



Case Study

Chlorblue® the New Standard for Townsville City Council

In June 2018, the Plastics Industry Pipe Association (PIPA) published industry guideline POP018 “Polyethylene Drinking Water Pipes in Contact with Chlorine and Chloramine Disinfectants”.

This document points out that in a very small number of discrete geographical regions in Australia (mostly northern Australia), risk factors such as aggressive water chemistry and/or operational and environmental conditions may potentially reduce the expected service life of polyethylene (PE) pipe conveying disinfected drinking water.

Identifying the need for a PE100 product with enhanced chlorine resistance, Vinidex launched Chlorblue® in early 2019. Vinidex Chlorblue® is manufactured from a higher chlorine resistance classification (CC2) PE100 resin and is easily identified by its twin blue stripes.

Noting that some PE piping systems were failing prematurely and costing significant time and money to repair and maintain, Townsville Water and Waste reviewed their specification and installation practices in the Townsville City Council area. The review identified a number of factors that may adversely affect the service life of smaller diameter PE pipelines in the area.

Based on this review and to align with PIPA POP018, Townsville Water and Waste has updated its pipeline specifications to include Chlorblue®. All Council delivered DN25 to DN63 PE pipeline projects either directly or via a contractor will have Chlorblue® or equivalent product specified as part of the installation moving forward.

Furthermore, a Group Alliance which includes representatives from surrounding North Queensland Councils including Cairns and Mackay has been formed which is working towards a common specification to be adopted in the future. Townsville Water and Waste will be supporting the inclusion of Vinidex Chlorblue® as part of the specification.

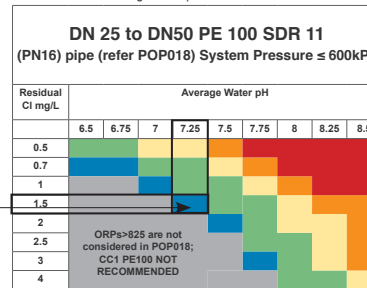
Chlorblue® CC2 PE 100 AS4130 BLUE STRIPE									
OD (mm)	PN	SDR	Colour/ Configuration	Length (m)					
				3	6	25	50	100	150
Vinidex Code									
25	20	9	Twin Blue Stripe	23248	23214	23247	23243		23215
32	20	9		23249	23216	23217	23244		23218
40	16	11			23219		23239		23220
50	16	11			23227		23240		23222
63	16	11			23223		23224	23241	23242

SUITABLE FOR A WIDER RANGE OF APPLICATIONS AND CONDITIONS

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).

CC1 (Assumed existing PE100 materials)

As diameter increases the pipe will be able to be used in a broader range of temperature zones.

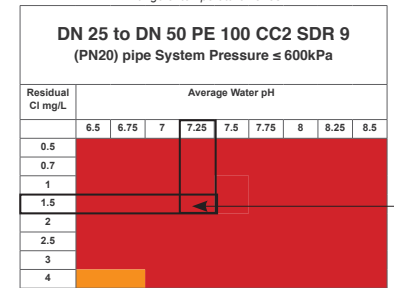


Example: Average Water pH 7.25 & Residual Chlorine 1.5mg/L

CC1 PE100 suitable for water temperatures up to 21°C

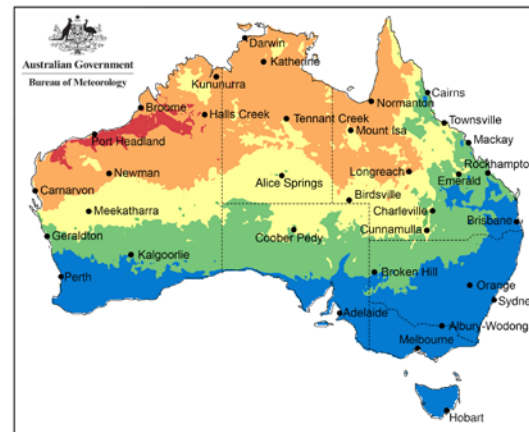


As diameter increases the pipe will be able to be used in a broader range of temperature zones.



CC2 PE100 Chlorblue® suitable for water temperatures up to 33°C

Annual Average Soil Temperature 2010-2015, 0.35-1.0m depth



©Commonwealth of Australia 2018, Australian Bureau of Meteorology. BARRA Reanalysis Data. Issued: 20/04/2018. Note: This data and map have been provided by the Australian Bureau of Meteorology however Vinidex Pty Limited have overlaid additional locations. Source: PIPA POP018 Polyethylene Drinking Water Pipes in Contact with Chlorine and Chloramine Disinfectants

For the same range of water conditions, Vinidex Chlorblue® can be used in a much larger range of temperature zones without needing to increase pipe size or pressure classification compared to traditional PE100 material.

As a result, Vinidex Chlorblue® is the ideal solution for the large range of water temperature and chlorine levels encountered across Australia.