



Compliance tested in Australia • Confidence assured

PAVEMENT MARKING GLASS BEADS

October 2019
Roll-out



Product support and packaging

Maximising efficiency and budgets

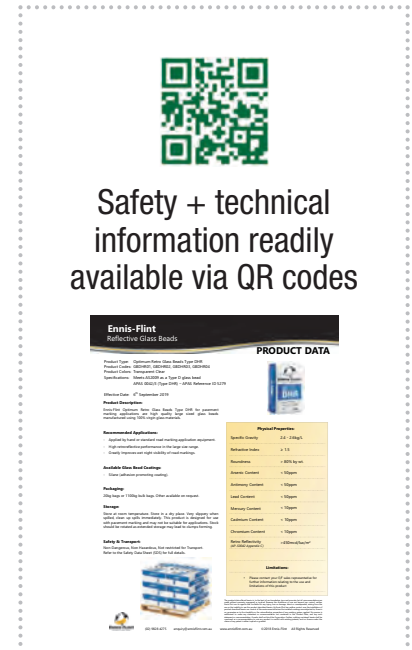
Now our standard of presentation is as good as our products. And customers get greater choice, better economies, and reliable technical/safety information.



Recyclable + reusable packaging



Bulk packaging



Bag packaging

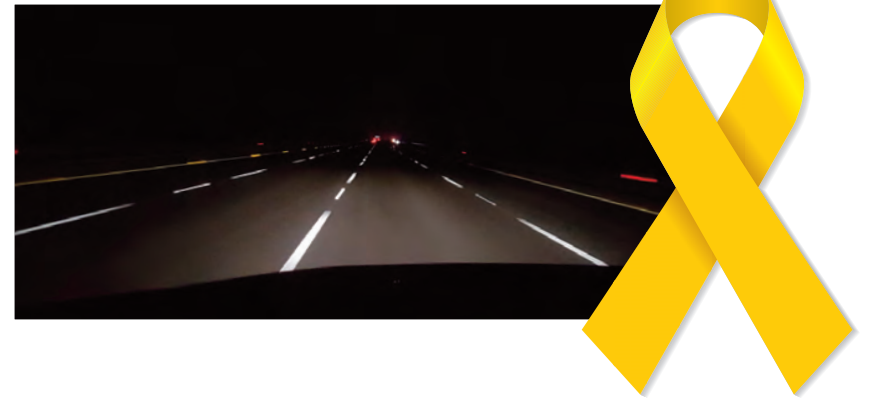


Multi-sourced, local compliance

There are no compromises in road safety

Globalisation means materials originate from many countries but our adherence to Australian standards assures you that Ennis-Flint's beads meet specific quality and reflectivity requirements.

By mandating testing in our NATA-certified laboratory, customers have peace-of-mind in knowing that Ennis-Flint products will match what down-stream suppliers have claimed.



Ensuring only quality beads are used to enhance our road safety is at the core of Ennis-Flint's Values. Our priority is that you and your loved ones are guided home safely—night or day, rain or shine.

Ennis-Flint will not compromise our testing and commitment to road safety

Glass beads on Australian roads must comply with AS/NZ2009:2006 and AP-S0042

Previously: industry had confidence that beads were tested locally in a laboratory accredited to ISO/IEC 17025 (NATA)

APAS relaxes need for bead testing laboratories to be NATA accredited

APAS then reinstates ISO/IEC 17025 (NATA) testing requirements but offers grace-period until June 2020

Ennis-Flint identifies non-compliant beads through local testing

Ennis-Flint commits to adhere to previous testing standards

Ennis-Flint local testing continues to detect non-compliant beads

Adherence instills confidence

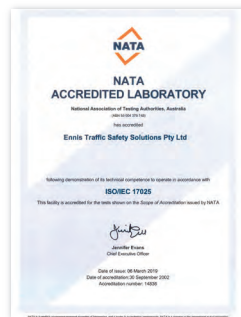
Ensuring only compliant beads are used on our roads

Ongoing testing and investigations by Ennis-Flint in Australia has identified **non-conformances in product quality**.

Customers should substantiate the validity of labelling and product testing by **sighting compliance certificates** provided by a laboratory accredited to ISO/IEC 17025.

And all packaging must confirm the level of testing and a product's compliance.

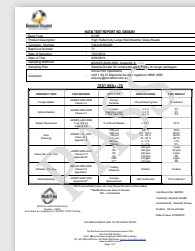
As Ennis-Flint we conduct business based upon honesty and integrity, **while upholding the right to a fair return for goods supplied**.



Ennis-Flint packaging clearly attests to compliance with the requirements of AS/NZS2009:2006, AP-S0042



Our qualified chemists **test all beads** to confirm compliance with Australian Standard



Ennis-Flint glass-beads are tested and verified in our NATA-accredited laboratory



Ennis-Flint testing facilities are subject to **regular external NATA inspection**

Exhaustive, accredited testing

Only when we pass them can you use them

Local NATA testing ensures your Ennis-Flint beads meet AS/NZS 2009:2006 and AP-S0042 requirements for enhancing safety on our roads.

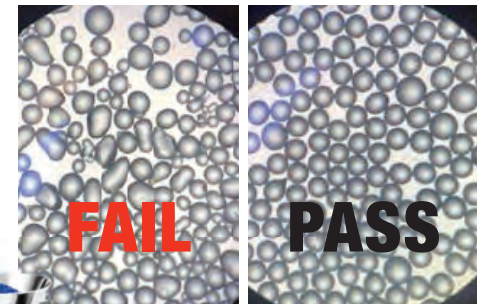
All campaign runs of High Retroreflectivity (HR) beads received by Ennis-Flint are tested prior to sale. Customers are invited to request a NATA-endorsed report for their HR Glass bead orders.

As well as our extensive local testing capabilities, Ennis-Flint APAC is backed by the Ennis-Flint Global Science and Technology Centre — 50+ chemists, engineers and specialist bead scientists.

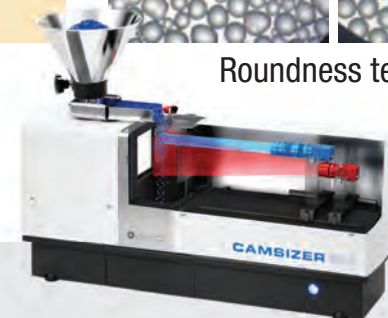
Together we provide the APAC market with highest quality products and world-leading technologies.

Minimum Compliance Testing Conducted on High Retroreflective Beads (HR)		
Property test		Test method
Foreign matter	✓	AS/NZS 2009:2006 Clause 5.2
Optical defects	✓	AS/NZS 2009:2006 Clause 5.3
Shape/roundness	✓	AS/NZS 2009:2006 Clause 5.5.3 Appendix D
Size distribution	✓	AS/NZS 2009:2006 Clause 5.4 Appendix C
Heavy metal content	✓	AS/NZS 2009:2006 Clause 5.11 Appendix N*
Adhesion coating	✓	AS/NZS 2009:2006 Clause 5.9 Appendix L
Retroreflectivity	✓	AS/NZS 2009:2006 Appendix M

Retroreflectivity testing ▼



Roundness testing ▲



Combining global manufacturing and local expertise

*Accredited laboratories are permitted to include the results of tests not covered by their scope of accreditation on a NATA-endorsed test report, provided such results are appropriately identified as not being covered by the endorsement.