and 35% transverse direction(TD). The central layer is a special linear low density polyethylene (LLDPE); the outer two layers are copolymer polypropylene. Sealing temperature required: 125 to

19um thick 600m roll	25um thick 450m roll	Approx. Weight per roll
Width, mm	Width, mm	kg
440/220		4.56
500/250		5.19
560/280		5.81
	660/330	6.76
700/350	700/350	7.26
800/400		8.20 - 8.30
900/450	900/450	9.20 - 9.30
1000/500	1000/500	10.37
	1400/700	14.52

Venus POLYPROPYLENE SUPERWRAP

A co-extruded shrink film with three layers of polypropylene, it is specially suitable for Venus 4363 and 5985 automatic L-bar sealers. High clarity, strength, and tear resistance make Venus Superwrap suitable for almost any shrink wrapping application. 19um thick, centrefolded on 600 metre rolls.



Width	Approx. weight per roll, kg
610/305	7.55
700/350	8.66
800/400	9.90
1000/500	12.38



Venus XOP POL POLYTHENE (LLDPE)

Biaxial orientation of 50% machine direction (MD) and 50% transverse direction (TD) gives an even shrink in both directions to hug the product's contours for an attractive, tight finish. Venus XOP POL is a co-extruded film constructed of three layers of linear low density polyethylene (LLDPE). An anti-blocking additive ensures centrefolded surfaces separate easily. The film also has good 'slip' which prevents packages sticking or snagging together. It has high impact strength and is chemically inert, non-toxic, non-static, printable and easily heat sealable. Compared to Venus XOP 27, Venus XOP POL has higher tear resistance, better sealability, a lower sealing temperature (115 to 150 deg. C), a higher shrinking temperature and it does not shrink as quickly.

15um thick 1200m roll Width, mm	Approx. Wt. per roll kg	19um thick 600m roll Width, mm	Approx. Wt. per roll kg
400/200	6,55	440/000	4 50 4 00
440/220	6.50 - 7.10	440/220	4.50 - 4.60
500/250	8.19	500/250	5.19
560/280	9.17	560/280	5.81
660/330	10.81		
700/350	11.52		
800/400	13.1	800/400*	8.10 - 8.30
900/450	14.70	900/450	9.34
1000/500	16.40		
15um thick	Approx.Wt.	19um thick	Approx.Wt.
200m roll	per roll	200m roll	per roll
Width, mm	ka	Width, mm	kg
**690/345	2.30	**690/345	2.93
450 metres	117777	100000000000000000000000000000000000000	12000
800/400	4.91		
600 metres			
800/400	6.55		

- Also 25um thick (8.3kg roll)
- "Mini rolls to suit Venus Mini Mini machine

Venus POLYPROPYLENE **FRESHWRAP**

A high clarity, biaxially oriented, polypropylene shrink film for the hygienic, fresh and appealing presentation of bakery products. Polypropylene is stiffer and more transparent than low density polythene (LDPE), but requires a higher temperature for heat sealing and has less elongation. It has outstanding gloss and sparkle, low water vapour transmission and excellent resistance to acids, alkalis and organic solvents. Resistance to scuffing, brittling and yellowing keeps packages looking new and attractive. Venus Freshwrap is centrefolded on reels to suit a wide range of shrink wrapping equipment. Shrink properties: 55% at 135 deg. C. Sealing range: 155 to 200 deg. C.

PLAIN FRESHWRAP: Low moisture emission keeps soft rolls, cakes pizzas and prepared meals moist and fresh. PERFORATED FRESHWRAP: Ideal for packaging products such as hot breads and crusty rolls. The perforations allow the emission of heat and moisture to ensure baked goods retain their oven-fresh crispness. 19um thick on 600 metre rolls.



