



ENGINEERED & INDUSTRIAL PLASTICS



**Quality
Endorsed
Company**

ISO 9001 Lic QEC20749

SAI GLOBAL

Product List

COMPANY PROFILE



E-Plas Pty. Ltd is one of Australia's largest suppliers of engineered and industrial plastics. Established in 1981 as a dedicated supplier of Engineering and Industrial plastics to a diverse range of industries, E-Plas has developed a reputation for service, quality and the ability to advise customers on the right choice of material for the application.

With the support from our international manufacturers:

Quadrant EPP / Poly Hi Solidur

Sustaplast KG

Fluorseals

Cattaneo

Spartech Corporation

Xperion FS Composites

Westlake Plastics

Crown Plastics

Armor USA®

E-Plas brings to the Australian market high quality materials manufactured to ISO standards and products meeting regulatory bodies such as Pharmacopeia (USP) Class V1, UL 752, NIJ0108.01, BS5051, DIN 52290 and EN1063.

Our major warehouse and machining facility is located in the Melbourne suburb of Tullamarine with a sub branch in Clayton together with our Polyurethane manufacturing and machining facility in Adelaide. Stocking branches are located in Sydney, Brisbane and Perth. We also support a network of distributors strategically located to service the needs of regional areas throughout Australia.

Our list of customers includes many of the top 100 Australian corporations and industries as diverse as pharmaceutical, food manufacturing, aerospace, mining and architectural.

An accredited company to AS/ISO 9002:2000 E-Plas Pty. Ltd is constantly focused on quality, technology and efficiency.

E-Plas Pty. Ltd is a full corporate member of the Victorian Employers Chamber of Commerce and Industry, and the Food Industry Machinery Manufacturers Association.



Brisbane Branch



Perth Branch



Sydney Branch



Melbourne Branch



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SAI GLOBAL

TIVAR® - U.H.M.W.P.E (Ultra High Molecular Weight Polyethylene)

ROD:	10mm – 250mm Diameter Ex Stock – Natural Colour only. Black and Green available on request.
STANDARD GRADES:	Tivar® 1000 Natural & 1000 Anti-Static Black.
SHEET THICKNESSES:	3mm – 100mm Ex Stock. Up to 250mm Available on request.
SHEET SIZES:	2000 X 1000 & 3000 X 1220 Ex Stock. 6000 x 2000, 6000 x 1330, 6000 x 1220, 4000 x 2000, 4000 x 1000, 3000 x 2000, 3000 x 1330, 3000 x 1000 Available on request.
COLOURS ON REQUEST:	Green, Blue, Yellow, Red, Grey and custom colours.

SPECIALTY GRADES



TIVAR® BULK HANDLING GRADES

Tivar® 88: "System Tivar Engineering" Lining Grade specifically developed for the Mining Industry – 2000 x 1000 & 3000 x 1220 in 6mm-25mm Ex Stock.

CERAM P: Wear Optimised Premium Grade designed for high abrasive applications – 2000 x 1000 x 10mm-50mm Ex Stock.

TIVAR® FLAMEX: Also known as Tivar® 88 with BurnGard® is a Flame Retardant grade that meets the stringent requirements of UL94 V0. Available on request.

TIVAR® RUBBER BACKED: material that allows adhesions to other materials. Available on request.

TIVAR® BLUELINE: An optimum lining grade in a distinctive pale blue colour. This grade is also available in roll stock. Available on request.

TIVAR® XTENDED WEAR: is a hybrid ceramic filled grade designed for high flow applications. Turquoise is colour this grade was primarily developed for the high speed abrasive applications in the paper industry.

TIVAR® - U.H.M.W.P.E (Ultra High Molecular Weight Polyethylene)

FOOD & PHARMACEUTICAL INDUSTRY

TIVAR® SURFACE-PROTECT: – PET Bottle Handling “Anti-Scuffing Grade”
– 2000 x 1000 x 10mm – 30mm Ex Stock. Also available in rod for feed screws.

