

Eco Dust Range

Chryso®Dust Primer

High range dust suppressant - surface primer that is a co-product of cellulose production that aids as a binding additive.

Chryso®Dust 100

High range dust suppressant - a fine particle size surface poly-adhesive that exhibits excellent dust binding and prolonged water resistance properties.

Chryso®Dust 200

High range dust suppressant - surface sealer that is an emulsified dust lubrication system that aids in suppression of rising dust particles and spores.

Chryso®Dust 200D

A diluted emulsified dust lubrication system that aids in the coalescing, stabilisation and suppression of rising dust particles and spores, preventing them from becoming air-borne.



Coalescing of rising dust,
increasing road visibility and grip



Complete dust suppression,
creating a dust free environment



Stabilisation of dust,
eliminating grading and watering



Low cost application & maintenance,
compared to paving or tar roads



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Added value for the mining industry



Chryso product offer for the mining industry

As a global leader in the formulation, manufacture and distribution of concrete admixtures with over 70 years of experience in the construction chemicals industry, Chryso has a large product offer that is suited to meet all varying operational conditions on mines (different transport systems, pipework, gravity set, tailings).

- Chryso® Accelerator Range (wet & dry)
- Chryso® Air Entraining Agents
- Chryso® Plasticiser Range
- Chryso® Superplasticiser Range
- Chryso® Fibre Range
- Chryso® Retarder Range
- Chryso® Water Repellents
- Chryso® Environmentally Friendly Cleaning Agents
- Chryso® Pigments
- Chryso® Curing Compounds
- Chryso® Release Agents
- Chryso® Eco Dust Range
- Chryso® Vent Block Sealer



The **Chryso** mining business unit specialises in designing concrete to meet specified performance requirements whilst also considering the logistical, safety and environmental needs of the mine.

Chryso has the expertise and experience in the design of shaft lining concrete as well as high flow, highly accelerated concrete that is transported through slick lines and can provide solutions for shotcreting, thin skin liners, tailings grout support and backfill. South African project references include: Impala 16 and 17, Styldrift, Leeukop and Kalagadi.

Shotcreting

Due to advances in concrete admixture technology, the use of sprayed concrete (as both a temporary and permanent support element) has increased dramatically over the past 20 years.

- **Chryso® Admixtures** can be used to control the workability of the concrete, create longer open times, lower the cement/water ratios, improve early and late strength development and reduce rebound.
- The **Chryso® Jet Range** of accelerators ensure early hydration of cement and is developed to suit the size of the shotcrete machine as well as any desired thickness for shotcrete - making the **Chryso® Jet Range** a cost effective option. These accelerators have been used on copper, diamond, platinum and gold mines.
- **Chryso® HPB Powder** is an accelerator for reducing rebound and improving early strengths in drycrete which can also assist bonding in wet conditions.



- **Chryso® Shotcrete Fibres** are low dose, high energy absorption fibres that do not ball or clog in pumps. These polypropylene fibres are specially coated to increase bond strengths to concrete and are safe on site, in comparison to steel fibres. They can also replace mesh reinforcement.
- **Chryso® Superplasticizer** are powerful water reducing agents that allow cement and accelerator reductions. They also give good cohesion and open time for pumping long distances.
- **Chryso® Stabalisers**. Extend open time necessary when transporting over long distances and where delays or stoppages can be expected.
- **Chryso® CE 40 Powder** is a powdered superplasticiser for pre-bagged shotcrete.

With our technical expertise, Chryso is the first supplier to develop the use of tailings shotcrete and concrete to alleviate logistic issues faced by mines, in which the bulk of the material can be pumped over long distances and stored before being sprayed.

Thin Skin Liners (TSLs)

Chryso has introduced a first for the mining industry - two dustless thin skin liners. The single part and liquid polymer are patented products, Chryso is the only company in Africa that is licensed to manufacture and distribute these polymers. The dustless TSLs are a healthier and safer option to use than traditional TSLs.

Grout Plants

Driven by innovation, **Chryso** has specially formulated admixtures that improve the stability of active cementitious grouts. **Chryso® Admixtures** offer stabilisation, anti-washout, low water/cement ratios, reduction of bleed water, longer open times, early and later compressive strengths and highly flowable grouts.



Chryso offers a superplasticiser designed to reduce shrinkage in grout pack support, thus allowing the packs to better support the hanging wall.

Furthermore, **Chryso** has developed a tailings shotcrete grout that can be pumped long distances, stored underground, then pumped into the shotcrete mixer where **Chryso® Shotcrete Fibres** and additional cement are added to dry the mix out before application.

Additionally, **Chryso** uses tailings grout for void fill systems.



Backfill

Chryso has been at the forefront with regard to the introduction of admixtures to backfill. Chryso® Admixtures assist in increasing the density of pumped grout whilst minimising costs by reducing cement content. With Chryso® Admixtures, one can alter the flow characteristics of cementitious backfill and grouts and achieve quicker pumping times while using less energy as well as faster and better settlement rates and compaction of the final backfill. With a wide range of products, Chryso® Admixtures can meet different criteria of backfill materials (types of cement, placement and settlement criteria and available plant and pipework)

Project references include mine pillar extraction in Orange Free State - Black Mountain Mine, Harmony Gold Target Mine, Great Nolingwa and Goldfields South Deep Mine.



Ventilation Sealer

Chryso® Vent Block Sealer is an underground ventilation sealer for hollow block walls. **Chryso® Vent Block Sealer** acts as a styrene acrylic copolymer sealant for ventilation walls and air crossings.

Shaft Sinking

Chryso has assisted many shaft sinking jobs over the years, the most notable being Impala 16, Impala 17, Leeukop, Styldrift, Kalagadi and Ivonhoe platreef mines.

