



HEGGEL®

You Build, We Protect!

NEWSLETTER

HEGGEL® Fix 833

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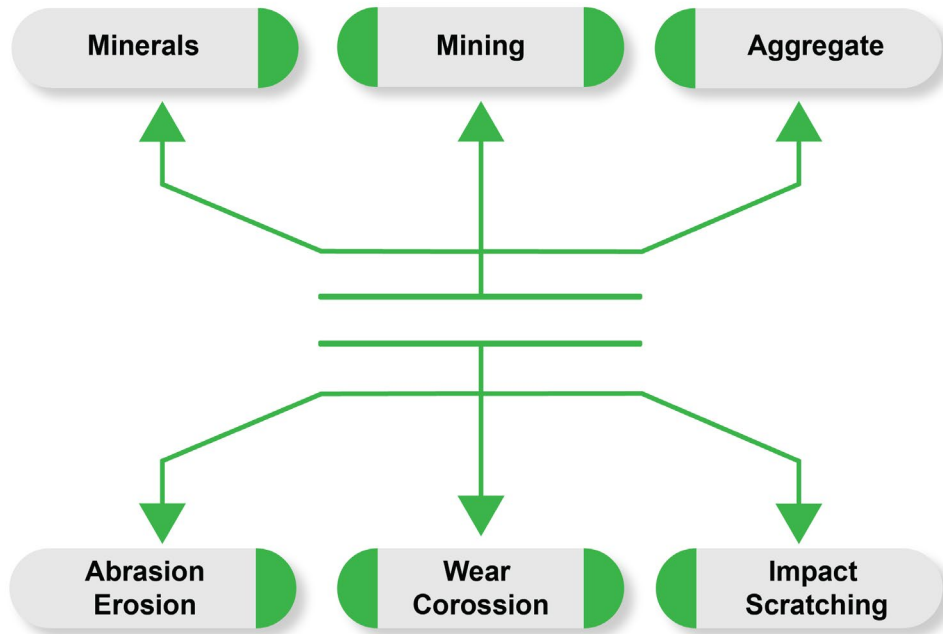
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Multi-Purpose Coating & Repair Compound

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- Rebuilding Rubber, Urethane & Metal Substrates**
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Minerals Wear Effects

The distinctive chemical and physical properties of minerals make them key components of major industrial plants. Widely used as raw material in manufacturing industries such as rubber, plastic, paint, glass, etc., minerals inflict abrasive damages on production facilities and therefore, robust and wear resistant protection is required to maintain consistent operation.



Mineral processing industries entail various extremely abrasive/corrosive applications. Abrasiveness of the mineral deposits, ores and excavated materials results in deteriorative wear effects on various mining equipment from ore transposing means including pipes, pumps, chutes, conveyor belts to blenders, hoppers, storage tanks and bunkers. Abrasive aggregate in multiple sizes streaming through pumps, slurry pipelines, etc., also leads to slide and/or impact abrasion of the metal surfaces. Additionally, inadequate flow patterns such as offsets, bottlenecks, etc. cause erosion, and consequently premature failure.



Abrasion effects on process equipment in heavy-duty mining and slurry systems encompass a wide range of defects including Solid Particle Erosion, Gouging Abrasion (severe form of abrasive wear), Adhesive Wear, Fretting Wear in industrial parts, Pitting Failure, Corrosion, Oxidation, etc.

► Major Contributors to Exacerbating Wear Effects Could Be:

- Variable Working Conditions
- Grain Size Distribution, Mineralogy and Grain Shape of the target Mediums
- Working Pressure
- Water Content
- Presence of Chemical Components
- Equipment/System Design

Meanwhile, wear rates are measurable, and could be predicted by variables such as material selection and fabricating methods of equipment; in addition, appropriate material selection for each specific application significantly improves service life and protection of industrial key assets.



Due to its long wear life and capability of being temporarily deformed to absorb impacts, Elastomer is commonly the first material chosen to limit wear damages; Elastomers such as Natural Rubbers, Synthetic Compounds of Neoprene, Butyl Rubber Derivatives, etc. exhibit superior resistance features against abrasion, corrosion, aging and atmospheric conditions. Moreover, in service conditions dealing with coarser particles, hydrocarbons and high temperatures, metal alloys are the preferred material of choice.

