

# TECHNICAL

# INFORMATION

## SMR PROPRIETARY BINDER Product Data Sheet

### DESCRIPTION

SMR is a cementitious binder which enables the re-use of almost 100% of the host material, diverting waste from landfill and eliminating the import of aggregate. Our uniquely designed binders are environmentally friendly allowing land to be returned to its original state after stabilisation. When mixed, SMR Binder produces a high performing end material, compared to traditional construction methods.

### APPLICATIONS

SMR binder can be used for Soil Stabilisation and applied in two different processes, In-situ & Ex-situ stabilisation.

#### Temporary and Permanent Works

- Footpaths and Cycleways
- Car Park Bases
- Compounds
- Crane and Piling Platforms
- Haul Roads & Tracks
- Reversible application - Restoring land back to its original PH and Fertility levels
- Large Trench work
- Railway Embankments
- Remediation
- Adoptive and non-adoptive roads
- Treatment of contaminated land - encapsulates
- contaminated soils ie. Heavy Metals, Coal Tar, TPH & PAH

### COST SAVING

- No import of Aggregates and no exporting of material off site saving on landfill and aggregate tax
- Increased productivity
- Reduced programme time - projects delivered in a timely way saving on costs



### PERFORMANCE BENEFITS

- SMR Binders can be used with all site won materials, apart from Organic materials.
- SMR allows for reduced capping/sub-base layer thickness.
- SMR Binders consistently achieves high CBR Strengths of 30%>.
- Once compacted, SMR will cure rapidly and become even stronger and more durable over time.
- The compacted form of SMR is non-permeable as its created a monolithic structure & thus there would be no leachability through the structural layer.
- One pass process unlike traditional lime & cement stabilisation.

### SOCIAL & ENVIRONMENTAL BENEFITS

- Reduced import and export of material to and from site by recycling up to 100% of site won material reduces the number of vehicle movements.
- The SMR solution is an example of a circular economy model.
- Preservation of our landfills.
- Reduced CO2 emissions saving on carbon footprint.
- Less congestion and disruption to the local community.
- A reduction in programme time.
- The requirement for geogrid is removed by using SMR.
- SMR Binders are not harmful to soils and our reversible process can restore land to its original PH values and soil properties to allow for re-growth.
- Agriculture is unharmed by the intervention of infrastructure.



[www.smruk.com](http://www.smruk.com)



[info@smruk.com](mailto:info@smruk.com)

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### STORAGE

Store in a dry covered area out of direct sunlight & exposure to the elements.

### PROCESSES

In-situ - A spreader box spreads the SMR Binder over the the host material and rotavates it into the existing sub soil, trims, then immediately compacts the material in one continuous movement only requiring a single pass.

Ex-Situ - A mobile screener with additional mixing capabilities is set up onsite and the excavated material is screened where all material fractions that are larger than 40mm are removed along with organic material. The soil is then weighed, blended and treated with SMR Binder at the desired addition rate, between 1-5% dependent on the recommended ratio determined by tests results and stockpiled until needed, ensuring that enough treated material will be available as and when required.

### SITE INVESTIGATION, TESTING & MIX DESIGN

Site investigation & soil samples are taken to our UKAS accredited lab to carry out pre-testing such as OMC, MOD, CBR, TRL447 Sulphate. A mix design is formulated based on the test results. Post works CBR +/-or Plate bearing, PH & nutrient level testing is carried out.

### COMPLIANCE

SMR Binders can produce the following products:

- Hydraulically Bound Materials (HBM) as per BS EN 14227
- Hydraulically Bound Materials as per the Specification for Highways Works vol. 1, 800 series
- Stabilised capping/fill materials as per the Specification for Highways Works, Vol.1, 600 series.
- SMR proprietary Binder is produced in accordance with the WRAP Quality Protocol (QP) for Ex-situ processes.



- QSROH NFSMR (Non Flowable Structural Material for Reinstatement + TMF (Treated Material for Fill)

### QUALITY CONTROL

All SMRUK Products are factory blended, tested and packaged to quality control procedure in accordance with Quality Management Certificate ISO 9001 & Enviromental Management Certificate ISO 14001.

### HEALTH AND SAFETY

Health and safety advice, which must be followed, can be found on the Material Safety Data Sheet and method statement.

Users are advised to wear correct PPE clothing at all times.

### INFORMATION, PRICES & ORDERING

For technical information, pricing and to place orders please contact our Sales office on the following:

Telephone: 01252 710772

Email: [info@smruk.com](mailto:info@smruk.com)

Visit our website: [www.smruk.com](http://www.smruk.com)

### MANUFACTURING FACILITY

Severn Bridge Industrial Estate, Units 1 Oa Norman Way, Portskewett, Caldicot NP26 5PT

### HEAD OFFICE

SMR UK, Hendy Industrial Estate, Swansea, SA4 OXP



[www.smruk.com](http://www.smruk.com)



[info@smruk.com](mailto:info@smruk.com)

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