

## April 2019 Vol. 2

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### PPN- The Leading Source of Industry News on Polymer Pipes and Plastic Pipe Failure

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#### **Plumbing Pipe Failures Around Australia Accelerate the Development of More Oxidation Resistant Plastic Pipes**

As a result of the large range of water temperature and chlorine levels encountered across Australia we have seen more PB and PEX plumbing pipe failures recently particularly in WA, NT and QLD. In response new pipes made from higher classification polymers have been developed which will withstand higher levels of chlorine, temperature and pressure over time.

PIPA POP018 provides guidelines on the suitable application zones based on specific drinking water conditions at a location (considering local average water temperature, chlorine and pH levels). Plastics Industry Pipe Association (PIPA) POP018 "Polyethylene Drinking Water Pipes in Contact with Chlorine and Chloramine Disinfectants" outlines the Chlorine Classification (CC) Index set out in the US ASTM Standard D3350:2014 "Standard Specification for Polyethylene Plastics Pipe and Fittings Materials".

<https://www.vinidex.com.au/wp-content/uploads/VIN021.1Chlorblue-2pp-Flyer.pdf>

Puriton™ Barrier Pipe for the Safe Distribution of Drinking Water Through Contaminated Land/Soil

<http://www.hygradewater.co.nz/product/radius-puriton-barrier-pipe-and-fitting-system/>

PDF: [http://www.hygradewater.co.nz/wp-](http://www.hygradewater.co.nz/wp-content/uploads/2019/03/PF9.1RadiusPuritonBarrierPipeandFittingsSystem.pdf)

[content/uploads/2019/03/PF9.1RadiusPuritonBarrierPipeandFittingsSystem.pdf](http://www.hygradewater.co.nz/wp-content/uploads/2019/03/PF9.1RadiusPuritonBarrierPipeandFittingsSystem.pdf)

Vinidex Release New Chlorblue™ Higher Chlorine Tolerant PE Piping

<https://www.vinidex.com.au/wp-content/uploads/VIN021.1Chlorblue-2pp-Flyer.pdf>

Pipes on Display at StormWater 2019 (1-3 May 2019, Auckland, NZ)

<http://stormwaterconference.org.nz/exhibition/>

Rehau Updates PEXa Pipe Certifications & Listings (March 2019) (Declassified)

<https://www.rehau.com/download/869008/pex-certifications-and-listings.pdf>

PIPA Release New Industry Guidelines for Polyethylene Drinking Water Pipes in Contact with Chlorine and Chloramine Disinfectants v 1.1 (POP018)

<https://www.pipa.com.au/wp-content/uploads/2019/04/POP018.pdf>

Rehau Expanded Pipe Sleeve Fittings Enhance Versatility

<https://www.facilitiesnet.com/site/pressreleases/Expanded-Pipe-Sleeve-Fittings-Enhance-Versatility--43605>

RPC Launch of Newly Designed Website for RPC Pipe Systems

<https://www.rpctechnologies.com/the-launch-of-our-newly-designed-website-for-rpc-pipe-systems-03-04-2019/>

Effect of Thermal Gradients on Failure of Thermoplastic Composite Pipe

<https://www.sciencedirect.com/science/article/pii/S0308016118305258?via%3Dihub>

SPE Plastic Pipe Conference Abstracts Now Available

<https://www.eppm.com/industry-news/spe-plastic-pipe-conference-abstracts-now-available/>

<https://www.4spe.org/i4a/pages/index.cfm?pageID=4285>

Uponor's Ecoflex Pre-insulated Pipe System Delivers

<https://www.theade.co.uk/news/market-news/uponor-delivers-piping-for-scunthorpe-social-housing-project>

Uponor Price List March 2019 UK Customers Only (Restricted)

<https://www.uponor.co.uk/-/media/country-specific/uk/download-centre/pricelist/a5-price-guide-2019.pdf>

New PEX-a Pipe Support - Galvanized Steel Channel Provides Continuous Support of PEX in Suspended Piping Applications, Enabling Hanger Spacing Similar to that of Copper or Steel Pipe

<https://modernpumpingtoday.com/next-wave-radiant-new-solutions-radiant-heating-cooling-applications/>

A Smarter Way to Prevent Plumbing Pipe Failure

<https://restechtoday.com/plumbing/>

Agru Publishes Comprehensive List of PE100 Pipe Properties

<http://agruamerica.com/wp-content/uploads/2014/01/PE-100-and-PP-Material-Properties-Sheet.pdf>

### **Warning Over Chinese Electrofusion Fittings Containing Calcium Carbonate Filler/Extender**

HDPE EF fittings are required to be made from virgin PE100 material to fully meet with ASTM/NZS 4129 EN12201-3 standards

Lab testing has found the use of chalk adulterants in imported EF Fittings.