TIVAR® “OIL FILLED”: Enhanced lubrication – FDA Approved. Available on request.

TIVAR® CLEANSTAT: Specially formulated Anti-Static grade that meets EU and FDA regulations. Available on request.

TIVAR® H.O.T: (Higher Operating Temperature) Specially formulated to maintain key properties in an extended temperature range of 80°C to 135°C. This grade also meets EU and FDA regulations. Available on request.



ENHANCED GRADES



TIVAR® SUPERPLUS: A wear optimised partially cross-linked grade for use in extremely demanding applications and environments. Available on request.

TIVAR® DRYSLIDE: This grade has the lowest coefficient of friction within the Tivar® product family and is ideal in dust borne environments due to its dry lubricant additives. Available on request.

TIVAR® MOS2: Containing Molybdenum Disulphide, a solid lubricant, which reduces frictional resistance. The coefficient of friction reduces with dynamic load and is used in applications with high loads and where dry running is required. Available on request.

ADDITIONAL FORMS

PROFILES:

A range of standard profiles is available. Please refer our profiles catalogue. Custom profiles can be made to order. Available on request.

NUTS & BOLTS:

A variety of metric and imperial sizes. Available on request.

BALLS:

Up to 50mm diameter. Available on request.

DURASURF® ADHESIVE BACKED TAPES:

widths: 15mm – 610mm, length: 16 metres. Manufactured in a range of grades including Tivar® 1000, 88, Ceram P and Dryslide. Also is manufactured in 150 different Pantone® colours. Durasurf® is the leading supplier of base material for the snowboarding market. Available on request.

SUSTAMID® – NYLONS

MONOMER CAST NYLON (PA6 G)

STANDARD GRADES:	PA 6 G (Natural) PA 6 GMO (Molybdenum Disulphide) PA 6 GOL (Yellow Oil Filled)
RODS:	50mm – 300mm Ex Stock. 310mm – 1000mm. Available on request.
SHEET THICKNESSES:	10mm – 80mm Ex Stock. 85mm – 150mm. Available on request.
SHEET SIZES:	2000mm x 1000mm Ex Stock. 2500mm x 1250mm. Available on request.
BLOCKS:	600mm x 1250mm x 120mm – 500mm Available on request.
TUBES:	35mm OD x 25mm ID – 1250mm OD x 1000mm ID Available on request.
CUSTOM CASTINGS:	Special shapes and rings up to 2000mm in diameter. Available on request.



SPECIALTY GRADES (Available on request)

SUSTAGLIDE®: Modified with a solid lubricant for improved sliding properties and wear resistance. This grade is green in colour.



SUSTAGLIDE® PLUS: Modified with three lubricating systems and reinforced for improved sliding properties, wear resistance and increased surface hardness. This grade is available in natural, grey or blue in colour.

SUSTAMID® 6G PLUS: Modified with a mineral reinforcement material for increased resistance to pressure and E-Modulus couples with good machineability. This grade is grey in colour.

SUSTAMID® GLU: Combines liquid and solid lubricants for advanced wear resistance and low friction properties to eliminate stick-slip. Ideally suited for stop-start applications.

SUSTAMID® 6GHI: Modified with an elastomer component for good shock loading and increased impact resistance.

SUSTAMID® GLL: A highly modified copolymer grade combining Type 6 caprolactum and Type 12 laurylactum which provides much lower moisture absorption and very high impact strength.