Venus Pagasa

Venus MICRO-PP

Venus MICRO-PERFORATED POLYPROPYLENE

A non-shrinkable balanced film biaxially oriented 20% machine direction (MD) and 20% transverse direction (TD), suitable for use with Venus heat sealers and L-bar sealers. Oriented PP has greater stiffness, tensile strength, tear strength and impact strength than non-equally oriented PP and it can be heat sealed at lower temperatures. The emission of heat and steam through the micro-perforations ensures bakery products such as breads, rolls and biscuits retain their crispness and freshness. Due to its dimensional stability and its excellent durability at low temperatures this film is also ideal for frozen and cold storage goods, 20um thick, centrefolded on 750 metre rolls, 160 holes cm2



Venus PE TUBING

Venus POLY TUBING

The easy and effective way to package long items such as pipes, rods, automotive components, garden tools, umbrellas, etc. Venus Poly Tubing is made from LDPE. The package can be closed using Venus heat sealers, Venhard hand clippers



Width		Thick	ness	Approx kg	Approx.
inches	mm	inches	um	per roll	metres/kg
2	50	.002	50	3	209
3	75	.002	50	8	140
4	100	.002	50	10	104
5	125	.002	50	15	87
6	150	.002	50	15	70
8	200	.002	50	20	50
9	228	.002	50	25	46
12	304	.002	50	30	34
15	380	.002	50	35	28
18	460	.002	50	35	23
24	610	.002	50	35	17
30	760	.002	50	35	14

Venus SKIN FILMS

Venus POLYTHENE/EVA

A low cost film made of co-extruded polyethylene and ethylenevinyl acetate (PE/EVA). The EVA content provides outstanding impact strength and resilience while the polyethylene content provides a barrier to moisture and oxygen. This combination provides optimum protection and a sparkling presentation for a wide range of card mounted products - from heavy, sharp, odd shaped, metallic and rust prone items such as tools automotive parts and hardware items, to breakables such as toys and

cookware. The EVA adhesive is built into the film, eliminating the need to coat the card.

Venus Skin Film is suitable for use in the Venus Vacuumaster Skin Packaging machines.

Width	Length metres	Thickness um	Weight per roll, kg
360	450	80	11.40
360	450	110_	16.50
360	320	150	16.20
508	430	80	19.00
508	200	175	16.40 - 17.00
508	230	150	16
508	140	250	16.30
660	220	175	23.70



Ven Livini EVA

A strong, high clarity co-extruded (Surlyn*) ethylene-vinyl acetate

(EVA) skin film with deep draw capabilities which make it ideal for taller products as well as carded displays. It softens at lower temperatures and is therefore faster to use than polyethylene films. The EVA adhesive additive eliminates the need for adhesive coate backing cards. *Du Pont trademark

Ven VIRGIN

This film has no adhesive additive, therefore cards do need to be adhesive coated.

	Width	Length metres		Weight per roll, kg
	360	450	75	12.33
	360	300	125	12.86
	360	300	175	17.46
	508	450	75	18.10
	508	300	125	19.33
	508	200	175	16
	635	300	125	23.33
9	660	300	125	22.5
1	660	200	175	21.10

Width	Length metres	Thickness um	Weight per roll, kg
360	300	125	12.40
360	300	175	17.38
508	300	125	18.56
508	200	175	16
635	300	125	23.33
660	300	125	22.50

VenCover

Ven Cover BOOK COVERING FILM

Ven@www is made from crystal clear polypropylene. It is waterproof and greaseproof. Stains simply wipe off. Hardcover books retain their new condition for years and the life of paperbacks is extended by strengthening the spine. Ven Securit can be removed and re-positioned during application and because it has minimum stretch a smooth, wrinkle-free finish is easily achieved. Ven@seese is also ideal for preserving maps, wall charts and your favourite magazines, posters and prints. Chinagraph pencil notations can be made and removed repeatedly. Available in 15 metre rolls x 225mm, 250mm, 300mm, 375mm, 450mm and 900mm, 75 um thick. Special sizes cut to order, from 75mm to 900mm.



Venus *BUBBLE PACK*

POLYTHENE BUBBLE PACK

Protect fragile and valuable items such as paintings. pottery and mirrors from shocks and scuffing during handling, storage and transit. Venus Bubble Pack is economical and easy to use. 80 um thick an 50 and 100 metre rolls.



Width	Length	Bu	bble
mm	m	diam mm	Height mm
500	50	10	4.5
1500	100	10	4.5
1500	100	20	6.5



Venus LIDDING FILM Venus CLING FILMS

LIDDING AND TRAYS FOR Venus VPA1, VPA2, TSM93 and TSV95 THERMO-SEALERS.

The Venus Thermo-seal system is designed for suppliers of fresh foods and hot or cold prepared dishes. The lid is heat sealed to the tray creating an hygienic, leak-proof seal which ensures freshness, weight retension and visual appeal.



