Renolith Brand History

Context

The Renolith brand has a long and complicated history. There are many myths and misconceptions.

Aim

The aim of this document is to articulate key facts in the Renolith brand history.

Quick Summary

- "Renolith 2.0" is the branding for latest (2023) generation of the genuine Renolith admixture product line.
- The provenance of "Renolith" admixture previously sold in Australia is uncertain. It is understood that product sold:
  - prior to 2000 was genuine,
  - from 2000-2001 may or may not have been genuine, and
  - from 2002-2014 was typically not genuine.
- "Renolith WS" and "Renolith WP" admixtures (sold in Australia from circa 2001 to 2014) were not genuine Renolith.
- "Renolith" and "NanoTerraSoil" (NTS) and "NanoTerraConcrete" (NTC) are/were the same product. NTS & NTC brands are no longer supported.
- There are many polymer products that have attempted to emulate Renolith with partial success, but copying the recipe is insufficient. The nanochemistry is critical. This is a proprietary secret.

Table 1: Renolith brand timeline

Brand name	Renolith	NTS	NTC	NTS-50	Renolith 2.0	Renolith WS	Renolith WP
Provenance	Original formula			Double concentrate		NOT genuine Renolith	
Patent	WO1997023433A2			WO2010018020A1		WO2016141439A1	
Nanotechnology	Proprietary nanotechnology					?	
Technical issues	Nil					Shrinkage cracking	
Epoch	Availability / main markets						
1996-2000	SE Asia, Aus						
2001-2007	SE Asia	Europe, Russia				Australia	
2008-2014		Europe, Russia					
2015-2021							
2022+					Global		

1990s

In the early 1990s, German industrial chemist and nanotech pioneer Mr Gerd Thöne visited Australia for a CSIRO project exploring nanotechnology in fire retardant applications. He later met with Australian entrepreneurs James (Jim) Black (solicitor) and Mike Alexander (roadworks practitioner), who saw potential for adapting Gerd's nanotechnology to roadworks. The idea was for a road construction system, with the objectives that the roads be long-lasting, simple and quick to build and at half the cost. The potential was immense, but the technology did not yet exist. After years of research and development, Gerd and the Nano GmbH team

were successful. Renolith™ was invented and originally patented in 1995 (Patent WO1997023433A2).

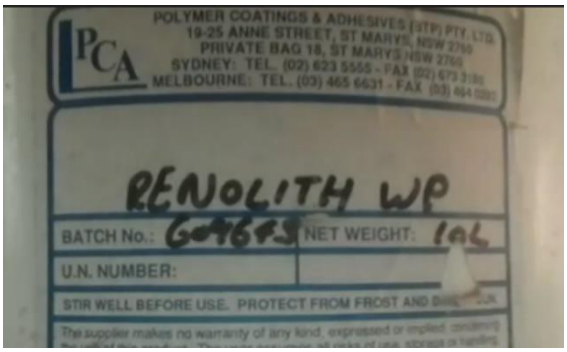
In 1996, a marketing and distribution agreement for the Renolith product was executed between its inventor - Mr Gerd Thöne and Jim Black & Mike Alexander's company - Renolith International Pty Ltd (originally Jimik Pty Ltd). Renolith International Pty Ltd commenced manufacture and sale of Renolith in Australia and achieved some early successes, most notably with the Sydney Olympic Games.

2000-2022: Australia

In the late 1990s, a complicated dispute arose relating to marketing and distribution rights and (non)payment of royalties. ICC International Court of Arbitration Case No. 10884/DK was decided in two Awards, dated 07 Sep 21 and 21 Jan 02. Renolith International Pty Ltd essentially won the case and continued to manufacture and sell products under the Renolith brand name in Australia. A new company, Renolith Technology Corporation Limited (Renolitech), was established in Thailand to manufacture and sell Renolith in other regions.

Although Renolith International Pty Ltd won case 10884/DK and was able to continue using the Renolith brand name, it was a pyrrhic victory. A critical ingredient in the manufacture of genuine Renolith is a special aqueous formulation of silicon dioxide nanoparticles and nanocellulose. The recipe for this nanotechnology is a proprietary secret of Nano GmbH. Nano GmbH ceased supply of this critical nanotechnology to Renolith International Pty Ltd.