SUSTAMID®: Type 66, Type 11, Type 12 and Type 12 30% Glass Filled.
Type 46 High Heat Grade

EXTRUDED MATERIALS

RODS:	10mm – 100mm Natural & Black
THIN GAUGE SHEET:	2000 x 1000 x 2mm – 6mm
THIN GAUGE FILM:	1000MM WIDE Rolls x 0.3mm – 1.5mm
SUSTAVACU®:	12% glass-filled vacuum formable sheet

SUSTARIN® ACETAL COPOLYMER – P.O.M (Poly Oxy Methylene)

STANDARD GRADES:	Natural & Black
SHEET THICKNESSES:	0.5mm – 6.0mm Ex Stock. 10mm – 60mm Ex Stock.
SHEET SIZES:	UP TO 6.0mm 2000 x 1000 Ex Stock. 620mm X 3000mm Ex Stock. 2000 x 1000 x 16mm – 60mm Available on request. 2500 x 1250 x 16mm – 60mm Available on request. 620 x 3000 x 8mm – 60mm Available on request. 620 x 2000 x 70mm – 100mm Available on request. 620 x 1000 x 100mm – 150mm Available on request.
RODS:	6mm – 300mm Ex Stock. 310mm – 450mm Available on request.

SUSTARIN® - H (DELRIN®- HOMOPOLYMER) Available on request.

SPECIALTY GRADES (Available on request)

SUSTARIN® TF / DIELUX®: P.T.F.E filled for added low friction

SUSTARIN® GF25 / POMALUX®: 25% Glass Filled added stiffness and stability

SUSTARIN® ELS: Conductive`

SUSTARIN® AS: Anti-Static

POMALUX® CN-F: Carbon Fibre filled - Black in colour

POMALUX® CN-SS: Stainless Steel filled – Dark grey in colour

POMALUX® SD-A: Static Dissipative – non-carbon filled – Beige in colour

SUSTADUR® P.E.T.P (Poly Ethylene Terephthalate)

STANDARD GRADES:	Natural
SHEET THICKNESSES:	10mm – 60mm Ex Stock 70mm – 100mm Available on request.
SHEET SIZES:	620mm x 3000mm Ex Stock.
RODS:	20mm – 150mm Ex Stock. 60mm – 200mm Available on request.

SPECIALTY GRADES:

SUSTADUR® TF: – P.T.F.E filled for added low friction. Available on request.

SUSTADUR® PBTP: – high impact performance. Available on request.

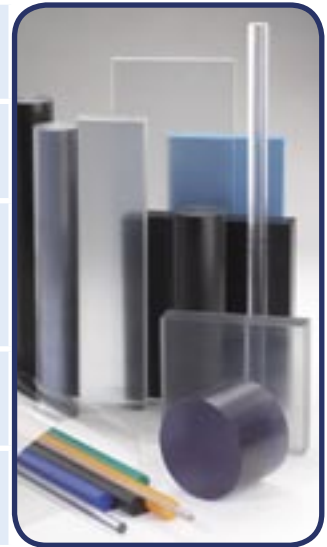
P.E.T.G (VIVAK®) / SIMOLUX® CLEAR SHEET

STANDARD GRADES:	Plain & UV
SHEET THICKNESSES:	0.5mm – 6mm Ex Stock.
SHEET SIZES:	2440mm X 1220mm, 8mm to 15mm in sheets 2000mm x 1000mm & 3000mm x 1500mm Available on request.

POLYCARBONATE (LEXAN® / MAKROLON®)

GLAZING GRADES

STANDARD GRADES:	Clear UV Resistant & MAR Resistant
SHEET THICKNESSES:	1.5mm – 12mm Ex Stock. 15mm – 25mm Available on request.
SHEET SIZES:	2440mm x 1220mm & 2440mm x 1830mm Custom sheet sizes available on request based on minimum economic quantities.
AVAILABLE ON REQUEST:	Tinted sheet, Formable Mar Resistant & Anti-Fogging sheet.
TUBES:	6.3mm OD – 203mm OD Ex Stock.