POLYTHENE COATED PAPER LIDDING

The polythene coated paper material 'breathes' to ensure foods retain their appetising colour and consistency: ideal for shellfish, pastas, sausages, etc. Six rolls per

CLEAR FILM LIDDING

This polypropylene coated, polyester film gives a clear view of the packaged contents. Foods can be prepared in advance and displayed. Six rolls per carton.

Туре	Width	Length m	Thickness um
PE coated paper	125	1801	film 15*
Clear film	125	3001	65
Clear film	310	545	12 um PET / 40 um PP.
Clear film	310	415	12 um PET / 50 um PP.

^{*}Paper 42gsm

POLYPROPYLENE TRAYS

The thick, heavy duty PP has vertical corrugations which provide extra strength and rigidity to prevent deformation. Venus trays are temperature resistant from -20 to +130 degrees C and completely microwave and freezer safe.100 per pack.

Length mm	Depth mm	Thickness um	Capacity gm	Pieces per ctn
149	36	400	375	1200
149	50	400	500	800
149	70	500	650	800
199	52	500	750	800
199	73	700	1000	600
199	106	950	1500	400
*325	95	1000	5.5 litre	92

^{*}All travs are 118mm wide except 5.5 litre-size which is 265mm wide

Ven@ling ROLLS

PERFORATED SHEETS ON A ROLL

Von Rithof is made from co-extruded polyethylene/ethylene vinyl acetate (PE/EVA). With outstanding impact strength, resilience, softness, flexibility and clarity it is the perfect cling film for caterers, sandwich bars, canteens and take-away food shops. Tear-off perforations ensure fast and easy dispensing. 12um thick sheets on rolls.

Width	Perforations every (mm)	Weight roll, Kg	Sheets per roll	Film Type
250	250	2.74	1900	PE
300	300	2.33	1600	PVC
350	350	2.40	1300	PVC
CUTTE	R BOXES			
Width	Length	Thickness	Film	Quantity
mm	metres	um	type	per carton
			Aliprot	
300	300	- 11	PE microwave safe	10
300	300	13	PVC	4
330	300	13	PVC	4
450	300	13	PVC	9
REFILL	ROLLS			
300	300	12.5	PE EV	9
300	300	12.5	PVC	9
300	300	13	PVC Meatwrap	
330	600	13	PVC	4
450	300	12.5	PE EV	9
450	300	12.5	PVC	9
450	300	13	PVC Meatwrap	- 2
450	500	13	PVC	9

Venus PVC VEGEWRAP

Venus Vegewrap stretch film keeps vegetables and fruits such as trays of tomatoes, sugar peas, sweet corn and

strawberries fresh and appealing at the point of sale. It is made of soft, clear, non-fogging extruded poly vinyl chloride (PVC) with a green tinge.

Width	Length metres		Weight per roll Kg
380	1300	13	6.21
400	1300	13	8.28
450	1300	15	9.30
450	1950	13	12.10
380	1300	15	9.10
400	1300	15	9.55



Venus PVC MEATWRAP

Soft and clear with a champagne tinge, this stretch film is used for the in-store packing of fresh meat. It is made of thin gauge extruded poly vinyl chloride (PVC). The film's high water vapour and oxygen transmission properties allow the meat to breathe, which prevents fogging and helps the meat to retain its freshness, colour, and appeal. (PVC is not suitable for cooked or processed meat, or cheeses.)



	Width	Length metres		Weight per roll, kg
ı	Colour	clear ch	ampagne tir	nge
Н	300	1300	13	6.21
Ш	380	1300	13	7.87
Ш	400	1300	13	8.28
П	410	1300	15	9.80
Н	600	1300	17	16.50
Н	Colour	clear go	ld tinge	
	455	1300	13	9.32
	300	1950	13	9.32
	450	1300	17	12.30



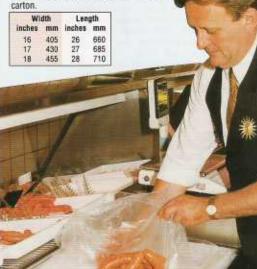


VenLene

VenLono SHEETS

The polythene sheets used by butchers and delicatessens for fast and hygienic selection and wrapping of meat, poultry and smallgoods at the counter. They are also used as interleaves between items that might stick together and between pottery, crockery and cutlery, etc to prevent scratching and chipping. Sheets are made from high density polyethylene

