BORAL™

# ENVISIA®

## TECHNICAL DATA

**Lower Carbon**
**High Early Strength**
**Lower Shrinkage**
**Superior Durability**
**Architectural Presence**

Punchbowl Mosque, Sydney

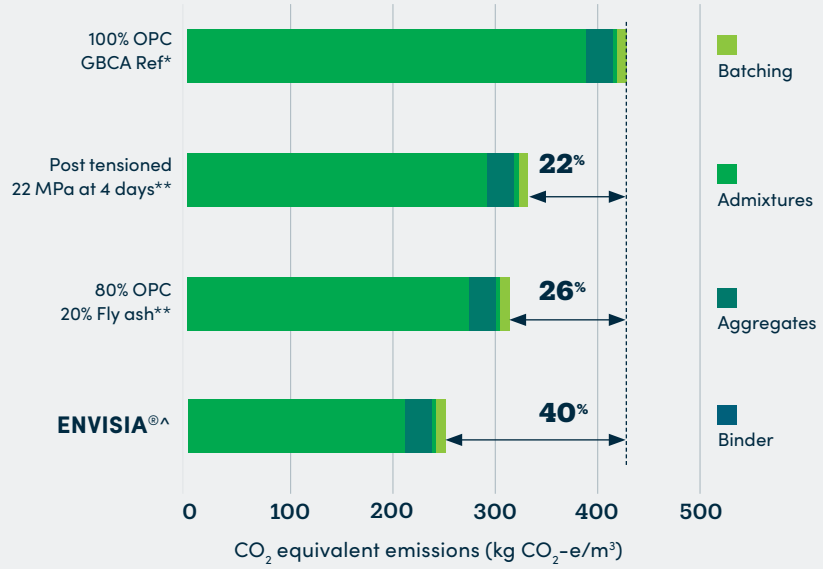
www.boral.com.au

# Why ENVISIA®?

## LOWER CARBON

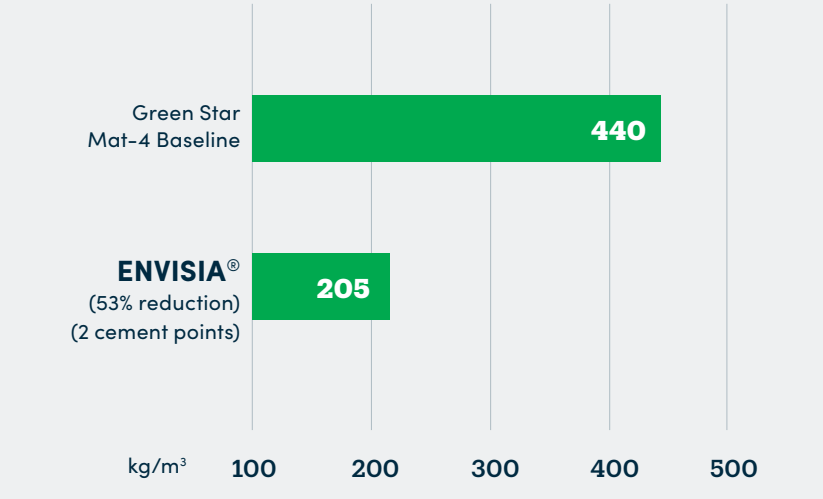
- **ENVISIA®** is ideal for Green Star projects due to its reduced portland cement content. Yet it can still be used for post-tensioned slabs or when early stripping is required.
- **ENVISIA®** is an AS 1379 compliant concrete that offers significant reductions in embodied carbon whilst maintaining high early-age strength.
- **ENVISIA®** can be placed, pumped and finished like conventional concrete.

### EMBODIED CARBON CONTENT (kg $CO_2$-e/$m^3$)




* Based on the 40 MPa reference case in the Green Building Council of Australia rating tool
** Conventional 40 MPa concrete mixes
*** ENVISIA 40 MPa concrete