INDUSTRIAL GRADES

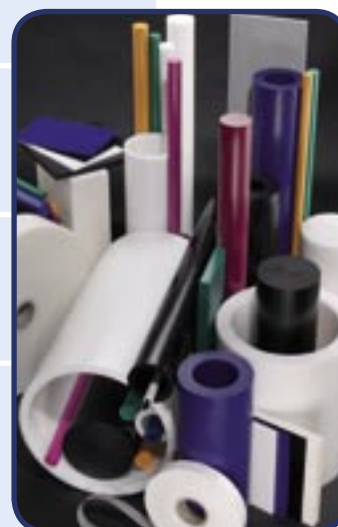
RODS:	SUSTANAT® 160mm – 200mm Available on request. SUSTANAT® 6mm – 150mm Ex Stock. ZELUX® 230mm – 380mm Available on request.
SHEETS THICKNESSES:	SUSTANAT® 16mm – 80mm Available on request. ZELUX® 90mm – 150mm Available on request.
SHEET SIZES:	SUSTANAT® 620mm X 3000mm & 310mm X 3000mm Available on request. ZELUX® 2440mm x 1220mm & 610mm x 1220mm Available on request.
ZELUX® GLASS FILLED:	Rod & Sheet in 10%, 20%, 30% & 40% content. Available on request.

SPECIALTY BALLSISTIC GRADES FROM ArmorUSA® (Available on request)

- AUGARD® "BALLISTIC" GLASS CLAD POLYCARBONATE:** 21mm – 75mm Thick
- CONGARD® "CONTAINMENT" GLASS CLAD POLYCARBONATE:** 11mm – 38mm Thick
- CONGARD® "CONTAINMENT" LAMINATED POLYCARBONATE:** 10mm – 32mm Thick
- SHARGARD® "BLAST" RESISTANT GLASS:** 19mm – 57mm Thick
- RAYGARD® "X-RAY" SHIELDING GLASS:** 1.8mm, 2.4mm & 3.0mm Lead Equivalency
- HURGARD® "HURRICANE" RESISTANT GLASS:** 14mm – 36mm Thick
- PRIVADO® "SWITCHABLE" PRIVACY GLASS:** Glass, Polycarbonate & Acrylic

P.T.F.E (POLYTETRAFLUOROETHYLENE)

STANDARD GRADE:	Virgin
SPECIALTY FILLED GRADES:	Glass filled, Carbon, Bronze, Stainless Steel Filled, RULON® Available on request.
EXTRUDED RODS:	25mm – 150mm ø Ex Stock.
MOULDED RODS:	20mm – 775mm ø Available on request.
EXTRUDED TUBES:	10mm OD x 4mm ID – 120mm OD x 100mm ID Available on request.
MOULDED TUBES:	20mm OD x 10mm ID – 1440mm OD x 1420mm ID Available on request.
SHEET THICKNESSES:	3mm – 25mm Ex Stock. 30mm – 130mm Available on request.
SHEET SIZES:	1200mm x 1200mm Ex Stock. 300 x 300, 600 x 600, 900 x 900 1000 x 1000, 1380 x 1380 & 1500 x 1500 Available on request.
SKIVED TAPE:	1200mm x 0.25mm – 3mm Plain Ex Stock. Up to 6mm Available on request. 1200mm x 1mm – 3mm Etched Ex Stock. Up to 6mm Available on request.
SPECIALTY FLUORO-POLYMERS (Available on request)	P.V.D.F – Kynar® E.T.F.E – Tefzel® E.C.T.F.E – Halar® P.C.T.F.E – Kel-F® F.E.P & P.F.A



POLYURETHANE

GRADES:	Polyether / Polyester /TDI / MDI
RODS:	5mm – 250mm
SHEETS:	1000mm x 600mm x 1.6mm – 12.7mm 1000mm x 1000mm x 4.75mm – 25.4mm Other sheet sizes and thicknesses available on request.
TUBES:	Available on request.