VenLacos (HDPE) which has high tensile strength, low elongation, medium stiffness; and excellent grease and temperature resistance. .0004* (10um) thick. 480 sheets per pack, 20 reams per carton



Venus FILMS SELECTION GUIDE

		LIII OTTIMI	THUL CON	ITAMISON		
		LDPE	HDPE	PP Non-equally Oriented	PP Oriented	PVC
CLARITY		to to ti	tp to op	tp	tp	tp to ti
transparent-tp, translucent=tl, opa	Control of the Contro	70000000000000000000000000000000000000	Walle Chaire	***************************************	10 10 10 10 10 10 10 10 10 10 10 10 10 1	
YIELD Square om per kg (25.4um	CONTRACTOR AND	426,700	412,477	430,967	419.587	270,243 to 315,760
SPECIFIC GRAVITY (is relative density	441100000000000000000000000000000000000		.941 to >.965	.88 to .90	.88 to .90	1.23 to 1.35
TENSILE STRENGTH kg square or (ASTM D 882)	n'	70 to 246	211 to 703	211 to 422	1055 to 2109	141 to 1336
STRETCH % (ASTM D 822)		225 to 600	5 to 400	200 to 500	200 to 500	5 to 500
IMPACT STRENGTH kg cm		7 to 11	1 to 3	1 to 3	10 to 25	12 to 20
TEAR STRENGTH (Elmendorf) grr (ASTM D1922)	/ml	100 to 400	15 to 300	40 to 330	40 to 330	Varies widely.
STIFFNESS gm (handle-o-meter)	MD	2.5 to 4.5	8 to 16	11 to 27	11 to 27	7.5 to 40
	TD	3 to 7	10 to 20	11 to 27	20 to 30*	10 to 45
HEAT SEAL RANGE deg C WATER VAPOUR TRANS.	2707	121 to 177	135 to 154	163 to 204	88 to 132	93 to 177
gm/24hrs/ 1 sq.m/ 38deg C/ 90% (ASTM E 96 Method El 11)		18	5 to 10	8 to 10	4 to 10	25 plus
GAS TRANS, cc/ml/ 1 sq.m/24hrs 1 atm/23 deg C 0% RH						-
(ASTM D 1434)	0° 00²	3900 to 13000 7700 to 77000	520 to 3900 3900 to 10000	1300 to 6400 7700 to 21000	1300 to 6400 7700 to 21000*	77 to 7500 770 to 55000
RESISTANCE TO GREASES AND O	DILS	May swell slightly on long immersion.	Excellent	Excellent	Excellent	Excellent
MAX USE TEMPERATURE deg C		66 softens at 110	110	121	121	93 approx. Depends on plasticiser
MIN USE TEMPERATURE deg C		-5	-51	***		Depends on plasticiser
DIMENSIONAL CHANGE AT HIGH	RH %	None	None	None	None	None
FLAMMABILITY		Slow burning	Slow	Slow burning	Slow	Self extinguish.
MACHINE PERFORMANCE		Fair/good	Good	Fair/good	Fair/good	Fair/good
PRINTABILITY		Good if treated	Good if treated	Good if treated	Good if treated	Special inks required
SEALING		Heat	Heat	Heat	Heat	Heat or adhesive
HEAT SHRINKABLE		Special types	Some types			Some types

Balanced, oriented, stabilised and coated two sides. "* Varies according to composition or type and weight of coating.

Non-equally oriented PP films are not recommended where low temperature durability is required. Oriented ,balanced ,stabilised coated PP

has good low temp durability.

GLOSSARY OF TERMS USED IN THE PLASTICS INDUSTRY

MONOMER The smallest repeating structural unit of a POLYMER. Mono = one. Mer = unit.

POLYMER A solid substance in the form of a (giant) long chain molecule produced by joining the molecules of a gaseous or liquid substance by chemically and physically modifying them with heat, pressure and catalysts. Poly = many. Mer = unit.

POLYMERISATION The process of producing POLYMERS from MONOMERS

COPOLYMERISATION The process of 'addition polymerisation' involving more than one type of mer. eg ethylene and propylene.