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

Discovering Polybutylene Piping in a Home can be a Difficult Obstacle to Overcome when Buying or Selling a Property

<https://www.gulfshoreinsurance.com/the-polybutylene-piping-solution/>

SILON Leads the Way with Innovative High-Grade PE-Xb Pipes (Video)

<https://www.youtube.com/watch?v=ai0GHQ9ul3k>

Large HDPE Pipe Inner Bead Remover (500 – 900 mm ID)

<https://www.holm-holm.dk/en/finishing/debeaders/internal-debeaders/hdid/>

Tips for a Successful Plastic Pipe Installation (GF Piping Systems)

<https://www.process-heating.com/articles/92959-tips-for-a-successful-plastic-pipe-installation>

How to Make Proper HDPE Electrofusion Joints

<https://www.wwdmag.com/pipe-joint-restraints/how-make-proper-hdpe-electrofusion-joints>

Reece Limited (ASX:REH) Share Price is up 63% in the Last 5 years

<https://simplywall.st/stocks/au/capital-goods/asx-reh/reece-shares/news/the-reece-asxreh-share-price-has-gained-63-and-shareholders-are-hoping-for-more/>

Ocean Cleanup Experts Pinpoint HDPE Pipe Failure Points

A root-cause analysis shows the structural failure was caused by a stress crack at a point where the collection skirt is welded to the floater HDPE pipe

<https://www.plasticsnews.com/article/20190405/NEWS/190407681/ocean-cleanup-experts-pinpoint-failure-points-plan-fixes>

### **ExcelPlas Plastic Pipe Testing Labs – The Largest Poly Pipe Testing Lab in Australia**

Multidisciplinary lab fully equipped to perform routine QC testing to customized product testing, failure analysis, and consulting.

- Independent verification of conformity to specifications and standards.
- Evaluate the performance of polymers, elastomers, and composites.
- Material properties including flexural, tensile, creep, impact resistance, density, melt flow, etc
- Fully equipped laboratory to handle a wide range of testing needs
- In-depth materials science and experimental process
- ID unknown foreign materials, chemical contamination, and fracture analysis
- Materials selection, testing a new formulation, or reformulate a recipe of interest.

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

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### **ExcelPlas - the Australian Pipes & Fittings Testing Laboratory**

- Accredited to ISO 17025 by the National Association of Testing Authorities (NATA) Australia, and is Australia's largest laboratory dedicated for the testing of plastic pipes and fittings to various Standards which include Australian, European and International Standards.

- The staff employed at the laboratory have a combined experience of more than 85 years within the plastics industry specifically with manufacturing, quality control and the research and development of plastic piping systems including HDPE, PEX, PP-R, PVC, U-PVC, M-PVC, O-PVC, ABS, GRP, GRE and PB.
- Services provided include conformance testing, compliance testing, batch release testing, root cause analysis for field failures and non-destructive testing of samples.
- <http://www.excelplas.com/>

### **ExcelPlas Lab Specialising in HDPE Pipe Condition Monitoring, Failure Analysis and Testing**

In the event of a HDPE butt weld or electrofusion weld failing during initial testing, or in service, we can conduct investigations to assist in identifying the root cause of the failure.

This service also extends to the premature failure of the pipe or fitting itself.

<http://www.excelplas.com/plastic-pipes>

### **ExcelPlas Pipe Testing is a Leader in the Field of Polyethylene (PE) and High-Density Polyethylene (HDPE) Testing**

ExcelPlas is accredited with the National Association of Testing Authorities (NATA) for butt weld tests, bend and tensile tests, peel decohesion tests on electro fusion sockets and failure mode determination

<http://www.polypipetesting.com.au/butt-fusion-welds/>

### **New UHMWPE Pipe for Tailing Offers Greater Than 4X the Abrasion Resistance of PE100 (Australia wide)**

<http://slurrypipes.com.au/>

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### **ExcelPlas Poly Pipe Weld Inspection Lists Top 7 Causes of Weld Failure:**

- Lack of scraping
- Inaccurate scraping
- Contamination from dirt, water, oil or clays
- Lack of Parallell-ness of fusion faces
- Misalignment of surfaces
- Time, temperature and pressure deviations
- Not adhering to cool times

We have extensive experience in inspection of poly pipe welds for assuring welded joint quality. Direct Poly Pipe Inspection ensures that operators are following the proven welding procedure; this reduces the occurrences of operational errors which lead to defects such as inclusions, lack of fusion (LoF), porosity and misalignment.

More information, contact [john@excelplas.com](mailto:john@excelplas.com)

**Get Your HDPE Pipe Products or Services Noticed – Advertise in Poly Pipe News (PPN) Australia**

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

**This Newsletter is brought to you by Excelplas Labs, Australia's Largest group of Poly Pipe Testing Labs.**

Pipe Poly News (PPN) is now Australia's most current and comprehensive source of news on Polyethylene pipes and Poly Pipe Welding;

Poly Pipe News is now sent to over 4500 Poly Pipe Industry Members every week.

Any news requests should be sent to [john@excelplas.com](mailto:john@excelplas.com)

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