CUSTOM SHAPES, CASTINGS AND MOULDINGS: Available on request

THERMOSETS (S.R.B.F-BAKELITE®)

GRADES:	Canvas Fabric, Paper, Woven Glass
RESINS:	Phenolic, Epoxy, Silicone, Melamine
NEMA CLASSES:	XXX, XXXP, L, C, CE, G10, G7, G9, GP-03
SHEETS THICKNESSES:	1.6mm – 30mm
SHEET SIZES:	1980mm X 980mm
RODS:	15mm – 150mm

ACRYLICS

CAST RODS:	1" – 6" Ex Stock. Larger diameters available on request.
EXTRUDED RODS:	1/8" – 2" Ex Stock.
CAST TUBES:	50mm OD x 3mm wall – 500mm OD x 5mm Ex Stock Larger diameters and thicker walls available on request.
EXTRUDED TUBE:	1/4" – 8" Ex Stock.
SHEET THICKNESSES:	1.5mm – 25mm Ex Stock. Larger thicknesses available on request.
SHEET SIZES:	2440mm X 1220mm, 2440mm X 1830mm Ex Stock. Larger sheets available on request.

HIGH DENSITY POLYETHYLENE (H.D.P.E)

COLOURS:	Natural & Black, custom colours on request.
RODS:	20mm – 200mm larger diameters available on request.
SHEETS:	2000mm x 1000 x 1.0mm – 6mm, natural only ex Stock. 3000mm x 1500 x 6mm – 25mm Ex Stock. 2440mm x 1220mm x 30mm – 90mm Ex Stock. 2000mm x 1000mm x 100mm – 150mm Ex Stock.

POLYPROPYLENE

RODS:	Black & Grey, natural on request.
DIAMETERS:	10mm – 250mm Ex Stock.
SHEET THICKNESS:	1.0mm – 50mm Ex Stock.

PIPE & FITTINGS:
Available on request.

P.V.C – INDUSTRIAL GREY

RODS:	10mm – 300mm Ex Stock.
SHEETS SIZES:	2440mm x 1220mm Ex Stock. 3000mm x 1500mm Available on request.
SHEET THICKNESSES:	1mm – 50mm Ex Stock 60mm – 100mm Available on request. Colours available on request.

L.D.P.E

SHEET:	2000mm X 1000mm X 1.5mm – 6mm
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THERMOFORMABLE SHEET MATERIALS *(Available on request)*

ROYALITE® "R" SERIES:	Flame & Smoke Grades For Aerospace Static Control Grades Weather Resistant Grades "Soft Feel" Laminates
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HIGH PERFORMANCE MATERIALS *(Available on request)*

