Orthotic Materials

Contents:

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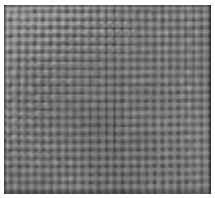
MATERIALS REVIEW

RX Laboratories can supply you with all the materials you need to manufacture top quality foot orthoses. All the materials offered are the actual materials used at RX Laboratories to fabricate their own exclusive range of devices.

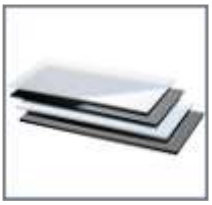
The unique aspect of RX orthotic materials sales is that we supply small quantities, supplied in ready to use pieces, aimed at the non-commercial orthotic manufacture. Everything is ready to glue or press!

The following list describes the materials immediately available from stock. Please refer to the price chart on page 3 for current prices.

TL-21OO® is a true carbon fibre/acrylic composite material used to manufacture strong, thin, and lightweight orthotic shells. Supplied in five ready-to-press sheet sizes, and in four grades of rigidity, the material addresses every prescription requirement. TL-2100®is the most researched and tested graphite composite material, and has been specifically designed for foot orthotic use.



TL-Silver® is a fibreglass/acrylic composite, and the latest development in the TL-family of materials. Slightly heavier than TL-2100®, it is extremely resistant to fracture, and therefore, well suited for the manufacture of sports foot orthoses.



High Density Polypropylene (HDP) - is a co-polymer of polypropylene and polyethylene, and is used for sports orthotic shells. Supplied in ready to press sizes of 210 mm x 110 mm, the sheets are available in 3.0 mm and 4.5 mm thicknesses. The plastic film on one side (to ensure a scratch free surface) should be removed prior to heating. The material colour is 'opaque' and is used at RX Laboratories to fabricate the RX Sport™, Zig-Zag™, RX Cobra™ and other foot orthoses.

High Density Ethyl Vinyl Acetate (EVA) - High density EVA is a hard rubber material used to add forefoot and rearfoot wedges or 'posts' to foot orthoses. RX EVA is very hard, being 70 Shore-A, and is supplied in ready to glue pieces of 100 mm x 100 mm. The pieces are available in 12 mm and 6 mm thicknesses and are available in black or white. At RX Laboratories, white EVA is used on polypropylene and TL-Silver® shells, and black EVA is used to post TL-2100™ shells.

MethylMethacrylate Monomer and Polymer - Dental acrylic is used to add hard forefoot and rearfoot posts to TL-2100® and TL-Silver® shells. There are various qualities of acrylic monomers and polymers, and the material available from RX Laboratories is the finest quality available. The monomer (powder) is available in three sizes: 450 gm, 800 gm, and 3 Kg; and the polymer (liquid) in 500 ml, 1.0 litre, and 5.0 litres.

1.0 mm EVA sheets - This is a special split-thickness grey EVA used to cover the underside of orthotic devices. It is used at RX Laboratories to cover the bottom of any device with a Poron™ arch filler (e.g., the RX Ski™ device) to stop frictional abrasion. It is also used as a base for simple insoles. The sheet size is approximately 550 mm x 550 mm.

0.8 mm polypropylene sheet - This is a unique material used to protect EVA posts. It is the thinnest polypropylene available, as has an attractive leather grain on one side. The sheet size is 550 mm x 650 mm (giving approximately 143 large post caps) and is available in black and white to match the high density EVA post material. This material is also used as a base for simple insoles.

Poron 4000S® - RX Laboratories specialises in supplying small sheet sizes of this well-established and tested open-cell shock absorbing material. 6.4 mm thick Poron® is used as arch filler on orthoses, and may be used as a shock absorbing heel cushion. The 3.2 mm and 1.6 mm materials are used for forefoot extensions. The sheet sizes are 1120 mm x 400 mm, and Poron 4000S® is grey in colour.

Vinyl (for top covering orthoses) - RX vinyl is sold in sheet sizes of 692 mm x 1000 mm and is available in black, grey, maroon, and dark blue.

Nylon Post Screws EVA posts may be supported with nylon post plugs, and nylon screws are used for this purpose. The screws are size M5 x 25 mm, and supplied in bags of 100 pieces.