No longer able to manufacture genuine Renolith, Renolith International Pty Ltd sold a substitute product (MSDS Chemwatch 5131-53) under the Renolith brand and new products "Renolith WS" (MSDS Chemwatch 5131-54) and "Renolith WP" (MSDS Chemwatch 6606-07). These products (Patent WO2016141439A1) had a completely different formula to genuine Renolith. They lacked the critical nanotechnology. They were not endorsed by Nano GmbH. Not surprisingly, they didn't perform nearly as well as the genuine product. Shrinkage cracking was a common problem.



Fake Renolith (Renolith WP) label

Jim Black died in 2012. An application for winding up of Renolith International Pty Ltd was sought by Chep Australia in 2013. In 2014, the assets were acquired by Laing O'Rourke. "Renolith WS" was rebranded as "Stabilor C". "Renolith WP" was rebranded as "Stabilor P". Stabilor Pty Ltd (a subsidiary of Laing O'Rourke) promoted Stabilor C & Stabilor P products via Stabilor.com. In early 2022 the Stabilor brand was acquired by Hiwaygroup.com.au. Hiwaygroup subsequently rebranded the Stabilor products as MasterFlex C and MasterFlex P.

Mike Alexander now (2024) promotes the Polypave product – a waterproofing agent for soil-cement. Polypave appears to be yet another fake-Renolith derivative (SDS Manufacturers code: REN-6a). Noting the branding as Polypave C, the product is possibly similar/equivalent to Renolith WS / Stabilor C / MasterFlex C.

2000-2022: Rest of World

Renolith original formula

Renolitech Thailand continues to manufacture and sell original formula (genuine) product under the Renolith brand in South East Asia.
Original formula Renolith admixture was sold in Europe under the "NanoTerraSoil" (NTS) and "NanoTerraConcrete" (NTC) brands until circa 2015 when the distribution agreement expired. NTS/NTC brands are no longer supported by Nano GmbH.

Renolith 2.0 - double concentrate

2023: Renolith 2.0

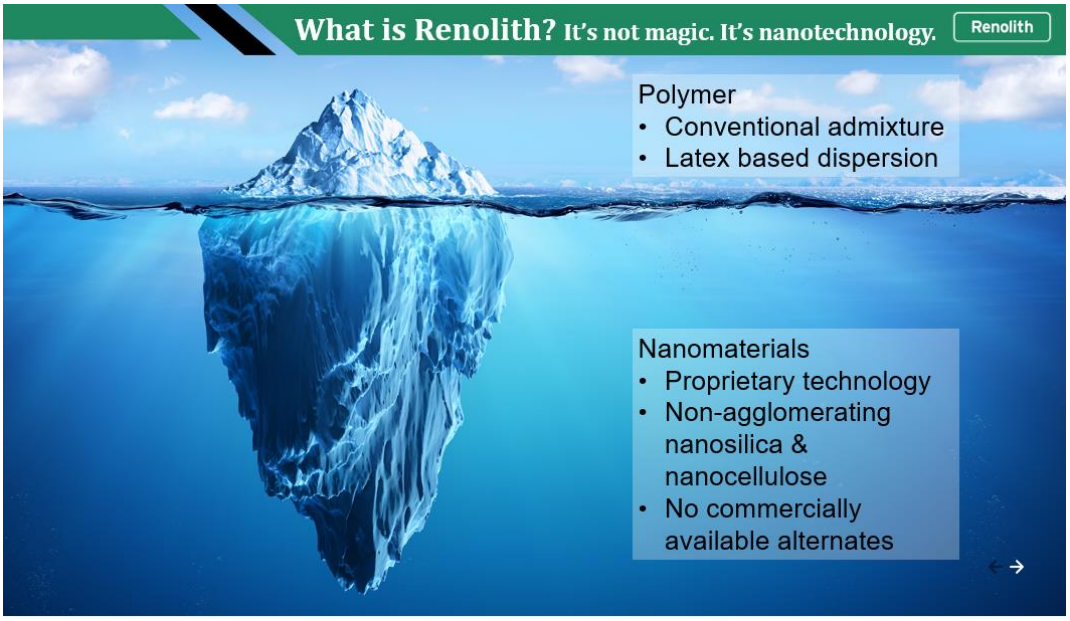
Genuine Renolith admixture was reintroduced to Australia by Grey Vort Pty Ltd (trading as Renolith) in 2023 via Renolith.com.au with release of the new "Renolith 2.0" formula. "Renolith 2.0" is the latest generation Renolith formula (Based upon Patent WO2010018020A1), manufactured under an ISO 9001 compliant Quality Management System with oversight by Nano GmbH. "Renolith 2.0" is a double concentrate of the original genuine Renolith (ie. Only half as much is needed to achieve a similar outcome).