P.E.E.K – VICTREX®

P.E.S – ULTRASON E® RADEL A®

P.S.U – ULTRASON S® UDEL® SUSTASON®

P.P.S – RYTON® FORTRON®SUSTATRON®

P.P.A – AMODEL®

P.A.R – ARDEL®

P.I – VESPEL® TECALOR® AURUM®

P.E.I – ULTEM®

P.P.O – NORYL®

P.A.I – TORLON®

P.P.S.U – RADEL R® SUSTASON®

CUSTOM MACHINING CAPABILITIES

C.N.C – Turning, Milling & Routing

Thickening

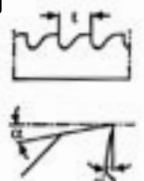



Plastic Fabrication

Bending

Welding



MACHINING GUIDELINES

		SUSTAMID®	SUSTARIN®	SUSTANAT®	SUSTADUR®	SUSTA®PEEK	SUSTA®PEI	SUSTA®PVDF	SUSTASON®	SUSTA®ABS	SUSTA®PPE	GF and CF reinforce	Special measures
Sawing  α Clearance angle [°] γ Effective cutting angle [°] V Cutting speed m/min t Tooth pitch mm	α	20 to 30	20 to 30	15 to 30	15 to 30	15 to 30	15 to 30	20 to 30	15 to 30	15 to 30	15 to 30	15 to 30	Preheating to 80 °C for sawing: from Ø60 mm: SUSTA® PEEK GF, CF from Ø80 mm: SUSTAMID® 6 GF SUSTAMID® 66 GF For wall thicknesses from 200 mm: SUSTAMID® 6 G For GF/CF reinforced rods with Ø >60 mm, use ribbon saw
	γ	2 to 5	0 to 5	5 to 8	5 to 8	0 to 5	0 to 4	5 to 8	0 to 4	0 to 5	0 to 5	10 to 15	
	V	40 to 100	40 to 100	30 to 80	40 to 100	30 to 100	30 to 80	40 to 100	30 to 80	30 to 100	30 to 100	20 to 100	
	t	3 to 8	2 to 5	3 to 8	3 to 8	3 to 5	2 to 5	2 to 5	2 to 5	2 to 8	2 to 8	3 to 5	
Turning  α Clearance angle [°] γ Effective cutting angle [°] χ Setting angle [°] V Cutting speed m/min S Advance mm/r	α	6 to 10	6 to 8	5 to 10	5 to 10	6 to 8	6 to 10	6 to 10	5 to 15	5 to 15	6 to 8		
	γ	0 to 5	0 to 5	6 to 8	0 to 5	0 to 5	5 to 8	0 to 8	25 to 30	25 to 30	2 to 8		
	χ	45 to 60	45 to 60	45 to 60	45 to 60	45 to 60	45 to 60	10 to 60	45 to 60	15 to 15	15 to 15	45 to 60	
	V	250 to 500	300 to 600	300 to 400	300 to 400	250 to 500	350 to 400	150 to 500	350 to 400	200 to 500	200 to 500	150 to 200	
	S	0,1 to 0,5	0,1 to 0,4	0,1 to 0,5	0,2 to 0,4	0,1 to 0,5	0,1 to 0,3	0,1 to 0,3	0,1 to 0,3	0,1 to 0,5	0,2 to 0,5	0,2 to 0,5	0,1 to 0,5
Drilling  α Clearance angle [°] γ Effective cutting angle [°] ϕ Acute angle [°] V Cutting speed m/min S Advance mm/r	α	5 to 15	5 to 10	8 to 10	5 to 10	5 to 10	3 to 10	10 to 16	3 to 10	8 to 12	8 to 12	6 to 10	Preheating to 80 °C across the entire material cross section for drilling is required for: from Ø60 mm: SUSTA® PEEK GF, CF from Ø80 mm: SUSTAMID® 66 GF from Ø100 mm: SUSTAMID® 6 GF, SUSTADUR® Reinforced SUSTAPLAST materials: - Heat to 80 °C for drilling - Hard-metal tools required SUSTANAT®, SUSTASON® are susceptible to stress cracking. Caution with using cooling agents! (Use only water or air for cooling.)
	γ	10 to 20	15 to 30	10 to 20	10 to 20	10 to 30	10 to 20	5 to 20	10 to 20	10 to 30	10 to 30	5 to 10	
	ϕ	90	90	90	90	90	90	130	90	90	90	120	
	V	50 to 150	50 to 200	50 to 100	50 to 100	50 to 200	20 to 80	150 to 200	20 to 80	50 to 200	50 to 200	80 to 100	
	S	0,1 to 0,3	0,1 to 0,3	0,2 to 0,3	0,2 to 0,3	0,1 to 0,3	0,1 to 0,3	0,1 to 0,3	0,1 to 0,3	0,1 to 0,3	0,2 to 0,3	0,2 to 0,3	
Milling  α Clearance angle [°] γ Effective cutting angle [°] V Cutting speed m/min	α	10 to 20	5 to 15	10 to 20	5 to 15	5 to 15	2 to 10	5 to 15	2 to 10	5 to 10	5 to 10	15 to 30	
	γ	5 to 15	5 to 15	5 to 15	5 to 15	6 to 10	1 to 5	5 to 15	1 to 5	0 to 10	0 to 10	6 to 10	
	V	250 to 500	250 to 500	300 to 300	300 to 300	250 to 500	250 to 500	250 to 500	250 to 500	300 to 500	300 to 500	80 to 100	



PLAS

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PLASTICS**

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