THIS PRODUCT UNAVAILABLE UNTIL FURTHER NOTICE
Special Adhesive - This toluene based special impact adhesive, manufactured by Evode, can be used to adhere all orthotic components to the shell including EVA posts, post caps, top covers, and forefoot extensions.

Acrylic Polishing Soap - This is a unique opaque polishing compound used to polish TL2100™ and TL-Silver™ shells, and acrylic rearfoot posts. Supplied in a 320 g bar, it is simply applied by using a soft polishing mop, and produces and excellent gloss finish with no discolouration.

Cast Pencil - A pencil that writes on wet plaster of Paris and stays!

Gypsona Plaster of Paris Slab Dispenser – is the most economical way to buy plaster of Paris for casting the foot. The plaster bandage is 15 cm. wide and 100 meters long, x 4 ply – that's 400 meters of bandage! Dispensed straight from the box, the re-sealable plastic bag inside the dispenser keeps the remaining plaster fresh.

Trademarks:

- *TL-2100® and TL-Silver® are registered trademarks of Performance Materials Corporation, USA.*
- *Poron® and Poron 4000S® are registered trade marks of the Rogers Corporation, USA.*
- *RX Sport™, Zig-Zag™, RX Cobra™ and RX Ski™ are trademarks of RX Laboratories.*
- *Plexidur 0™ and Rohadur™ are trademarks of Rohm GmbH, Germany.*

Orthotic Materials

Price List – 1st November 2006 until further notice

Prices are subject to VAT and do not include shipping costs

Product & Code	Description	Thickness	Size	Price
TL-2100® & TL-Silver®				
TL-Family	Top of the range graphite and fibreglass composite materials	See pages 4-6 for details and prices		
High density polypropylene (HDP)				
PE3N	High density polypropylene	3.0mm	210mm x 100 mm (10 sheets min)	£0.97 / piece
PE4N	High density polypropylene	4.5mm	210mm x 100 mm (10 sheets min)	£1.22 / piece
High density ethyl vinyl acetate (EVA)				
E6W	White, high-density EVA	6.0mm	100mm x 100 mm (10 piece min)	£0.55 / piece
E12W	White, high-density EVA	12.0mm	100mm x 100 mm (10 piece min)	£0.78 / piece
E6B	Black, high-density EVA	6.0mm	100mm x 100 mm (10 piece min)	£0.55 / piece
E12B	Black, high-density EVA	12.0mm	100mm x 100 mm (10 piece min)	£0.78 / piece
Methylmethacrylate (Acrylic)				
RR1	Acrylic powder (clear)		450gm	£26.46
RR2	Acrylic Powder (clear)		800gm	£37.00
RR3	Acrylic Powder (clear)		3Kg.	£104.35
CC1	Cold cure liquid		500ml.	£18.99
CC2	Cold cure liquid		1 Lt.	£27.79
CC3	Cold cure liquid		5 Litres	£110.15
1.0 mm EVA sheet				
ES1	1.0mm EVA sheet (grey)	1.0mm	550mm x 550mm approx.	£11.68 / sheet
0.8 mm polypropylene sheet				
PPW	0.8mm leather grain polypropylene sheet (white)	0.8mm	550mm x 650mm approx.	£7.50 / sheet
PPB	0.8mm leather grain polypropylene sheet (black)	0.8mm	550mm x 650mm approx.	£7.50 / sheet
Poron 4000S™				
PR2	Poron™	1.6mm	1120mm x 400mm	£10.42 / sheet
PR3	Poron™	3.4mm	1120mm x 400mm	£15.89 / sheet
PR7	Poron™	6.3mm	1120mm x 400mm	£22.13 / sheet
Vinyl top covering material				
QV1	High grade vinyl – black, grey, maroon, and dark blue	1.0mm approx.	692mm x 1000mm	£12.24 / sheet
Sundries				
NP1	Nylon post plugs	M5 x 25mm	Bag of 100	£13.61 / bag
AC1	Acrylic polishing compound	320g.	1 bar	£14.69 / bar
CP1	Cast pencil		1 pencil	£1.61 / pencil
PL1	Gypsona™ POP slab dispenser	15cm x 100m	1 box	£88.65 / box

TL-2100®

A fourth generation, tried and tested, graphite thermoplastic composite material for foot orthoses.

