

# ALEX FRASER RECYCLED SAND



Good quality sand is becoming harder to source. Alex Fraser recycled sand is manufactured from inert recycled glass material recovered from the glass recycling process. This is processed by Alex Fraser into a consistent material that can be used in a range of applications, as a competitive replacement for traditional quarried sand.

## Applications

This material has been used for several years as a direct replacement for sand. It is used in asphalt to VicRoads specifications Section 407 and more recently into road base, pipe bedding and Granular A2 Filter material applications.

1

### Environmental benefits

Hundreds of thousands of tonnes of suitable glass have been sorted and diverted from landfill in preparation for use in civil construction applications. Beneficial re-use of this material reduces landfill and preserves our existing sand deposits. The Environment Protection Authority (EPA) supports the reuse of industrial wastes in appropriate engineering applications such as the controlled conversion of glass into recycled sand for civil construction.

2

### Product quality assurance

Rigorous testing on this material by various parties has shown the product to be very durable, free of toxic contaminants and to have the physical performance ready for road and pipeline construction. Geotechnical and long standing field trials have also been conducted over several years which prove its free-flowing nature helps minimise voids below the spring line area down to the bedding. The very high degradation and 0% weight loss also suggests that its long term performance ability will generally out perform other available sand products. As with all Alex Fraser products, testing is performed in NATA accredited laboratories.

3

### Material properties

The raw material for recycled sand is sourced from the glass recycling process and includes pieces too small to be recycled into glass. It includes non-contaminated sources such as industrial glass offcuts and food and beverage containers. When processed, it is a very consistent product and looks and behaves similar to a course sand. It is supplied to common industry gradings. We invite you to read more detailed information overleaf.

4

### Health & safety benefits

The recycled sand is safe to handle with normal worksite practices, the fully developed Safe Operating Guide also recommends the material be handled in a similar way to general sand products, and requires no additional OH&S requirements. A Material Safety Data Sheet has also been developed with a reportable silica content of less than 1%, making it a much safer product to handle than other general sands that are known to contain up to or greater than 98% silica.



**For sales and advice call 136 135**



Application	Bedding and backfilling material
Maximum Dry Density (approx)	1.73-1.75 t/m3
Optimum Moisture Content (approx)	10-11%
Colour	Brown, Green, Grey
Ph	7.5-9
Plasticity index	Non plastic
Californian Bearing Ratio @ 5mm % *	50-75
Swell	Nil
Degradation Factor *	94
Sand equivalent	75-80
Sodium Sulphate Soundness Individual Loss %	0.1
Shear Box Friction Angle Degree @300mm	37-41
Choride as Cl % *	<0.1
Sulphate as SO4 & + % *	0.016
Sulphides presence	Nil
Silica content	<1%

\*Approximate number

Grading Limits	
Sieve size as (mm)	Alex Fraser grading (approx)
4.75	100
3.35	95
2.36	84
1.18	57
0.600	35
0.425	27
0.3000	20
0.150	10
0.075	5



## Organic matter and water run-off

The recycled sand material contains small quantities of bio-degradable organics. In some circumstances this organic matter may temporarily discolour run-off water, particularly in low flow or stagnant water.

Stagnant water generally has an increased biochemical oxygen demand (BOD) and this is potentially temporarily increased due to the organic matter washed from the recycled sand.

Continuous high levels of BOD can be of concern to natural waterways as

the amount of oxygen dissolved is reduced. BOD does not pose a direct risk to human health because it has no hazardous ingredient.

Run-off may be light brown or brown. While discolouration and occasionally odour is common, there is a negligible effect on the amount of oxygen available in the atmosphere and water. Questions in relation to water run-off from the recycled sand material have been thoroughly investigated and the results confirm leachate had no adverse effects on BOD levels of waterways.

As with raw materials of any type used in civil construction stockpile management practices apply and controls should be maintained to ensure run-off does not impact on local land or waterways.



## Recycling Facilities

**LAVERTON:** 9-19 Alex Fraser Drive, Laverton North Vic 3026 (Melways 39 D12)

**CLARINDA:** 275-315 Kingston Rd, Clarinda Vic (Melways 78 K11)

**EPPING:** 445-475 Copper Street, Epping Vic 3076 (Melways 88 D1)

**Fax:** (03) 9371 8150

**Website:** [www.alexfraser.com.au](http://www.alexfraser.com.au)

**Email:** [sales@alexfraser.com.au](mailto:sales@alexfraser.com.au)



# For sales and advice call 136 135