However, the extent of damages caused by abrasion corrosion on equipment are hard to anticipate due to the domino effect of upstream operations on downstream wear; therefore, even with proper design or/and with the accurate material selection of substrates (rubber, metal, etc.), when exposed to intensive abrasion and corrosion such as in mining industrial applications, repair and refurbishment procedures would be inevitable. It is vital to conduct frequent inspections to schedule necessary repairs on time, in order to avoid costly replacements and long downtimes for critical operations.

How Equipment Repair/Coating Compounds Benefits Industries



Preventive and/or protective solutions are of paramount importance to maintain production rates while minimizing overall operating costs in manufacturing plants and process systems exposed to harsh environment and excessive wear. In case wear protection is lost, sudden failures occur and the catastrophe could go beyond losses in plant assets, bringing about environmental issues.

Among the solutions, Advanced Polymeric Compounds are effective solutions to:

- Reduce wear/ corrosion induced failures Incredibly
- Extend lifetime of equipment and structures exposed to severe abrasion, corrosion, erosion and wear attacks
- Improve production and operational efficiency in industrial plants
- Lessen wastage
- Decrease the cost of replacements and down time

With the highest attention paid to meeting and exceeding the industry's most stringent standards, **HEGSEL Fix 833** is a high-tech polymeric compound with excellent wear/corrosion protective features. Fully capable of rebuilding and coating applications, **HEGSEL Fix 833** is a reliable and cost-effective solution to adequate resistance against harsh abrasive attacks for a long service life.

HEGGEL® Fix 833

► 2-Component Multiple-Use Rubber Repair Compound

Innovatively synthesized by the application of combined urethane and epoxy technology, **HEGGEL Fix 833** is a pliant compound, ideal for protecting, repairing and coating rubber, urethane and metal components.

The 2-C compound of **HEGGEL Fix 833** provides outstanding protection against wear, impact, abrasion and cavitation to a wide variety of substrates in small or large areas exposed to deteriorating chemical and mechanical conditions, under typical service temperatures ranging from -30 to $+80^{\circ}\text{C}$. **HEGGEL Fix 833** demonstrates outstanding mechanical strength and excellent protective features to areas suffering from flow erosion and wear damages caused by impacting abrasive particles, both fine and coarse.

Rapidly curing with 100% solid content, **HEGGEL Fix 833** is a multipurpose compound; owing to its extremely smooth surface finish, it is ideal for repair and rebuilding old damaged components, effectively protecting against high abrasion, impact, erosion, cavitation and corrosion.

Applied as repair or/and coating material in a single layer, **HEGGEL Fix 833** can be customized to meet the technical requirements for comprehensive protection to any substrate prone to erosion and wear.

Treating the substrates in one application with **HEGGEL Fix 833** offers a glossy and extremely smooth finish. Hand application of **HEGGEL Fix 833** makes the coating/repair operation convenient for areas of a complicated design and/or hard-to-access damaged zones.



Characteristics

- Self-priming
- Solvent-free
- Multifunctional protection against abrasion, impact, wear and corrosion
- Bonding tenaciously to rubber, urethane, steel, stainless steel, cast iron, copper, bronze, aluminium, alloys and concrete
- Very high sliding abrasion resistance
- Excellent resistance to impact from impinging particles either dry or within fluid
- Very high flexibility and elongation properties useful in crack bridging

Application Areas

- Impellers
- Pumps
- Ash handling systems
- Mineral storage
- Coal bunkers
- Pulverized fuel lines
- Rubber and conveyor belts
- Cyclones



Chemical Resistance

- Crude oil (sweet or sour)
- Kerosene
- Sulfuric acid (10%)
- Hydrochloric acid (10%)
- Demineralized water
- Nitric acid (5%)
- Sodium hydroxide (50%)
- Sodium hypochlorite (15%)
- Methanol
- Sea water

Technical Features

Description	Value
Abrasion Resistance	Taber H-18/1kg/1000 cycles 60 mg weight loss
Impact Resistance	BS 3900 Part E3 1973 Forward: 25 Joules Reverse: 15 Joules
Adhesives Strength	BS 3900 Part E10 20.1 MPa (cohesive failure)
Elongation to Break	BS 6319 Part 7 1985 200 %
Barcol Hardness	ASTM D-2583 40
Tensile Strength	BS 6319 Part 7 1985 20.6 MPa