Composition:

TL-2100® is a woven carbon fibre reinforced thermoplastic composite impregnated with an acrylic resin specially designed for orthotic fabrication.

Grades:

The grades differ only in terms of the volume of carbon fibre used and the thickness of the sheet material. Three grades of TL-2100® use a 9.0 6K x 12.5 3K plain weave carbon fabric which provides 44% more fibres in the longitudinal direction of an orthosis (compared to TL-61® and TL-2100®). The Ultra strength grade uses a 12.5 6K x 9.0 3K plain weave carbon fabric which provides 100% more fibre in the longitudinal direction.

	Ultra	Rigid	Semi-Rigid	Semi-Flexible
Thickness (mm)	2.75	2.75	2.25	1.75
Inner core	1.25	1.25	0.62	0.32
Fabric design	6K x 3K	3K x 6K	3K x 6K	3K x 6K
Flex Load (lb.)	570	450	350	250
Rigidity (lb./sq. in.)	340	300	185	70

Sheet Sizes:

TL-2100® is available in the following sheet sizes:

Size 1 3.0" x 7.0" (75mm x 175mm)
Size 2 Discontinued
Size 3 3.5" x 7.5" (87.5mm x 187.5mm)
Size 4 4.0" x 8.0" (100mm x 200mm)
Size 5 4.0" x 8.5" (100mm x 212.5mm)
Size 6 5.0" x 9.0" (125mm x 225mm) *Non-stock, special order only size.*

Packaging:

TL-2100® is packed in hermetically sealed packs, 10 blanks per pack. A desiccant pouch is enclosed in each pack to avoid moisture exposure.

Storage:

TL-2100® must be protected, at all times, from the effects of air moisture. It is shipped in hermetically sealed bags containing a desiccant pack. It is advised that the material is stored in an air tight food container (Tupperware) enclosing the desiccant from the bag. Use as many desiccant bags as possible to guarantee dryness of the container.
The maximum time of exposure to ambient humidity prior to forming is 8 hours. If necessary, the material can be re-dried at 120°C for 24 hours.

TL-2100® comparable rigidity chart

	Materials with comparable rigidity		
TL2100 grade	TL-2000+	Plexidur 0	Polypropylene
Ultra	-	5.0mm	-
Rigid	Same	4.0 – 5.0mm	6.0mm
Semi-Rigid	-	3.5 – 4.0mm	4.0 – 5.0mm
Semi-Flexible	-	3.0mm	3.0 – 4.0mm

Testing:

TL-2100® has successfully undergone both laboratory testing and clinical trials. It is the most researched foot orthotics material on the market. A copy of the following paper is available at www.rxlabs.com: *Richie, D.H. & Olsen, W.R.: Orthoses for Athletic Overuse Injuries – Comparison of Two Component Materials, JAPMA, Vol. 83. No. 9.*

TL-2100®

Price List – November 2006, until further notice.

Grade	Sheet Size 1	Sheet Size 2	Sheet Size 3	Sheet Size 4	Sheet Size 5	Sheet Size 6
Semi-flexible, Semi-rigid, Rigid, or Ultra	£8.11	discontinued	£8.85	£9.97	£11.24	£13.82
Prices are per sheet. Sheets sold in packs of 10.						Special Order Size

Sheet sizes:

Size 1 3.0" x 7.0" (75mm x 175mm)
Size 2 Discontinued.
Size 3 3.5" x 7.5" (87.5mm x 187.5mm)
Size 4 4.0" x 8.0" (100mm x 200mm)
Size 5 4.0" x 8.5" (100mm x 212.5mm)
Size 6 5.0" x 9.0" (125mm x 225mm) *Non-stock, special order size.*

Notes:

1. Prices are per sheet and are in £'s sterling, F.O.B. Wellington, Somerset, UK and apply to all grades of TL-2100® material.
2. Minimum order is 10 sheets of one grade.
3. Sheets are packed 10 per bag; therefore, orders must be in multiples of 10.
4. Prices exclude VAT.
5. All shipping and related costs are to be paid by customer.
6. Terms are strictly net 14-days from date of statement - please review our terms and conditions of trading.
7. Prices are valid from November 2006 until further notice.
8. Sheet size 2 is discontinued, and sheet size 6 is a non-stock special order size.

