

**SOFT ROCK MINING / HARD ROCK MINING**

**SPRAYPLAST**

**HIGH YIELD, HIGH BUILD SPRAYED CEMENT**

**DESCRIPTION**

Sprayplast is supplied as a pre-packaged, coarse dry power. Manufactured from natural Gypsum (calcium sulphate dihydrate,  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ) Sprayplast is screened and calcined to produce a material composed principally of calcium sulphate hemihydrate  $\text{CaSO}_4 \cdot 1/2\text{H}_2\text{O}$ . It can be sprayed with the addition of water using the dry shotcrete process. The final product strength increases with a decrease in water content.



**APPLICATION AND USES**

Sprayplast is a rapid hardening, single component product used primarily for the construction of ventilation stoppings and scab control using the dry application shotcrete process.

**ADVANTAGES**

- High yield and high build material ideal for building stoppings and for scab control of ribs and roof.
- Natural product, Gypsum based, non-flammable and non-toxic.
- Plaster is quickly self-supporting due to a rapid set.
- Can be sprayed onto almost any surface with minimal rebound.
- High early strength development.
- Minimal airborne dust when spraying.
- 75 mm thickness will give up to 1 hour fire rating to AS 1530.4-1997
- Designed and live tested explosion rated 2 and 5 psi stoppings.

**TECHNICAL DATA**

Typical properties are as follows:

**Strength Properties**

Strength	:7 MPa within 1 hour
Dry Strength	:18 MPa at W:P of 0.50
Tensile strength	:2.8 MPa

**APPLICATION METHOD**

**Mixing**

The typical water: powder ratio for Sprayplast ranges from 0.4 to 0.6 by mass.

**Placing**

- Apply Sprayplast using a dry application shotcrete machine such as a Reed or Piccola
- The dry product can be conveyed over long distances by pneumatic conveyance through shotcrete hoses. Distance conveyed depends on the volume and pressure of available compressed air, hose diameter and length. (Refer to dry shotcrete machine specifications.)

- Empty Sprayplast directly into the hopper of the application machine.
- Initial set time is 4 minutes with final setting taking place at 6 minutes. This enables a high build in a one pass spray application.

**Cleaning**

Flush out the spray nozzle with air and water, making sure that any build-up is removed from within the nozzle.

**SAFETY INSTRUCTIONS AND LIMITATIONS**

Do not use at temperatures below 5°C.

At the recommended consistency, the approximate yield is as follows:

Water: Powder Ratio	Yield
0.45	0.75m <sup>3</sup> per tonne

Always make sure that water is flowing through the water mixing ring before conveying dry powder through the shotcrete delivery hose. Continuous flow of dry powder is necessary to ensure the correct water:plaster ratio. Check that all the jets in the water ring are unblocked to ensure efficient mixing and prevent build-up of plaster within the application nozzle. For best results, spray the product in a circular pattern and keep moving the nozzle to build up thin even layers.

In the field, product volumetric yield will depend on the amount of compaction, water:powder ratio, aeration, water quality, rebound and mixing efficiency of powder and water.

**PACKAGING AND TRANSPORTATION**

Sprayplast is supplied in 20kg bags. All bags are packed on stretch wrapped wooden pallets, 56 bags to a pallet

**STORAGE AND SHELF LIFE**

Sprayplast has a shelf life of 12 months.

**STORAGE CONDITIONS**

Material should be stored in original packing under dry warehouse conditions. High temperature and high humidity may reduce the shelf life.

**HEALTH AND SAFETY**

For more information please refer to the Safety Data sheet at [www.minovaglobal.com/apac](http://www.minovaglobal.com/apac).

**TECHNICAL SUPPORT**

We provide technical advisory service by a team of specialists in the field. The service includes on site assistance and advice on evaluation trials and laboratory work.

**MANUFACTURER**

**Minova Australia Pty Ltd**

An ISO 9001:2015 Quality Management Certificated Company



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Minova Australia offers a comprehensive range of products, all of which have been developed after extensive research and testing on a global scale via our international network of operations. These products include:

- Resin anchor systems
- High yield grouts and foams
- Monolithic chock systems
- High performance cable bolt grouts
- Polyurethane resin systems
- Sprayable coatings for ventilation control
- Water stop grouts
- Ventilation formwork systems including: Meshblock and Tecmesh
- Grout mixers and batchers both air and hydraulically operated
- Contract Installations
- Flexible membranes for strata support and waterproofing applications

## **CUSTOMER SERVICE**

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