



Material safety data sheet

CHRYSO® VRM 159

High performance vertical roller
mill grinding aid

1. Identification of substance/preparation and company

Substance/preparation

Trade name: **CHRYSO® VRM 159**

Use: Water reducing agent for concrete

Company

CHRYSO Southern Africa (Pty) LTD

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Website: www.chryso.com | Sharecall facility: 0861 CHRYSO

2. Composition/information on ingredients

Chemical nature: aqueous solution containing amino derivatives

This product is not classified as hazardous but contains hazardous components:

Substance name	Concentration	CAS /EC No/ Index No	Symbol	R-phrase
1,1',1'' -nitrilotripropan-2-ol	< 20%	122-20-3/204-528- 4/603-097-00-3	Xi	36-52/53



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3. Identification of hazards

CHRYSO® VRM 159 is not classed as hazardous to health by directive 88/379/EEC and is not flammable.

Inhalation

CHRYSO® VRM 159 is not expected to present a significant hazard under the anticipated conditions for normal use; however inhalation of CHRYSO® VRM 159 vapour may cause respiratory irritation.

Ingestion

CHRYSO® VRM 159 must not come into contact with food or be consumed because swallowing the product represents a health hazard and may create symptoms like abdominal pain and nausea.

Eyes

CHRYSO® VRM 159 will act as an irritant when it comes into contact with one's eyes and may cause redness, pain and blurred vision.

Skin

Repeated or prolonged contact with the skin will cause irritation.

3. First Aid

As a general rule, always call a doctor in case of doubt or if symptoms persist. Never induce swallowing in an unconscious person.

Inhalation

In the event of exposure by inhalation, move the patient into fresh air and keep him/her warm and still. If coughing persists, call a doctor. If breathing is irregular or has stopped, give mouth-to-mouth resuscitation and call a doctor. Do not give the patient anything orally.





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Ingestion

With ingestion, wash out mouth thoroughly with fresh water, but do not induce vomiting. Seek medical advice and show this material safety data sheet to a medical officer.

Eyes

If **CHRYSO® VRM 159** is splashed in or has any contact with a person's eyes hold the eyelids open and wash thoroughly with water. Regardless of the initial state, refer the patient to an ophthalmologist and supply this material safety data sheet.

Skin

Should **CHRYSO® VRM 159** have any contact with the skin, wash the affected area with soap and water. Remove contaminated clothing. Obtain medical attention if irritation persists.

5. Fire fighting measures

This is not relevant as **CHRYSO® VRM 159** is not flammable. However, toxic gas may be emitted on thermal decomposition and fire fighting personnel should be equipped with autonomous insulating breathing apparatus. Foam and carbon dioxide should be used as extinguishing media. Water is an unsuitable extinguishing media.

6. Measures to be taken in the event of accidental spillage

Safety precautions

Consult safety measures under section 7 and section 8 of this data sheet (handling and storage, exposure control/personal safety). Equip the cleanup crew with proper protection.

Environmental safety precautions

Prevent any material from entering drains or waterways. Use drums to dispose of waste that is recovered in accordance with section 13 of this data sheet (disposal considerations). If **CHRYSO® VRM 159** contaminates waterways, rivers or drains, alert the relevant authorities in accordance with statutory procedures.



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Cleaning methods

Contain and control the leaks or spills with non-combustible absorbent materials such as absorbent brooms, sand, earth, vermiculite, and diatom earth in drums for waste disposal. Clean up spills as soon as possible and use disposable containers. Clean preferably with a detergent, do not use solvents.

7. Handling and storage

The regulations that apply to the storage premises of **CHRYSO® VRM 159** must apply to workshops where the product is handled.

CHRYSO® VRM 159 must be handled in accordance with good industrial hygiene and safety procedures. Observe precautions stated on the label as well as industrial safety regulations.

Keep the product away from a person's or an animal's food or drink. All smoking, eating and drinking must be prohibited on premises where the preparation is used. Wash hands and other exposed areas with mild soap before one eats, drinks or smokes and before leaving work. Avoid any contact with the eyes.

CHRYSO® VRM 159 must be stored in tightly closed packaging in a cool, dry, well ventilated area. Prevent access of any unauthorised personnel onto the premises.



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8. Exposure control/personal safety



Respiratory protection

No respiratory protection equipment is recommended under normal conditions of use. Provide adequate ventilation in order to minimise vapour concentrations.

Skin protection

Personnel must wear regularly laundered overalls and physical protective equipment including gloves. The gloves should be resistant to chemical penetration. Protective creams may be used for exposed skin, but they should not be applied after contact with the product.

Eye protection

Avoid contact with eyes and use safety goggles. Supply eye washes in workshops where **CHRYSO® VRM 159** is constantly handled.

For further information, see section 11 of this safety data sheet (toxicological information).





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9. Physical and chemical properties

Physical and chemical properties

- Physical state (25°C): liquid
- Colour: brown
- Specific gravity (25°C): 1.055 (±0.015)
- pH (25°C): 8.2 (±1.5)
- Chloride content: ≤ 1.0%
- Alkali content: ≤ 2.0%
- Solubility in water: miscible

10. Stability and reactivity

This material is stable at the handling and storage conditions recommended in section 7 (handling and storage) of this data sheet.

11. Toxicological information

Rat oral LD50: 1,1',1''-nitriлотрипропане-2-ол: 4000 mg/kg

Rabbit dermal LD50: 1,1',1''-nitriлотрипропане-2-ол: 10000 mg/kg





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12. Ecological information

LC50-96 hour – fish: 1,1',1"-nitriлотripropane-2-ol: > 100 mg/l

48 H-CE50-Daphnia magna: > 100 mg/l

13. Disposal considerations

Do not pour into drains or waterways. Dispose this product and its container at a hazardous or special waste collection point in a safe manner and in accordance with national/municipal regulations; avoid its release into the environment.

14. Transport information

Not classified



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15. Regulatory information

R Phrases:

R36 – Irritating to eyes

R52/53 – Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment

16. Other information

The contents and format of this material safety data sheet are in accordance with EEC Commission Directive 2001/58/EC.

Print date: 2013/09/04

The user's working conditions are not known by CHRYSO, the information supplied on this safety data sheet is based on CHRYSO's current level of knowledge and on national and community regulations. CHRYSO® VRM 159 must not be used for any purposes other than those specified under section 1 (identification of the substance/preparation and the company) without first obtaining written instructions. It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations. The information given on this safety data sheet must be regarded as a description of the safety requirements relating to our product and not a guarantee of its properties.
The contents and format of this material safety data sheet are in accordance with EEC Commission Directive 2001/58/EC.