PLASTICS Products chemically synthesised from petroleum, natural gas, coal and certain agricultural products such as cotton and soybeans. The most important source is petroleum which yields the lightweight gases, methane, ethylene, propane and propylene. These are combined in various proportions with salt, chlorine, formaldehyde, nitrogen, air or various other chemicals to produce the required properties.

PLASTIC FILMS COMPARISON

LOW DENSITY POLYETHYLENE (LDPE) LDPE is amorphous and has branched polymer chains. It has a crystallinity of about 60 -70 % It has greater impact strength, elongation, flexibility and transparency than HDPE. Applications: mostly bag making because it is most readily heat sealed, has optimum balance of impact strength and clarity, superior properties at low temperatures, and is lowest cost. Ideal for high volume industrial packaging, and shrink wrapping of pallets loads.

HIGH DENSITY POLYETHYLENE (HDPE) HDPE is more crystalline and has linear polymer chains. It has a crystallinity of 75 - 95% It has greater stiffness, tensile strength and creep resistance; and higher softening and melting points than LDPE, therefore it has a higher minimum heat sealing temperature. Blown HDPE is normally translucent, not transparent. Cast HDPE has better clarity and superior grease resistance. Applications: used for speciality laminations where the packaging product is subjected to high heat.

POLYPROPYLENE CAST PP has no shrinking properties. It has high stiffness and therefore excellent machineability. It has outstanding optics - transmission of colour without distortion, high gloss and sparkle. The gloss level is approximately 30% greater than polyethylene. It is strong, static free, scuff resistant, has excellent thermal resistance, receptivity to printing, and long shelf life (lack of yellowing and brittling on aging). Ideal for slow turnover products and for self service displays. Applications: Soft goods, shirts, hosiery, bag packing of breads and rolls, twist

POLYOLEFIN A family of hydrocarbons with carbon to carbon bonds. Polyethylene and polypropylene are both polyolefins.

POLYETHYLENE A thermoplastic material composed of polymers of ethylene (a polyolefin). Commonlý shortened to 'polythene' or

POLY VINYL CHLORIDE (PVC) Chemically similar to polyethylene, except one of the hydrogen atoms from each molecule has been replaced by a chlorine atom. The basic raw material is acetylene or

POLYPROPYLENE Polypropylene is made by the polymerisation of high-purity propylene gas (a polyolefin) in the presence of an organometallic catalyst at relatively low pressures and temperatures. Commonly shortened to 'PP'

ETHYLENE-VINYL ACETATE (EVA) A high molecular weight copolymer of ethylene and vinyl acetate. (* Note: Ethylene-vinyl alcohol is EVOH, not EVA)

MOLECULAR STRUCTURE OF POLYMERS

LINEAR: long chains of molecules without appendages, BRANCHED: Appendages branch from the molecular chains in

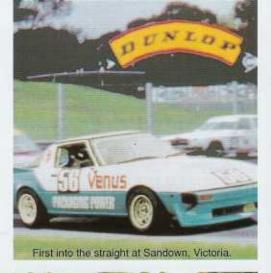
wrapping of confectionery, bagging of lightweight vegetables lettuces, spinach, mushrooms etc.

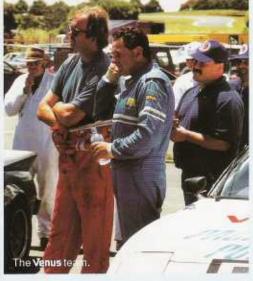
POLYPROPYLENE TYPES HOMO POLYMER: Greater stiffness. Ideal where machineability is important, but more brittle at low temperatures and has a narrower heat sealing range than copolymer PP. Ideal for cards, stationery, hosiery, specialty hand wraps of fruits and gift baskets. COPOLYMER: Used for side weld bags because of its excellent heat sealabilty over a wide temperature range. Shrinkable PP films are usually based on copolymers and are generally balanced. Ideal for packaging toys, records etc.

ORIENTED POLYPROPYLENE Stretching the film during manufacture produces orientation of the molecular structure. Improves machineabilty and low temperature performance, Ideal for cellophane type uses. Some films are used for shrink packaging. It cannot be converted into side weld or envelope bags because sealing temperatures required alter the film's orientation and radically change its overall properties. Properties: Excellent durability, dimensional stability, low water vapour transmission. exceptional flex crack resistance, outstanding clarity, favourable economics. Applications: Used for snack foods, biscuits, tobacco, cheeses etc.

