

If in doubt after reading this document contact 01952 588885 for technical advice.

1. Identification of the product and of the company/undertaking

Product name: Precast Concrete Products

Company: Elite Precast Concrete Products Limited
www.eliteprecast.co.uk

Address: Halesfield 9, Telford, Shropshire TF7 4QW

Telephone: 01952 588885 Fax: 01952 582011

2. Composition/information on ingredients

Precast concrete is a mixture of cement, aggregates (which may contain silica), admixtures and water it is dense, heavy, hard and abrasive. Some products contain steel reinforcing.

3. Hazards identification

Inhalation of silica particles in dust created by cutting set concrete or surface treatment of hardened concrete containing high silica aggregates may cause respiratory damage. Where respirable dust contains high quantities of free silica in the form of quartz, there is a risk of developing silicosis. The main symptoms of this chronic disease are difficulty in breathing and coughing. Long term prolonged exposure to high levels of respirable crystalline silica, which can arise from a failure to implement adequate control measures, can also lead to an increased risk of developing lung cancer. Any cutting or finishing can also result in particles being projected at high speed with the consequent risk of injury or damage.

As a substance, hardened concrete is non-hazardous, however, manual handling of the products is hazardous due to their weight.

Persons should not attempt to handle products manually unless they have received training in kinetic handling techniques. Manual handling can also cause cuts, abrasions and/or skin irritations therefore gloves should be worn when handling.

4. First aid measures

Eye contact: On contact with concrete dust, immediately irrigate with eyewash solution or clean water. The material is abrasive and may scratch the surface of the eye. If pain persists, obtain medical attention.

Skin contact: On contact with concrete dust, wash with soap and water. If irritation occurs seek medical attention.

Ingestion: If ingestions of concrete dust causes problems, remove from exposure and seek medical attention if required.

Inhalation: On inhalation of concrete dust, remove the affected person to fresh air and seek medical attention if required.



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5. Fire fighting measures

Concrete is not flammable and will not facilitate combustion with other materials.

6. Accidental release measures

Personal precautions: See section 8.

Methods for cleaning: No special requirements, where possible use mechanical aids to reduce the risk of manual handling injury.

Environmental precautions: Does not constitute a significant environmental hazard.

7. Handling and storage

Handling: **Concrete dust**

Avoid dry cutting concrete wherever possible. Wet cutting reduces the amount of dust generated and is a preferable method of cutting.

Manual handling

Care should be taken when manually handling precast concrete products. Good lifting practices should be followed at all times to avoid the risk of sprains, strains or ruptures. Plan so that, wherever possible, products are positioned near to the point of use. Where reasonably practicable, mechanical handling devices should be used for products heavier than 20kg.

Stock areas should always be level with a firm base to avoid pallet collapse when the bands are removed from pallets. Banding should be cut and not burst by the application of levered pressure. High tensioned straps can spring away when the tension is released.

The preferred method of off-loading from vehicles is by mechanical means, ensuring all lift apparatus and vehicles are capable of lifting the product within their working capacity.

Care must be taken when placing products into position avoid dropping or banging. Banding must not be used as a lifting aid.

Storage: When using hand off-loading methods, follow safe lifting procedures. To avoid damage, do not slide or paddle the product.

All products must be stored on a firm level surface and not on slopes or soft uneven areas.

When stacking products on top of each other, timber or similar material must be placed between products. These separators must be of equal thickness.

8. Exposure controls/personal protection

Workplace exposure limits: The following workplace exposure limits (WELs) for airborne dust are given in HSE guidance note EH40.

| Workplace exposure limits | | |
|----------------------------------|----------------------|------------|
| SUBSTANCE | WEL | PERIOD |
| Total inhalable dust | 10mg/m ³ | 8 hour TWA |
| Respirable dust | 4mg/m ³ | 8 hour TWA |
| Respirable silica | 0.1mg/m ³ | 8 hour TWA |

- Engineering measures:** Where reasonably practicable dust exposures should be controlled by engineering methods, such as wet cutting and local exhaust ventilation.
- Respiratory protection:** Suitable respiratory protection (HSE approved standard) should be worn to ensure that personal exposure to the constituents of concrete dust is less than the relevant WEL. Always ensure good ventilation.
- Hand and skin protection:** Gloves should be worn to protect against abrasions when handling precast concrete units. Safety footwear should be worn to protect against injury from falling precast units.
- Eye protection:** Goggles (HSE approved standard) that offer protection against dust and flying particles should be used when cutting or finishing precast concrete.

9. Physical and chemical properties

Odourless, solid concrete formed from a mixture of sand, aggregate, cementitious material, admixtures and water. Other chemical properties not applicable under ambient conditions.

10. Stability and reactivity

- Conditions contributing to chemical instability. None.
- Hazardous decomposition products. None.
- Special precautions. None.

11. Toxicological information

Short term effects

- Eye contact:** Dust caused by the cutting or surface treatment of hardened concrete may cause irritation.

Long term effects

- Inhalation:** Inhalation of mineral dusts over a prolonged period may give rise to a number of respiratory illnesses including chronic bronchitis, pneumoconiosis and silicosis (if silica present), long term prolonged exposure to high levels of respirable crystalline silica, which can arise from a failure to implement adequate control measures, can also lead to an increased risk of developing lung cancer.



12. Ecological information

LC50 aquatic toxicity rating: Not determined. No data is available on the preparations themselves. When used as intended, no environmental impact is anticipated.

Biological oxygen demand (BOD): Not applicable.

13. Disposal consideration

Disposal of these products should be in accordance with local legal requirements.

14. Transport information

Not hazardous. Classification for conveyance - not required.

15. Regulatory information

Chemicals (hazard information and packaging for supply) regulations.

Classification: Not classified as dangerous for supply in the UK.

16. Legislation and other information

- The Health and Safety at Works etc. Act 1974 ((NI) Order 1978)
- Consumer Protection Act 1987
- Control of Substances Hazardous to Health Regulations 2002 ((NI) 2003)
- Control of Substances Hazardous to Health (Amendment) Regulations 2004
- Environmental Protection Act 1990
- HSE Guidance Notes EH40 (Workplace Exposure Limits)
- Any authorised manual on First Aid by St Johns/St Andrews/Red Cross
- Manual handling Operations Regulations 1992.

Guidance references:

- EH40/WEL
- A step by step guide to COSHH Assessment
- HSE Construction Information Sheet No. 57 Reducing the Risks of Musculoskeletal Disorders
- HSE Construction Information Sheet No. 36 Silica
- HSE Construction Information Sheet No. 54 Dust Control.



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