Table 2: Renolith 2.0 organisational structure

Organisation	Key Functions	Location
Nano GmbH	Admixture R&D Oversight manufacture	Germany
Renolith.com.au	Brand HQ Engineering Marketing Sales Logistics/distribution	Australia
RMIT	Applications R&D Materials testing	Australia
Various	Introducer & Distributor network	Various

Polymer vs Nanopolymer

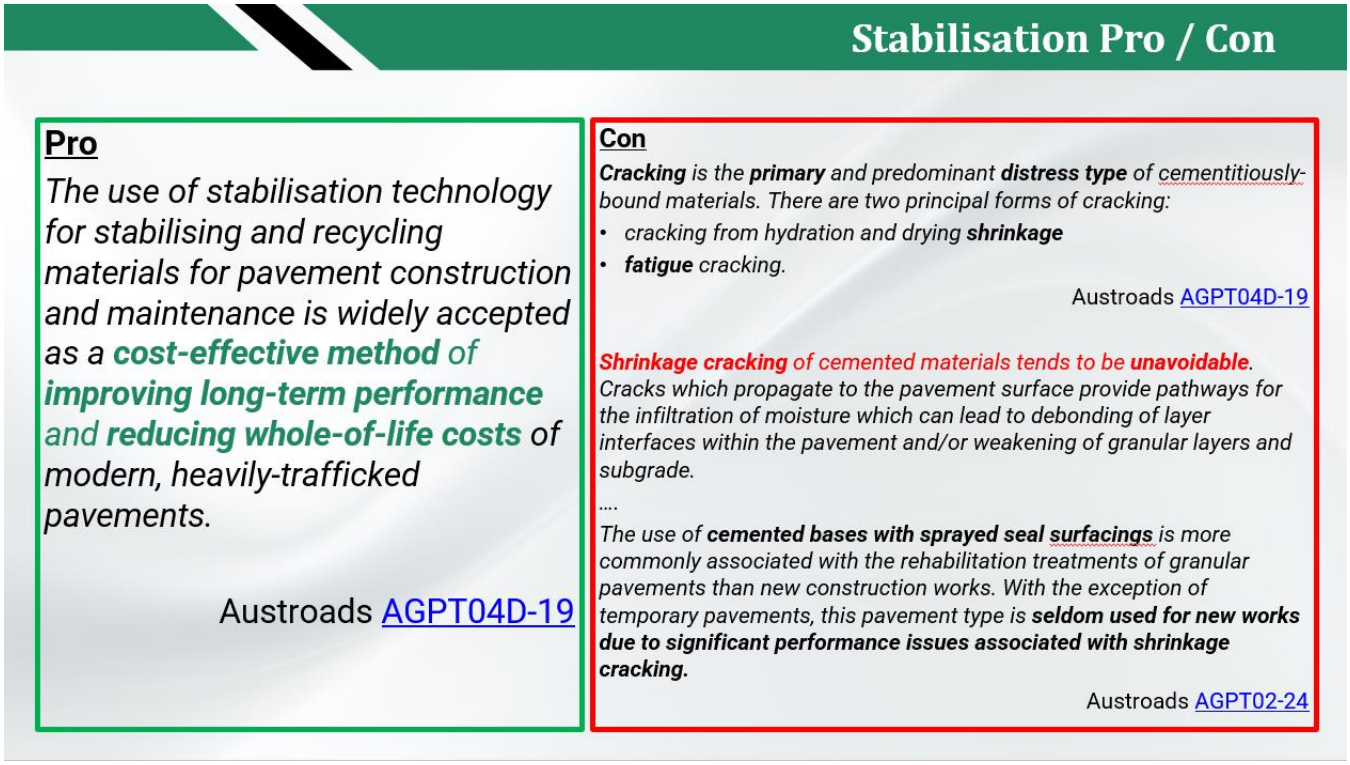
There are many polymer products that have attempted to emulate Renolith, typically achieving partial success such as reduced permeability and mildly improved material properties. However, copying the recipe is insufficient. The nanochemistry is critical. This is a proprietary secret and protected by patent.