Processing:
TL-2100® can be processed using conventional orthotic fabrication equipment used for processing other thermoplastic composite materials such as Polydor™ or Carboplast. The following guidelines are recommended for best results.

Cutting:
TL-2100® may be cut with a band-saw or similar equipment. Carbide or diamond grit blades may give extended life. Use a blade that is 3/8" wide, with 18 regular rake teeth/inch. The blade speed should be 2500-7500 ft./min. TL-2100® may also be cut with automated routing or high pressure water jet.

Heating:
Temperature control is important in thermoforming TL-2100® . It can be heated using convection, conduction and infrared methods. For consistent, high quality results, use a commercial oven with forced air circulation (i.e. fan assisted).
Some oven thermostats are not sufficiently accurate for processing TL-2100® , therefore place a high quality thermometer inside the oven to monitor the temperature.
TL-2100® should be heated at 200°C for 5-7 minutes. Please note that this time may vary between different ovens and some testing is required to 'calibrate' the heating process.
Exceeding the recommended temperatures will degrade the material, whilst insufficient heating will restrict forming.

Pressing:
TL-2100® has been designed for moulding on the types of vacuum press commonly used by orthotics laboratories. The only recommendation is that full vacuum (i.e. all bladder motion has stopped) is pulled within 5-10 seconds.
A 3.0mm latex rubber bladder is recommended.

Forming Procedure –
a. Stabilise the convection oven at 200°C (± 5°C).
b. Ensure vacuum system will pull at 25" Hg. (15-30 psi).
c. Cut TL-2100® blank as close to finished size as possible.
d. Heat blank for 6-7 minutes.
e. Place blank on cast as quickly as possible.
f. Apply vacuum and also apply hand and figure pressure to contour material in the cast contours for approximately 30 seconds.
g. Allow to cool for 1-2 minutes.
h. Remove TL-2100® shell from cast.
i. If wrinkles appear they can be spot heated with a heat gun (1500W) and re-pressed.

Heat Adjustment:
Use a hot air gun (paint stripper) that produces around 150°C. The recommended rating is 1500W. When spot heating TL-2100® keep the source a distance of about 2" from the material and keep the source moving to avoid burning the material. The material will remain plastic for about 5 seconds if heated properly giving enough time to make adjustments.

Grinding:
TL-2100® should be ground on a belt grinder with an initial course grind using a 60-80 grit abrasive belt. Avoid flapper wheels that force dust into the atmosphere. A 150 grit abrasive belt should be used as a finishing grind. The recommended grinder speed is 1500-2000rpm. 150-400 grit wet and dry paper may be used to hand finish the edges, after which they can be cloth polished using a buffing wheel and appropriate polishing soap.
Gloves and sleeves should be worn whilst grinding and polishing TL-2100® .

Bonding:
TL-2100® is an acrylic based composite, thus primers and adhesives used for acrylic provide excellent results. Surfaces should be cleaned with an abrasive pad and with isopropyl alcohol or other suitable solvent for best results.

Materials Safety Data Sheet
TL-2100® : Carbon Fibre Reinforced Acrylic Sheet

Section I - Manufacturer

Performance Materials Corporation
1150 Calle Suerte
Camarillo, CA 93012, USA

Tel: 805-482-1722
Fax: 805-482-8776

Section II – Ingredients

Carbon Fibres:	20% by Wt.
Acrylic Plastic:	80% by Wt.
Methylmethacrylate Monomer:	Trace.

Section III – Physical Data

Appearance, Odour etc.:	Solid sheets, odourless, black.
Solubility in water:	Negligible.
Specific Gravity:	1.5
Percentage Volatile:	250°F. Less 1%.

Section IV – Fire and Explosive Data

Flash Point:	304°C (579°F) – ASTM – 1929.
Auto Ignition:	460°C (860°F).
Extinguishing Media:	Chemical Foam, CO2, Water Fog, Dry Chemical.
Special Fire Fighting Procedures:	None.
Unusual Fire and Explosion Hazards:	Incineration can generate fibreglass and carbon fibres.