The major distinctions between polypropylene films are the degree and type of orientation;

BALANCED ORIENTATION PP Highly oriented in both directions, machine and transverse, Balanced types: 1. Shrink, 2. Heat set





three dimensions. These side chains permit greater interlocking. CROSS LINKED: chains with chemical links between adjacent chains. Cross linking restricts movement between chains therefore the polymer is usually not thermoplastic.

SHRINK FILM is made from cross linked polymer and usually 'prestressed'. When heated it tries to return to its original dimensions.

FILM PRODUCTION METHODS

CASTING The casting of film involves dissolving of plastics granules or powder, plasticiser, colourants or other additives in a suitable solvent. The solution is poured onto a stainless steel belt and the solvents evaporated by application of heat. The film deposit left on the belt is stripped away and wound onto a take-up roller.

BLOWN FILM EXTRUSION The molten plastic is forced out of an adjustable circular die opening, forming a tube. Air is forced into this extruded tube expanding it to the desired diameter. This blow helps regulate the film thickness. The air expanded tube may be wound onto take-up rollers or split and wound as flat film.

(stabilised against thermal dimensional changes through various manufacturing techniques) 3. Heat sealable --- generally coated on one or both sides. Better water vapour barrier, stiffness and low temperature performance than cast or non-equally oriented PP.

NON-EQUALLY ORIENTED PP Highly balanced in one direction, usually transverse, and maybe some orientation in the other direction.) Non-equally oriented types: 1. Heat set. 2. Heat sealable (a) extrusion coated or co-extruded (b) lacquer or emulsion coated. Applications HEAT SET: Used in combined laminated structures with cellophane or paper for snack packaging; with polyethylene and cellophane for cheeses, meats, coffee. Balanced films are preferred for better durability etc. BARRIER COATED, HEAT SET ORIENTED PP: has all the properties of other oriented PP films plus excellent gas barrier, moisture barrier and heat sealing properties. Extrusion coated with polyethylene or ethylene vinyl acetate copolymers it provides an excellent structure for gas flush or vacuum packaging.

ETHYLENE-VINYL ACETATE (EVA) EVA is slightly more expensive than LDPE and a poorer barrier to moisture, oxygen and most solvents. Properties: Outstanding impact strength (especially at low temperatures), a wide heat sealing range, resilience, softness, flexibility, resistance to flex and stress cracking, excellent clarity, printability and resistance to weathering. Its resilience is not achieved with plasticisers therefore it has no plasticiser migration problems. Applications: Skin packaging (usually co-extruded with polyethylene), cling and stretch food wrap films.

Williad Venus Packacing Films

Venus P.E. TARPAULINS

These tough tarpaulins are made from UV stabilised woven polypropylene. They are waterproof, tear and fade resistant. The seams are heat sealed and double stitched, and the hems have rope reinforcement and brass eyelets. 10 x 10 weave per 25mm.



HEAVYWEIGHT GREEN Brass eyelets every 560mm*. Sizes quoted are 'finished' sizes. Weight: 145gm/square metre. *12' x 18' (3.5m x 5.5m) and 17' x 24' (5m x 7m) sizes are also available with eyelets every 915mm.

Width		Le	ngth	Weight	Quantity
feet	metres	feet	metres	kg	per pack
12	3.5	18	5.5	2.8	8
*12	3.5	18	5.5	2.8	5
17	5	24	7	5.3	5
*17	5	24	7	5.3	4
19.6	6	29.5	9	8	3

LIGHTWEIGHT BLUE Brass eyelets every 915mm. Sizes quoted are 'cut' sizes. Weight: 120 gm/square metre.