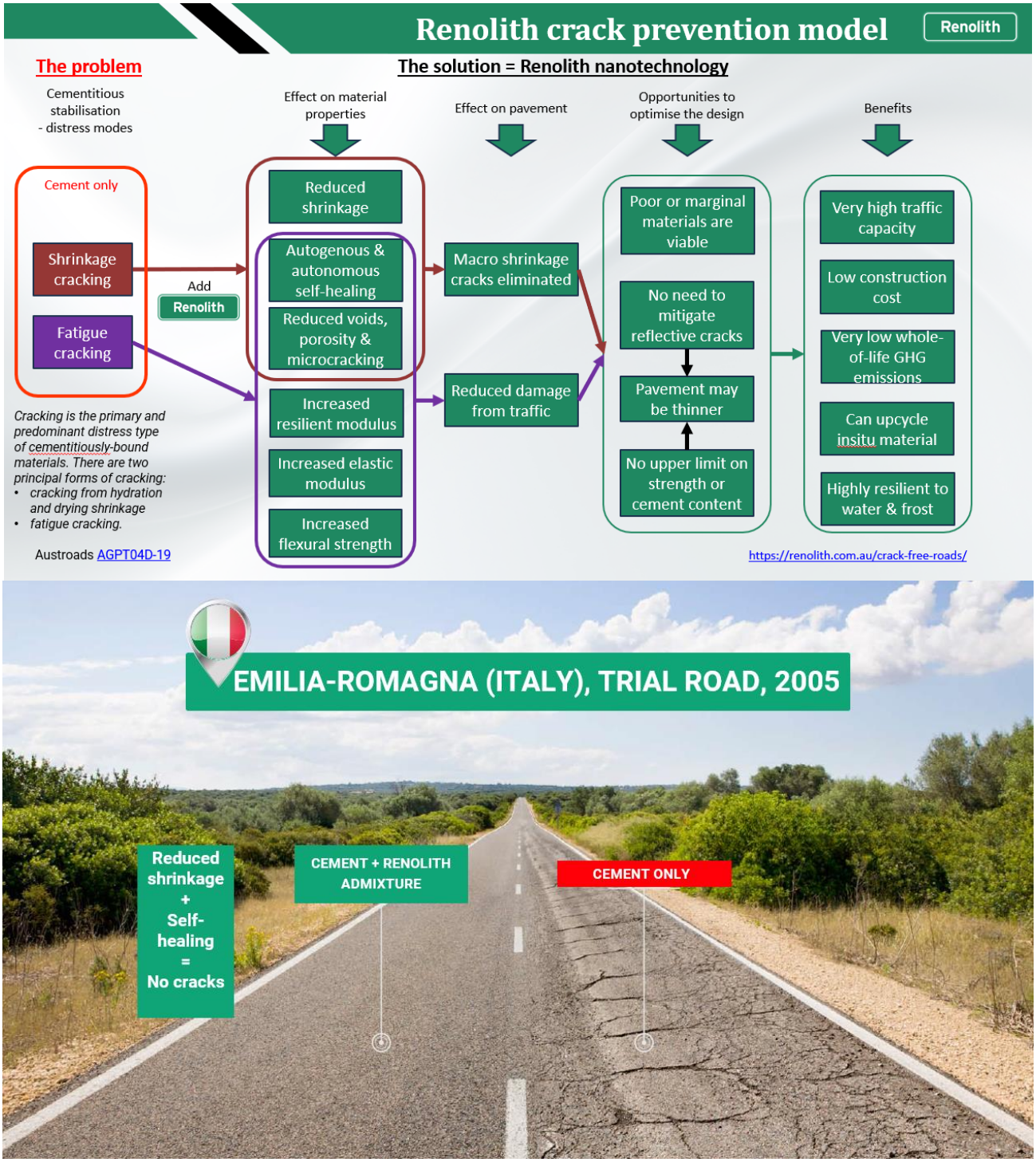


Polymers vs Nanotechnology

Key principles

1. Cementitious stabilisation has advantages but is constrained by cracking.
2. Renolith is highly effective at preventing cracking





Change History

Date	Version	Notes / changes
05 Nov 22	V1.0	Initial release
28 Apr 22	V1.1	Minor updates. Add Table 2
29 Nov 23	V1.2	Add Table 1
24 Apr 24	V1.3	Added chemwatch references. Minor edits.
06 Dec 24	V1.4	Added Polypave and MasterFlex details.
19 Apr 26	V1.5	Added images. Updated Jim Black history.
24Jun26	V1.6	Updated images