Section V – Health Hazard Data

Resin Particles:

Inhalation:	Gross exposure to nuisance particulate (regardless of how generated) may cause irritation to the respiratory tract. If affected by inhalation, move to a location with fresh air. If breathing difficulty persists, consult a physician.
Skin or Eye:	Nuisance particulate may cause irritation. In case of eye contact, flush with large amounts of water for about 15 minutes. If irritation persists, consult a physician. For skin, wash with soap and water.

Carbon Particles:

Inhalation:	Airbourne carbon fibres and fibreglass particles may cause mechanical irritation to the mouth, nose and throat.
Skin or Eye:	Carbon fibres and fibreglass or airborne particles can cause temporary eye or skin irritation. For skin irritation wash affected areas thoroughly with soap and water. If skin irritation continues, see a physician. All currently available information indicates that an insignificant rash from recurrent skin contact with fibreglass fibres. See 'Eye Contact' section above.

Section VI – Special Protection Information

Ventilation:	Local exhaust system recommended during processing.
Respiratory Protection:	Disposable dust masks should be used when cutting or grinding the material.
Skin Protection:	Gloves and long sleeves or equivalent should be worn when cutting or grinding. Barrier creams that are water soluble are recommended for exposed skin during grinding or cutting.
Eye Protection:	Safety eyeglasses with side shield should be worn when cutting or grinding.

Section VII – Reactivity Data

Stability:	Stable under normal conditions.
Conditions to Avoid:	Exposing material to temperatures above 260°C (500°F).
Incompatibility:	Strong acids, bases and oxidising agents.
Hazardous Decomposition Products:	Acrylic monomers from reversion, carbon monoxide from incomplete combustion, and other decomposition products if burnt.

Section VIII – Spill or Leakage Procedure

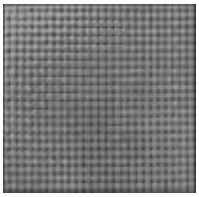
Clean Up:	Vacuum or sweep up spills, dusts, particulate, taking care not to generate airborne fibres which may cause electrical malfunction. (see section XI). Incineration can generate airborne fibres (fibres are thermally stable and do not burn readily). Waste fibre containing material should be bagged or contained and disposed of properly as permitted by local, state and federal regulations

Section IX – Special Precautions

Carbon fibres are electrically conductive and can cause short circuits in electrically operated machinery and instruments. The fibreglass is not electrically conductive under normal conditions (glass becomes electrically conductive only in a molten state).

Section X – Toxicity Information

The acrylic resin is in the form of a solid polymer and is not hazardous in normal storage and handling. However, all thermoplastic materials release some vapours of gases at high temperatures. Dry cutting and machining of the material can also produce high localised temperatures.



TL-Silver®

The latest technology in graphite/fibreglass thermoplastic composite materials for foot orthoses.

Composition:

TL-Silver® is a woven carbon and glass fibre reinforced thermoplastic composite with a silver pigmented acrylic resin, specially designed for foot orthotic fabrication.

Grades:

TL-Silver® is available in two grades. TL-Silver® (2L) is a two layer semi-flexible material with a 2.0mm nominal thickness. TL-Silver® (3L) is a three layer semi-rigid material with a 2.2mm nominal thickness.

Sheet Sizes:

TL-Silver® is available in pre-rounded heel blanks to reduce trimming and grinding in the following sheet sizes:

Size 1 3.0" x 7.0" (75mm x 175mm)
Size 3 3.5" x 7.5" (87.5mm x 187.5mm)
Size 4 4.0" x 8.0" (100mm x 200mm)
Size 5 4.0" x 8.5" (100mm x 212.5mm)
Size 6 5.0" x 9.0" (125mm x 225mm) *Non-stock, special order only size.*

Packaging:

TL-Silver® is packed in hermetically sealed packs, 10 blanks per pack. A desiccant pouch is enclosed in each pack to avoid moisture exposure.

