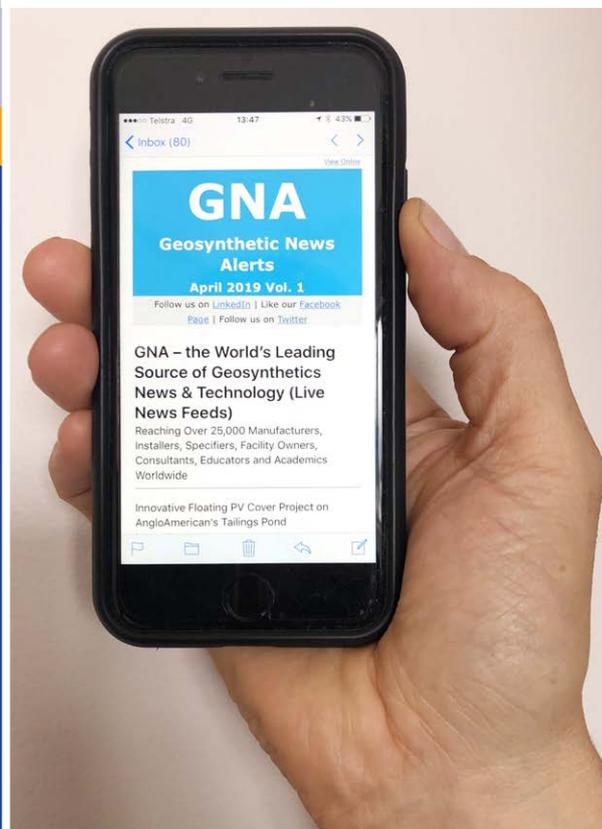


# CAPABILITY STATEMENT



**WE KNOW POLYMERS - WE KNOW TESTING**

## Introduction

ExcelPlas is a NATA-accredited, independent testing laboratory that is highly-respected for providing polymer testing, analysis, research and investigations services for local and international clients. The business is privately owned and commenced in 1994.

ExcelPlas undertakes materials analysis and product testing in diverse industries such as mining (tailings dams and brine ponds), geotechnical (landfills/wastewater), energy and resources (LNG/oil & gas plants and pipelines), construction (buildings), healthcare (hospitals), consumer products (appliances, packaging) and infrastructure (tunnels/roads).

We are also Australia's largest polymer-failure focused laboratory (with 15 full time staff and an expansive client base), having the capabilities to undertake a full range of polymer investigations.

## Services Offered

ExcelPlas delivers high quality, scientifically accurate, legally defensible analytical testing and analysis of polymers and other materials such as rubbers, glass, protective coatings, aluminium composite cladding, plastic pipes, industrial plastics, geosynthetics etc. Services offered include the following:

## Mechanical Testing

Mechanical testing can determine if a polymer or plastic has the required mechanical properties

- Tensile Strength and Elongation
- Compressive Testing
- Elasticity and modulus
- Tear properties
- Burst properties
- Flexure properties
- Fracture toughness
- Impact resistance
- Stress rupture
- Flexibility
- Adhesive strength
- Hardness
- Indentation resistance
- Abrasion resistance
- Fatigue Testing (Cyclic Testing)
- Fatigue limit
- Creep
- Melt Flow Ratio
- Density (Specific Gravity)



## Polymer Problem Solving



We provide detailed interpretation of test results and help translate these results into effective and meaningful solutions for our clients.

Our clients use our services for a variety of reasons, including competitive product characterization, identification of batch to batch variations, product improvement independent QA, comparison of "good" vs. "bad" samples and intellectual property legal cases.

Founder Dr. John Scheirs is a Polymer Chemist and the Principal Consultant at ExcelPlas. For over 25 years John has worked with many companies on failure analysis and root cause analysis investigations, as well as providing material science consulting on plastic and polymers ranging from geosynthetics such as geomembranes and geotextiles and pipes to coatings. He is also the author of a leading reference book **Compositional and Failure Analysis of Polymers**, which teaches how to investigate and analyze polymer products to improve performance, reliability, and cost effectiveness.

### Digital Marketing Platforms

ExcelPlas reaches and informs its extensive customer base frequently using its proprietary Digital Marketing Platforms that include:

GNA – Geosynthetics News Alerts

PPN – Poly Pipes News

CCN – Combustible Cladding News

PCN – Protective Coatings News

CNA – Cable News Australia

SAN – Sealants & Adhesives News

MNA – Masterbatch News Alerts

RNA – Rubber News Australia

TNA – Tailings News Australia

PFN – Product Failure News

ExcelPlas leads the way with digital communication with news blasts and news feeds in the industries and sectors in which it operates. eNewsletters and eAlerts are sent to its key customers weekly to be 'front of mind' for testing and analysis needs.

### PRODUCT TESTING WEBSITES

<http://www.excelplas.com/>

<http://www.polymertesting.com.au/>

<http://www.polypipetesting.com.au/>

<http://www.uvtesting.com.au/>

<https://www.claddingtest.com/>

<https://www.miniredgers.com.au/>

### DIGITAL MARKETING WEBSITES

<https://www.geosyntheticnews.com.au/>

<https://www.polypipenews.com.au/>

<https://www.claddingtest.com/news/>

<https://www.cablenewsaustralia.com.au/>

<https://www.tailingsnews.com.au/>

<http://www.masterbatchnews.com.au/>

**contact: [www.excelplas.com](http://www.excelplas.com)**



# WE KNOW POLYMERS - WE KNOW TESTING

**25+**

Years in Operation

**15+**

Qualified Staff

**500+**

Return Customers

**1000+**

Failure Analyses

**8000+**

Laboratory Jobs

ExcelPlas also conducts investigations and analysis for polymer quality assurance and problem solving using a number of available in-house techniques including:

- Visual and Microscopic Examination
- Scanning Digital Stereo Microscopy (SDSM)
- Fourier Transform Infrared Spectroscopy (FTIR)
- Differential Scanning Calorimetry (DSC)
- Oxidative Induction Time (OIT)
- Thermogravimetric Analysis (TGA)
- Thermo- Mechanical Analysis (TMA)
- X-Ray Diffraction (XRD)
- Chemical Resistance Testing (CRT)
- Creep Evaluation / Lifetime Prediction Testing
- Tensile Testing including controlled temperature (TT)
- Impact Testing (IT)
- Failure Replication
- Accelerated Weathering (AW)
- Immersion testing
- Oven ageing (OA)

We work with clients to develop a customise 'roadmap' of testing and analysis for solving their polymer and materials problems by:

- Developing a tailored analysis regime involving polymer identification, additive identification (deformulation), contaminant identification, failure analysis and root cause assessment.
- Consideration of the potential impact of external factors such as processing fabrication, installation, environment, in-service factors handling and storage, cleaning agents etc.
- Investigating accelerated ageing and durability of materials
- Providing condition monitoring and residual service lifetime estimates (ERL)

#### Characterization of Polymers

ExcelPlas is skilled in the characterization of polymers, rubbers and coatings. Our team of polymer chemists have performed over 1000 polymeric characterizations on a wide range of polymer products such as: Plastics (PP, PE, PS, PC PMMA, Nylon, PUs, flexible and rigid PVC, copolymer and blends, degradable PE and PP)

Specialty products (multilayer films, high temperature engineered products), Coatings, including protective coatings, paints, architectural coatings, Adhesives and sealants,

Rubber products,

Medical devices and healthcare products (eg. hospital disinfectant wipes

Textiles (industrial fabrics)

Composites



**ExcelPlas**  
MATERIALS TESTING