



Polymer Testing Laboratory

The Chisholm Polymer Testing Laboratory provides a wide range of testing and analysis services to industries where polymers and plastics are used and has the facilities for product and process development using both pilot and full scale polymer processing equipment.

The Laboratory has been in operation since 1983 and in that time it has earned a reputation for being one of the best-equipped and most professional facilities of its kind in Victoria. The Polymer Testing Laboratory is accredited by the National Association of Testing Authorities (NATA) and complies with the requirements of ISO/IEC 17025:2005 'General requirements for the competence of testing and calibration laboratories'.

Situated as it is in the heartland of the state's manufacturing sector, the Laboratory has serviced a range of clients throughout Australia, New Zealand and South-East Asia as well as many local organisations.

The Polymer Testing Laboratory is run by highly qualified personnel who are experienced in industry and understand the need for work to be carried out discretely. All requirements are handled professionally and in complete confidence and where necessary, a confidentiality agreement can be entered into.

The Laboratory is equipped with a very wide range of equipment including Shimadzu AG-IS tensile testing machine, Ceast pendulum impact tester, falling dart film impact tester, Shore A and D, Barcol and Rockwell hardness testers and Elmendorf tear tester.



Services offered at the Laboratory include:

- Product testing and evaluation using either the product(s) directly or test specimens taken from the product(s) by die or machine cutting.
- Material testing and evaluation of raw materials or test specimens prepared by injection and compression moulding then die cutting or milling.
- Identification and analysis of materials using Differential Scanning Calorimetry along with Infrared Spectroscopy as confirmation.
- Flow behaviour of materials such as melt flow rate and shear rate verses viscosity of materials can be determined using the Melt Flow Indexer and Monsanto Capillary Rheometer. The Brabender Plasticorder can provide information on torque and temperature, shear rate and viscosity.

All testing and analysis of products and materials is to specifications using Australian Standards, American Society for Testing and Materials (ASTM) Standards and International Organization for Standardization (ISO) Standards. Other test methods may be available on application.

Chisholm Institute

PO Box 684 Dandenong
Victoria 3175

For a full list of our services and equipment please contact us on **(03) 9212 5477** or **(03) 9212 5029** or email polymertesting@chisholm.edu.au

www.chisholm.edu.au



Chisholm

Chisholm Polymer Testing Laboratory Equipment

- Shimadzu AG-IS 10kN Tensile Testing Machine
- Ceast Pendulum Impact Tester for Izod, Charpy and Tensile Impact Testing
- Falling Dart Film Impact Tester
- Shore A and D Hardness Testers
- Barcol Hardness Tester
- Rockwell Hardness Tester
- Elmendorf Tear Tester
- Vicat/ Heat Deflection Temperature Tester
- Gardner Hazemeter/ Glossmeter
- Abbe Refractometer
- FMVSS 302 Flammability Tester
- AS/NZS 60685.2.10 Glow-wire Tester
- Melt Flow Rate Apparatus
- Monsanto Automatic Capillary Rheometer
- Brabender Plasticorder PL2000-6 with torque rheometer, mixing head heat stability apparatus, single screw and twin screw laboratory scale compounding, laboratory scale blown film line, laboratory scale tube extrusion
- Infra-red Spectrometer
- Mettler DSC25 Differential Scanning Calorimetry
- Muffle Furnaces
- Fan forced oven and vacuum ovens
- Brabender C-Aquameter Moisture Analyser
- Light Polariser
- Brookfield Viscometer
- ICI Instrumented Impact Tester
- QUV Accelerated Weathering Apparatus
- Wiley Mill
- ICS Micromatch 2000 Spectrophotometer-MS2020 Spectrophotometric Measuring Head
- Physical Test Specimen Injection Moulding Tools
- 130 tonne Battenfeld Injection Moulder/Mc

NATA accredited test procedures

Tension Tests

Tensile strength to AS 1145.1, AS1145.2, ISO 527-1, ISO 527-2, ASTM D638M-1996, ASTM D638

Impact Tests

Tensile test on plastic pipe butt welds to BS EN 12814-2

Heat Distortion Tests

Izod impact strength to ASTM D256 Methods A and E

Bend Tests

Heat deflection temperature to ASTM D648 Method A

Flow Properties

Flexural modulus to ASTM D790

Plastic Films

Melt flow rate to ASTM D1238

Tensile strength of polymer film to ASTM D882

Other Tests

Falling dart impact to AS 1326-1972

Thermal transition points of polymers to ASTM D3418

Vicat softening point to AS 1368, AS 1462.5, ISO 2507-1, ISO 306 and ASTM D1525

Shear and peel strength geomembrane polymeric sheet to ASTM D4437-1999

Pipe and Related Products

Degree of cross-linking by determination of gel content to AS 2492 and ISO 10147



For a full list of our services and equipment please contact us on **(03) 9212 5477** or **(03) 9212 5029** or email polymertesting@chisholm.edu.au