Storage:

TL-Silver® must be protected, at all times, from the effects of air moisture. It is shipped in hermetically sealed bags containing a desiccant pack. It is advised that the material is stored in an air tight food container (Tupperware) enclosing the desiccant from the bag. Use as many desiccant bags as possible to guarantee dryness of the container.
The maximum time of exposure to ambient humidity prior to forming is 8 hours. If necessary, the material can be re-dried at 121°C (250°F) for at least 12 hours.

TL-Silver®

Price List – November 2006, until further notice.

Grade	Sheet Size 1	Sheet Size 2	Sheet Size 3	Sheet Size 4	Sheet Size 5	Sheet Size 6
Semi-rigid and Rigid	£4.53	discontinued	£4.83	£5.17	£6.20	£6.81
Prices are per sheet. Sheets sold in packs of 10.						Special Order Size

Sheet sizes:

Size 1 3.0" x 7.0" (75mm x 175mm)
Size 2 Discontinued.
Size 3 3.5" x 7.5" (87.5mm x 187.5mm)
Size 4 4.0" x 8.0" (100mm x 200mm)
Size 5 4.0" x 8.5" (100mm x 212.5mm)
Size 6 5.0" x 9.0" (125mm x 225mm) *Non-stock, special order size.*

Notes:

1. Prices are per sheet and are in £'s sterling, F.O.B. Wellington, Somerset, UK and apply to all grades of TL-Silver® material.
2. Minimum order is 10 sheets of one grade.
3. Sheets are packed 10 per bag; therefore, orders must be in multiples of 10.
4. Prices exclude VAT.
5. All shipping and related costs are to be paid by customer.
6. Terms are strictly net 14-days from date of statement - please review our terms and conditions of trading.
7. Prices are valid from November 2006 until further notice.
8. Sheet size 2 is discontinued, and sheet size 6 is a non-stock special order size.

Processing:
TL-Silver® can be processed using conventional orthotic fabrication equipment used for processing other thermoplastic composite materials such as Polydor™ or Carboplast. The following guidelines are recommended for best results:

Cutting:
TL-Silver® may be cut with a band-saw or similar equipment. Carbide or diamond grit blades may give extended life. Use a blade that is 3/8" wide, with 8 to 14 regular rake teeth/inch. The blade speed should be 2,500 ft./min or faster. Wipe off dust and other surface contaminants before thermoforming.

Heating:
Temperature control is important in thermoforming TL-Silver®. It can be heated using convection ovens, infrared ovens are cautiously recommended. For consistent, high quality results, use a commercial oven with forced air circulation (i.e. fan assisted). Some oven thermostats are not sufficiently accurate for processing TL-Silver®, therefore place a high quality thermometer inside the oven to monitor the temperature. TL-Silver® should be heated at 193°C to 205°C (380°F 400°F) for 3-5 minutes. Please note that this time may vary between different ovens and some testing is required to 'calibrate' the heating process. Exceeding the recommended temperatures will degrade the material, whilst insufficient heating will restrict forming.

Pressing:
TL-Silver® has been designed for moulding on the types of vacuum press commonly used by orthotics laboratories. The only recommendation is that full vacuum (i.e. all bladder motion has stopped) is pulled within 10 seconds.
A 3.0mm latex rubber bladder is recommended.

Forming Procedure –
1. Stabilise the convection oven at 198°C (390°F) ± 5°C (10°F).
2. Ensure vacuum system will pull at 25" Hg. (15030 psi).
3. Cut TL-Silver® blank as close to finished size as possible.
4. Heat blank for 3 - 5 minutes.
5. Place blank on cast as quickly as possible.
6. Apply vacuum and also apply hand and figure pressure to contour material in the cast contours for approximately 30 seconds.
7. Allow to cool for 1-2 minutes.
8. Remove TL-Silver® shell from cast.
9. If wrinkles appear they can be spot heated with a heat gun (1500W) and re-pressed.

Heat Adjustment:
Use a hot air gun (paint stripper) that produces around 150°C (300°F). The recommended rating is 1200W. When spot heating TL-Silver® keep the source a distance of about 1.5" to 2" from the material and keep the source moving to avoid burning the material. The material will remain plastic for about 5 seconds if heated properly giving enough time to make adjustments.

