

Fine Grade Ash is a pozzolan that is collected from coal fired power stations and is further processed by Sunstate Cement for it to comply to Grade 1 Fly Ash in AS3582.1. It is a fine powder that resembles cement, it tends to be inert and has no cementitious properties until in the presences of water and calcium hydroxide, (from lime or cement), a chemical reaction occurs resulting in insoluble compounds forming that possess cementitious properties.

## USES

Fine Grade Ash is generally used in conjunction with other cement products, which assists to produce higher quality product with better economical results. Applications for Fine Grade Ash are;

- Pre-mixed Concrete industry
- Road stabilisation
- Roller constructed concrete dams
- and can be used in asphalt

## Characteristics

Fine Grade Ash when used in conjunction with GP cement can have the following properties, depending on its proportion to GP cement;

- Slower early age strength development, with potential to develop higher long-term compressive strength.
- Slightly extended setting times.
- Improved pumpability & workability.
- Reduce concrete permeability.
- Can significantly reduce the temperature rise.
- Enhances resistance to chemical attack.
- And improved chloride resistance.

Table 1. Typical test results of Fine Grade Ash

Property	AS3582.1 (Requirements)	Typical Fine Grade Ash
Fineness (% passing 45µm)	Min 75%	82%
Moisture Content	Max. 1.0%	0.3%
Loss on ignition	Max. 4.0%	1.3%
SO <sub>2</sub> Content	Max. 3.0%	0.1%

## Compatibility

Fine Grade Ash produced by Sunstate Cement is compatible with the following:

- Supplementary cementitious materials that comply with AS3582.1
- Other cements complying with AS3972 – General purpose and blended cements.
- Admixtures that are used and comply with AS1478 – Chemical Admixtures for Concrete.

## Packaging and Transport

Fine Grade Ash is available to be purchased from Sunstate Cement in bulk delivered in pneumatic tankers, 1tonne bulker bags, or 20kg bags.

## Storage / Shelf Life

The “shelf life” of Fine Grade Ash is dependant on the storage conditions, as the product may deteriorate with prolong exposure to moisture and air.

## Precautions

Suitable handling and work instructions should be developed for use of this product, which takes into account safety information that is available on the Safety Data Sheet for Fine Grade Ash. The Safety Data Sheet is available from Sunstate Cement’s website at [www.sunstatecement.com.au](http://www.sunstatecement.com.au) or by contacting Sunstate Cement Ltd. on Tel 07 3895 9890.

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