

## DESCRIPTION

Alkadyne HCR193B is a black high molecular weight bimodal PE100 High Density Polyethylene offering exceptional slow crack growth resistance. It is a high performance resin for use in pressure pipes where a service life to 100 years is required. Alkadyne HCR193B has high slow crack growth resistance to withstand harsh installation conditions. Alkadyne HCR193B will also provide excellent resistance to the effects of ultra-violet light exposure in outdoor applications due to well dispersed carbon black.

## APPLICATION

Alkadyne HCR193B is suitable for extrusion into a full range of pipes, where High Density, PE100 type resins are required. In particular, enhanced slow crack growth resistance makes Alkadyne HCR193B an excellent choice for pipes intended for trenchless installation. Alkadyne HCR193B is suitable for use in the transport of a wide range of fluids for industrial, rural and mining applications, including potable water. Suitability for use in any application should be determined by appropriate performance testing.

## COMPLIANCE

HCR193B complies to AS/NZS 4131 for PE100 type compounds and to PIPA guideline POP016 for PE100 HSCR type compounds. It is intended to be used in pipes conforming to AS/NZS 4130.

## PRODUCT SAFETY

For product safety information please refer to the Safety Data Sheet at [genos.com](http://genos.com).

| Polymer Properties          | Value <sup>1</sup> | Units             | Test Method      |
|-----------------------------|--------------------|-------------------|------------------|
| Melt Index @ 190°C, 5.0 kg  | 0.2                | g/10 min          | ASTM D1238       |
| Melt Index @ 190°C, 21.6 kg | 6.0                | g/10 min          | ASTM D1238       |
| Density                     | 0.959              | g/cm <sup>3</sup> | ASTM D1505/D2839 |

| Pipe Properties <sup>3</sup>                  | Value <sup>1</sup> | Units   | Test Method |
|-----------------------------------------------|--------------------|---------|-------------|
| Tensile Strength at Break <sup>2</sup>        | 35                 | MPa     | ASTM D638   |
| Tensile Strength at Yield <sup>2</sup>        | 24                 | MPa     | ASTM D638   |
| Elongation at Break <sup>2</sup>              | 750                | %       | ASTM D638   |
| FNCT <sup>3</sup>                             | > 8760             | Hours   | ISO 16770   |
| Notched test on full walled pipe <sup>4</sup> | > 5000             | Hours   | ISO 13479   |
| Oxidative Induction Time (210°C)              | 30                 | Minutes | ISO 11357-6 |

1. Typical values - not to be construed as specifications.
2. At 50mm/min cross head speed, type 4 dumbbell and 1.9 mm thickness
3. Tested at 80°C, 4 N/mm<sup>2</sup>, 2% Arkopal N-100.
4. Tested on 110 SDR 11 pipe at 920 KPa.  
For up to date information, refer to [genos.com](http://genos.com)



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