### PORTLAND CEMENT CONTENT




Source: Concrete strength 40 MPa grade AS 1379

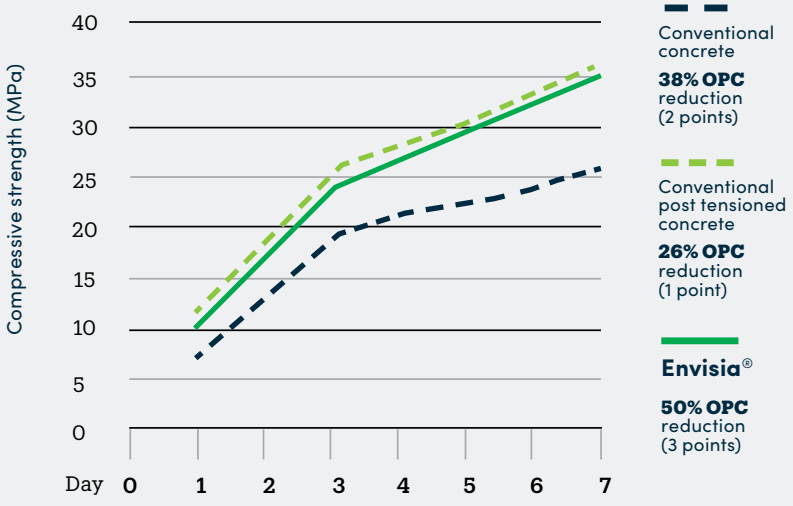


Punchbowl Mosque, Sydney

# STRENGTH PROPERTIES

- **ENVISIA®** will achieve early-age strength equivalent to conventional concrete (post-tensioned and precast) despite 50 per cent cement replacement.
- **ENVISIA®** has 30 per cent greater flexural strength compared to that of the equivalent grade of conventional concrete.
- **ENVISIA®** provides engineering benefits for industrial slabs, roads and car parks. Its abrasion resistance, high flexural strength and lower shrinkage will extend the life of the slab and reduce the potential for unplanned cracking and curling.

## EARLY-AGE STRENGTH CHARACTERISTICS: 40 MPA CONCRETE




Field data (early-age strength will vary depending on the ambient temperature). The number of GBCA points are based on all mixes containing 50% recycled water and 25% manufactured sand.

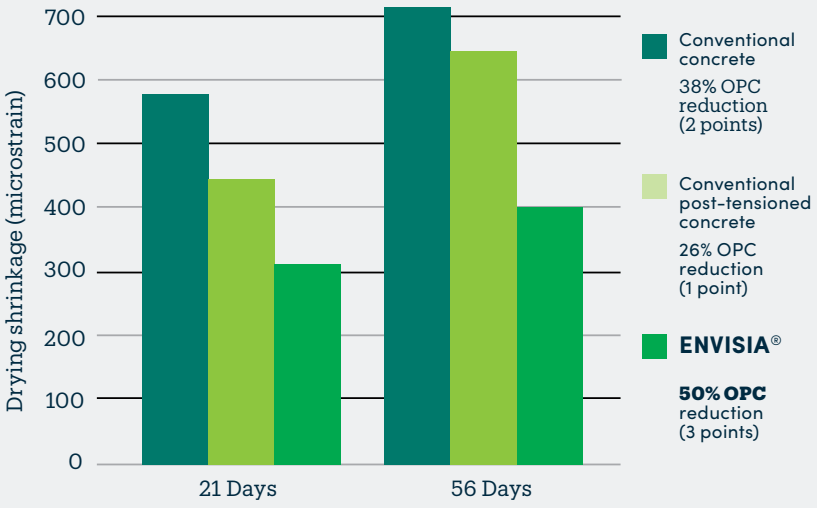
Inveresk University, Tasmania

The Stokehouse, Melbourne

## LOWER SHRINKAGE

- **ENVISIA®** achieves up to 50 per cent reduction in shrinkage when compared to conventional concrete.
- **ENVISIA®** lower shrinkage provides greater engineering and architectural options such as larger slabs and a reduction in control joints.

### SHRINKAGE CHARACTERISTICS: 40 MPA CONCRETE




The number of GBCA points are based on all mixes containing 50% recycled water and 25% manufactured sand.