Width		Width Length		Weight	Quant.
feet	metres	feet	metres	kg	per pack
4	1.2	6	1.8	0.2	50
6	1.8	8	2.4	0.5	40
8	2.4	10	3	8.0	25
10	3	12	3.6	1.3	20
12	3.6	12	3.6	1.5	10
12	3.6	14	4.2	1.8	10
12	3.6	16	4.8	2.1	10
12	3.6	18	5.4	2.3	10
12	3.6	20	6.1	2.6	5
12	3.6	24	7.3	3.2	5
16	4.8	24	7.3	4.2	3-5
24	7.3	30	9.1	7.9	1
30	9.1	30	9.1	9,9	1

HAEVYWEIGHT SILVER/BLACK

Brass eyelets every 915mm, 14 X 14 weave per 25mm. Sizes quoted are 'cut' sizes. Weight: 200 gm/square metre

Width		Le	ngth	Weight	Quant.
feet	metres	feet	metres	kg	per pack
6	1.8	8	2.4	1	20
6	2.4	10	3	1.66	15
10	3	12	3.6	2.46	15
12	3.6	14	4.2	3.3	10
12	3.6	16	4.8	3.8	10
12	3.6	18	5.4	4.25	8
12	3.6	20	6.1	4.75	8
12	3.6	24	7.3	5.75	8
16	4.8	20	6.1	6.4	8 5
16	4.8	24	7.3	7.6	5
18	5.4	22	6.6	7.8	5
18	5.4	24	7.3	10.2	4
20	6.1	24	7.3	10.33	3
20	6.1	30	9.1	12	2 2
24	7.3	30	9.1	14.5	2
30	9.1	30	9.1	18	- 1

Venus POLYTARPS Venus PE SHEETING Venus SILAGE FILM

Venus REMIL POLYTHENE SHEETING

A thick, heavy duty sheeting made from low density polyethylene. **Venus** Remil sheeting is the ideal fish pond liner and weed barrier. It can also be used as a drop sheet for painting and plastering, for protecting new concrete and paving and for many other building applications.



Width	Length m	Thickness um	Kg/roll (approx)	Colour
1	200	50	9.20	clear, black
1	400	50	18.40	clear, black
1	100	100	9.20	clear, black
1	200	100	18.40	clear, black
2	200	50	18.40	clear, black
2	100	100	18.40	clear, black
3	100	100	27.60	clear, black
3	75	150	31.10	clear
4	100	100	36.80	clear, black
4	200	50	36.80	black
4	50	150	27.60	clear
4	50	200	36.80	clear.black.orange
6	50	150	42.20	black
6	25	200	27.60	black
6	50	200	55.2	black

Venus SINGLE WOUND POLYTHENE

SHEETING For Venus Mailbag Machine

Width Length Thickness Weight per um roll, ko 490 1000 16

GIFT

Venus METALLIZED PP GIFT WRAP



Venus FLORIST WRAP

Oriented polypropylene (OPP) rolls 500mm x 500mm x 25um thick. Choose from plain transparent and transparent with white daisies. 4 rolls per carton.



Venus SILAGE BALE WRAPPING FILM

A strong, durable, 25um thick film made of 3 layers of co-extruded linear low density polythene (LLDPE) with excellent stretch. cling and self-sealing qualities. The film has a tacky surface with higher tackiness on the outer surface. This forms a strong, airproof seal which ensures bales remain in top condition for up to 12 months. Venus Silage film is UV stabilised to resist deterioration from prolonged exposure to sunlight. It is suitable for use in all modern round bale wrapping machir ery.





SPECIFICATIONS

ore.	CIF	CATI	OM9	0		
COLOUR	BL	ACK	WH	ITE	LIGHT	GREEN
TACK STRENGTH gm	.2	15	215		21	5
IMPACT RESISTANCE gm	5	00	45	90	500	
TENSILE STRENGTH						
kg/cu cm						
Longitudinal	0100	10	2000	06	20	Circle .
Transverse	1	39	14	43	14	3
ELONGATION %						
Longitudinal	3	78	435		435	
Transverse	- 6	00	256		256	
TEAR STRENGTH Newtons						
Longitudinal	3	2	3	2	3.7	2
Transverse	1	1.8	11	8	11	8
WIDTH mm	500	750	500	750	500	750
METRES PER ROLL	1800	1500	1800	1500	1800	1500
kg ROLL	21.3	26.25	21.3	26.25	21.3	26.25
ROLLS PER PACK	1	1	1	1	- 1	1
ROLLS PER PALLET	64	40	64	40	64	40
TUDICAL COORC D	0.00	to and the same	Street in	t bearing	441	-

TYPICAL CROPS Pasture hay or first cut lucerne.

WARNING: All data in this brochure is provided as a guide only and should not be used in writing specifications. Purchasers should test any product offered herein to determine suitability for their particular purpose. Sept. 1998.

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