

# Aggrebind<sup>©</sup> FAQs

*A Constructive Innovations Limited & Safety Tek, Inc. product.*

Frequently asked questions:

Aggrebind<sup>©</sup> environmentally friendly cross linked styrene acrylic water based polymers.

Typical Usages: Road Construction: Manufacture of Bricks/Blocks

## QUESTION

What is Aggrebind?

## ANSWER

Aggrebind is a water based cross linking styrene acrylic polymer that increases the strength of a wide range of soils and waste materials. It dries clear but can be coloured by adding any water based pigment.

Does Aggrebind enhance the weight bearing capacity of on-site conditions?

Yes. Aggrebind can increase the weight bearing capacity by 4 to 6 times as measured by the CBR (California Bearing Ratio).

Is Aggrebind environmentally friendly?

Yes. Treated soils have later been crushed and then used to grow grass and plants.

Will Aggrebind remain effective for years?

Yes. Aggrebind will last indefinitely after the 28 day curing period following installation. The polymer is guaranteed against failure, subject to declared conditions, for a period of 10 years.

What is the length of time unused Aggrebind can be stored?

Aggrebind has a 3 year shelf life of prior to use.

Is Aggrebind flexible or rigid when cured?

It cures over a 28 day period and produces a flexible layer.

Can Aggrebind be damaged by Ultra Violet?

Surface deterioration could occur after 10 years on un-surfaced roads. Stabilised layers are projected to last over 20 years.

Can Aggrebind be used as a sealer?

Yes. It cures normally within 1 hour at +/-16°C and produces a flexible, highly water resistant surface

What are the primary uses for Aggrebind?

Roads, manufacture of bricks/blocks from a wide variety of locally available on-site materials and construction waste or rubble.

Is there a basic specification for materials?

A minimum of 35% fines passing through a 0.63 sieve and no stone larger than 20% of the layer depth being stabilised. Aggrebind is effective with cohesive and non-cohesive materials, even desert sand.

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| Is Aggrebind quicker and cheaper than conventional road construction? | Yes. It is 80 to 100 times faster than conventional road construction and will reduce costs by 40-60%.   |
| Does Aggrebind require specialised equipment?                         | No. All standard road construction and block making equipment can be used.   |
| Can standard road testing methods be used?                            | Yes. Standard troxler or cone penetrometer equipment can be used. Core sampling is <u>not</u> recommended as this can damage the long strings of cross-linking polymer.  |
| What types of standard road construction equipment are used?          | You need something to rip the road and break up the surface like a Meri Crusher, a spray truck, road grader and smooth drum vibration compactor. The polymer can be diluted with virtually any type of water but sea water can reduce the layer strength.  |
| Does Aggrebind have quality controls?                                 | Yes. Aggrebind has a unique formulation that includes a tracer. This tracer offers Engineers and clients a unique opportunity to evaluate the polymer present in the treated material. This is carried out by an independent laboratory to ensure the credibility of the testing results.  |
| How is Aggrebind supplied?  | In 205 ltr drums and 25 ltr containers. There are 40 drums in a 20 foot container and 80 drums in a 40 foot container.   |
| What is the Harmonized Code?  | The code is 3906.90.10 or 3906.90.90. Consult your local customs office for the lowest importation code, as this varies from country to country.   |
| How must Aggrebind be stored?   | Under cover and it must not be frozen prior to being used.   |
| Is Aggrebind diluted before being used?                               | Yes. It is diluted with virtually with any type of water, even sea water, to ensure that it is dispersed evenly through the material being treated. It is important to ensure that all the soil particles are coated with the Aggrebind/water solution. This is why we recommend that the moisture level after spraying increases the moisture level to just over OMC. |
| What is OMC?  | OMC is Optimum Moisture Content and this represents the moisture level necessary to achieve maximum density after compaction.  |
| Is there a simple moisture level test?                                | Yes. After spraying the blend of soil with Aggrebind you squeeze the treated soil firmly in your hand. If it binds together, with no moisture  |

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|  | leaching through your fingers, then the treated layer is ready for compaction.   |
| What happens if the treated layer dries out?                   | Don't panic spray it again with water and continue working.  |
| How soon can we use the road and what is the full curing time? | Roads can be open for traffic within 2 hours, depending on conditions. Full curing takes up to 28 days depending on conditions.  |
| When should Aggrebind be sprayed?                              | When there is no frost or no rain forecast for 3 hours following the installation. If it does rain just re-work the treated soil to release some of the excess moisture.   |
| What is a sub-base?  | This is the area immediately below the soil that is to be stabilised. It is important that the sub-base is structurally sound as this could affect the strength of the stabilised layer. The most effective way is to rip the layer to be stabilised and move the loose soil to the side or ends to expose the sub-base. Re-compact or improve the sub-base before stabilising the base layer. |
| Can Aggrebind seal contaminated materials?                     | Yes. The Aggrebind coats each contaminated particle with a flexible durable coating that prevents leaching and protects the environment.   |
| Will any wearing surface bond to Aggrebind?                    | Yes. The durability of an un-surfaced Aggrebind treated layer will depend on the stone content in the treated soil. A wearing surface is recommended for roads that are constantly used by 40+ tonne vehicles. The wearing surface can be a top coat of Aggrebind.   |
| Can Aggrebind roads be repaired easily?                        | Yes. Aggrebind has a unique bond-back capability that ensures that damaged areas bond naturally to a previously treated area. Moreover the repaired area will attain the same strength as the previously treated original areas.   |
| Can Aggrebind repair potholes?                                 | Yes. But it is advisable to spray the exposed pothole first with Aggrebind, then fill the hole with Aggrebind treated soil, compact and overspray the surface. It is important to spray past the edges of the pothole repair as this prevents water ingress.   |
| For further questions please contact:                          | Constructive Innovations Limited,<br>Don Hawkridge, <a href="mailto:don.ci@live.co.uk">don.ci@live.co.uk</a><br>Tel. +44 1283 585 177<br>Safety Tek, Inc.<br>Robert D. Friedman, <a href="mailto:rdf@safety-tek.com">rdf@safety-tek.com</a><br>Tel. +1 203 785 1808  |