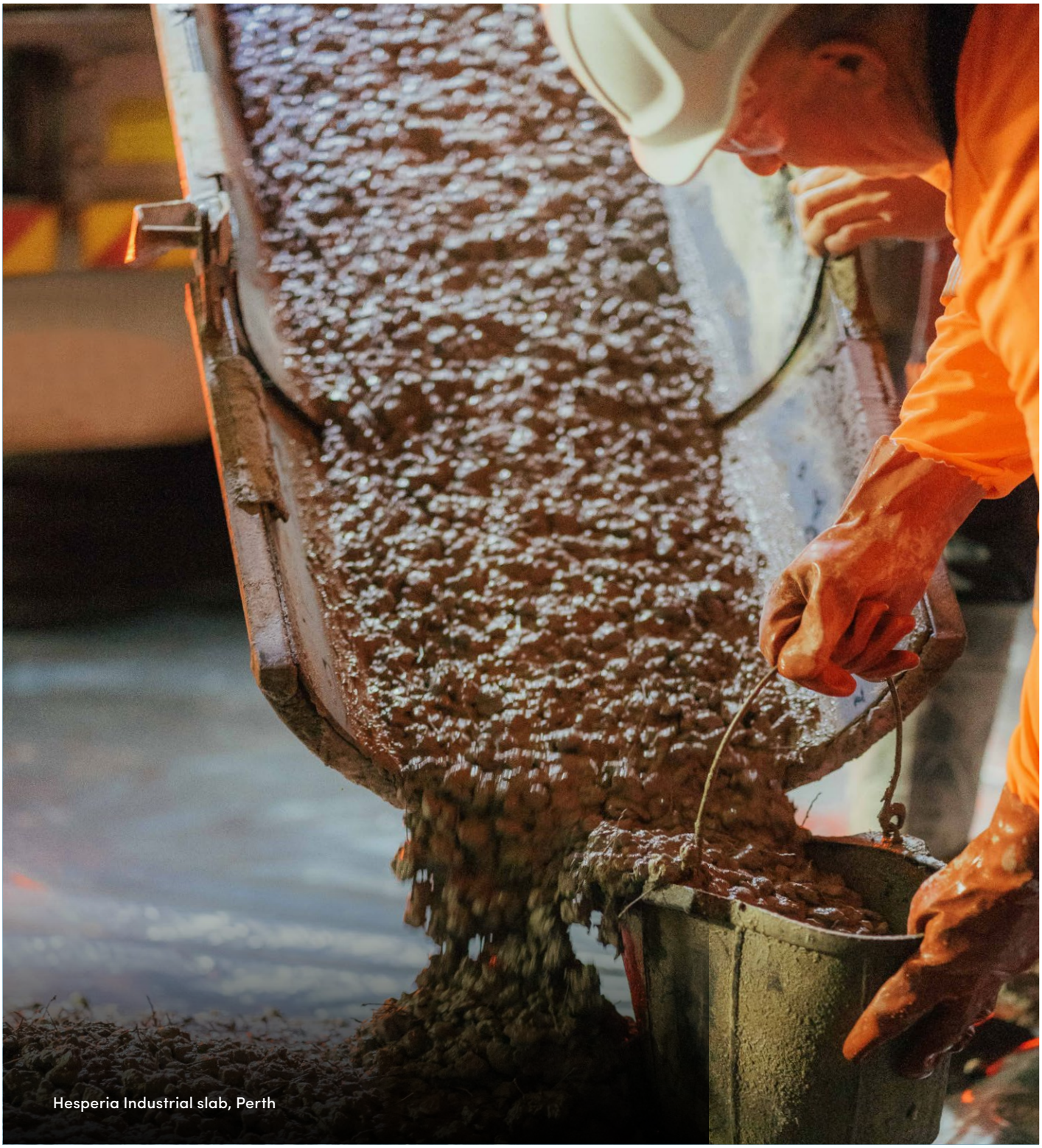
## SUPERIOR DURABILITY

- **ENVISIA**® provides greater protection for reinforcing against steel chloride-induced corrosion.
- **ENVISIA**® ability to resist chloride ingress is superior to conventional marine-grade concrete.
- **ENVISIA**® has improved sulphate and acid resistance properties.
- **ENVISIA**® mitigates the potential expansion due to alkali aggregate reactivity.

## ARCHITECTURAL PRESENCE

- **ENVISIA**® can achieve a range of architectural benefits because of its off-form finish and lighter colour.
- **ENVISIA**® lighter colour will enhance the use of colour oxides.


Boral now has an ISO 14025 and EN 15804 compliant EPD for Boral's ready-mix (Sydney NSW), conventional concrete which also features the low carbon ENVISIA® concrete. This is registered under the Australasian EPD Programme.



Hesperia Industrial slab, Perth

To view our technical papers and find out more visit:

## www.boral.com.au/envisia

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