

## **RESEARCH PAPER** PVC SEISMIC APPLICATIONS

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Iplex PVC pipes with rubber ring joints have a long record of success in delivering resilient performance in New Zealand seismic events, including the M 6.5 Edgecombe earthquake (1987), the Te Anau area (2001), Christchurch (2010 to 2012,) and Kaikoura (2016). The major Canterbury area earthquake sequence of 2010 to 2012 severely tested buried pipes in the region. PVC pressure pipes and fittings systems with rubber ring joints were generally found to perform well and continue as a preferred solution for many earthquake rebuild and new development projects, in the Selwyn and Waimakariri Districts.



Iplex Novakey® DN450 PVC-U pressure sewer rising main, laid near Belfast, Christchurch in 2005, which endured the 2011 Canterbury earthquake sequences undamaged.



Iplex PVC-U DN450 sewer main installed in Te Anau 2001, to replace a earthquake damaged concrete pipeline, and which has endured all earthquakes in the area since, undamaged.



Iplex Apollo® Blue PVC-O DN150 PN16 pressure watermain, installed in Kelburn Parade, Wellington City, in 2011, specifically to improve seismic resilience in the area, which endured the November 2016 Kaikoura / Culverden earthquake sequence, undamaged.



Iplex Apollo® PVC-O DN200 PN12.5 pressure sewer main, installed in Charles St, Kaiapoi, October 2010, which endured the February 2011 Christchurch earthquake sequence, undamaged.