Grinding:
TL-Silver® should be ground on a belt grinder with an initial course grind using a 40-80 grit abrasive belt. Avoid flapper wheels that force dust into the atmosphere. A 120 grit abrasive belt should be used as a finishing grind. The recommended grinder speed is 1500-2000rpm. 150-400 grit wet and dry paper may be used to hand finish the edges, after which they can be cloth polished using a buffing wheel and appropriate polishing soap.
Gloves and sleeves should be worn whilst grinding and polishing TL-Silver® .

Bonding:
TL-Silver® is an acrylic based composite, thus primers and adhesives used for acrylic provide excellent results. Surfaces should be cleaned with an abrasive pad and with isopropyl alcohol or other suitable solvent for best results.

Materials Safety Data Sheet
TL-Silver® : Fibre Glass Reinforced Acrylic Sheet

Section I - Manufacturer

Performance Materials Corporation
1150 Calle Suerte
Camarillo, CA 93012, USA

Tel: 805-482-1722
Fax: 805-482-8776

Section II – Ingredients

Fibre Glass Fabric:	Nominal 25% - 35% by Wt.
Acrylic:	Nominal 75% - 65% by Wt.
Methylmethacrylate Monomer:	Trace.

Section III – Physical Data

Appearance, Odour etc.:	Solid sheets, Odourless, Silver.
Solubility in water:	Negligible.
Specific Gravity:	1.50-1.55.
Percentage Volatile:	250°F, 20 minutes. 1% maximum.

Section IV – Fire and Explosion Data

Flash Point:	304°C (580°F) – ASTM D – 1929.
Auto Ignition:	460°C (860°F).
Extinguishing Media:	Chemical Foam, CO2, Water Fog, Dry Chemical.
Special Fire Fighting Procedures:	None.
Unusual Fire and Explosion Hazards:	Incineration can generate airborne fibres which may cause electrical malfunctions.

Section V – Health Hazard Data

Resin Particles:

Inhalation:	Gross exposure to resin particles (regardless of how generated) may cause irritation to the respiratory tract. If affected by inhalation, move to a location with fresh air. If breathing difficulty persists, seek medical attention.
Skin or Eye Contact:	Gross exposure to resin particles may cause irritation. In case of eye contact, flush with large amounts of water for about 15 minutes. If irritation persists, consult a physician. For skin, wash with soap and water.

Fibre Glass Particles:

Inhalation:	Exposure to glass fibre sometimes causes irritation of the skin and, less frequently, irritation of the eyes, nose or throat.
Skin or Eye Contact:	Eye irritation, flush eyes with clear water for at least 15 minutes. If irritation continues, seek medical attention. Skin irritation, rinse contacted areas with room temperature to cool water, then wash gently with mild soap. If fibre glass becomes imbedded, seek medical attention.

Section VI – Special Protection Information

Ventilation:	Local exhaust system recommended during processing.
Respiratory Protection:	Disposable dust masks should be used when cutting or grinding the material to screen out irritating airborne particles which are generated.
Skin Protection:	Gloves and long sleeves or equivalent should be worn when cutting or grinding. Barrier creams that are water soluble are recommended for exposed skin during grinding or cutting.
Eye Protection:	Safety eyeglasses with side shield should be worn when cutting or grinding.

Section VII – Reactivity Data

Stability:	Stable under normal conditions.
Conditions to Avoid:	Exposing material to temperatures above 260°C (500°F).
Incompatibility:	Strong acids, bases and oxidising agents.
Hazardous Decomposition Products:	Acrylic monomers and carbon monoxide, depending on conditions of heating or burning.

Section VIII – Clean Up and Waste Disposal Procedures

Clean Up:	Vacuum or sweep up spills, dusts, particulate, taking care not to generate airborne fibres which may cause electrical malfunction.
Waste Disposal:	Dispose of as solid waste in accordance with Federal, State and Local regulations. Not considered a hazardous waste under federal "RCRA" regulations.

Section IX – Special Precautions

Precaution to be taken in Handling and Storing:	None Known
Other Precautions:	None Known

For further information, visit www.rxlabs.com, and follow the 'Product Catalogues and Shop' link; or go straight to the materials section by clicking here.