

SOLUTIONS FOR CONCRETE

CHRYSO SOLUTIONS **FOR CONCRETE**



MARMOPEDIA
BUILDING MATERIALS



JALLAN
CONCRETE
YOUR CONCRETE SOLUTION

CHRYSO











INNOVATION IS OUR CHEMISTRY

CONCRETE SOLUTIONS

CHRYSO CONCRETE SOLUTIONS

CHRYSO offers World class admixture chemistries, designed around specific needs of our customers, serviced by people that add real value to your organization. We have the solutions to build the future you imagine.

+ Chryso Admixture Technology

				
				
FLEXIBILITY TO USE MULTI BRANDS OF CEMENT	EASY PLACABILITY WITH LESS STICKY CONCRETE	ROBUST & VERSATILE TO CEMENT & SAND VARIATION	ACHIEVES CONSISTENT CONCRETE QUALITY WITH POOR AGGREGATES	DESIGN OF GREENER CONCRETE
<ul style="list-style-type: none">+ Cement supply flexibility – Allow client to use more brand of cements+ Consistent concrete production every day without rejection leads to saving of overall cost for client	<ul style="list-style-type: none">+ Low Energy – Enhanced Placeability and Pumpability+ Flawless & very smooth finish+ Low viscosity yet cohesive & homogeneous concrete mix	<ul style="list-style-type: none">+ Use of multiple brands of cement inspite of cement chemistry variation+ Use of various quality of sand inspite of fines variation+ Less impact of admixture dosage variation+ Easy day to day consistent concrete production & placement	<ul style="list-style-type: none">+ Use of a wider range of aggregates+ Cost savings by use of low grade aggregates+ Admixture solution for high fines & clay content aggregates	<ul style="list-style-type: none">+ Cost saving & carbon footprint reduction+ Allows Portland cement content reduction+ Allows to increase supplementary Cementitious like (slag or fly ash) with enhancement in performance+ Early and ultimate strength achieved – Enhanced finish and durability.

SCOPE

BUILDINGS & FACTORIES

ROAD & BRIDGES

POWER PLANTS

RMC

METROS



+ FOCUS ON THE OFFER

CHRYSO®OPTIMA



- Suitable for OPC as well as PPC mix & Compatible with Fly ash, GGBS etc.
- Higher workability viz. more than 3 Hrs retention can be achieved.
- Longer steady workability enables transporting concrete at long distance.
- Excellent surface finish achieved along with high flow & Self Compacting Concrete.
- Less Thixotropy enables easy high rise pumping of concrete mix, even with crush sand.
- Fill Free technology enable to easily place concrete through congested reinforcement.
- Unique LSS technology helps in consistent concrete production with cement chemistry variation.

Concrete classes and types: M-40 to M-80 grade



- Hot weather concreting
- Pumped concrete
- Architectural concrete
- Concrete for heavily reinforced structures
- Deep foundations
- HPC - VHPC
- Prestressed concrete
- All types of cement

CHRYSO®PREMIA



- A robust solution for pre-stressed, precast concrete.
- Simple & rapid filling of moulds even in complex structures. Thanks to Fill Free technology.
- A great tool to avoid Thixotropy in concrete during placement.
- High early & long compressive strength.
- Excellent surface finish capability.
- Suitable for OPC as well as PPC mix
- Compatible with Fly ash, GGBS etc.
- Production of good high flow as well as SCC is possible with fair surface finish.

Concrete classes and types: M 40 & above



- HPC - VHPC - UHPC
- Prestressed concrete
- Self-compacting concrete
- Wetcast
- Reinforced concrete
- All types of cement

CHRYSO®DELTA



- Maintains a balanced between water reduction & workability retention.
- Can achieve consistent quality of concrete even with bad quality crushed sand.
- Acts as a bridge between old & new generation concrete plasticizer and superplasticizer.
- Suitable for OPC as well as PPC mix
- Compatible with Fly ash, GGBS...etc.
- Help for early deshuttering.

Concrete classes and types: M-10 to M-50 grade



- Standard concrete
- Concrete for highway works
- All types of cement



READY-MIX CONCRETE



PRECAST



JOBSITES



250 Kg drum



1000 Kg IBC



10/20 MT Tankers

CHRYSO®RMC / HP / HS



- Moderate water reduction capability helps in production of low grade of concrete.
- Customize formulations enables good workability retention like 3 hrs possible
- Low impact in very bad clay contaminated crush sand content mixes.
- Useful in structural concrete & PQC where ingredients quality is good.

Concrete classes and types: M-10 to M-40 grade



- RMC
- Jobsite



225 Kg drum



1000 Kg IBC



10/20 MT Tankers

CHRYSO®TARD



- Concrete to achieve variable retention period over wide range of concrete grade production
- RMC sector with different grade of concrete where different retention periods to be achieved in cost optimized manner.
- Capable to boost ultimate strength.



- Fresh concrete bonding
- Mass concrete
- Diaphragm walls
- Piles
- All types of cement



200 L drum



1000 L IBC

CHRYSO®CURE



- Protects concrete surface from evaporation through loss of water.
- Specific & challenging solution for hot weather concreting.
- Prevent concrete surface cracking at early ages by reflecting day light.

- CHRYSO® Cure ST1 is a water / wax based efficient curing agent with white pigment
- CHRYSO® Cure AC is a water / Acrylic based efficient curing agent with / without white pigment
- CHRYSO® Cure AL is a solvent / Emulsion based efficient Aluminized curing agent



- Floors, concrete slabs, roads and concrete roadworks
- Concrete and mortars
- Trowel finishing and smoothing of poured surfaces
- All cement-based parts
- Precast walls

CHRYSO®DEM OLEO



200 L drum

- Offers a good range of mineral oil or emulsion based agents that enable easy demolding & protects sticking of any concrete substrate after demolding.
- The CHRYSO® Dem Oleo is a solution for fair concrete surface :

- Compatible for all types of form work like plywood, steel etc.
- Leaves very minuscule dust on concrete element or form work.
- Protect the aesthetic concrete surface with no oil strain .
- Offers long life of form work.



- Steam-cured or non-steam cured concrete
- Shuttered concrete
- Prestressed concrete
- All precast parts
- All types of formwork
- Construction sites

CHRYSO® SOLUTION

FOR ALL YOUR CHALLENGES

YOUR CHALLENGES	CHRYSO® SOLUTION
Concrete Pumping to heights is difficult-high pump pressure?	Use CHRYSO®Optima with fill free technology for ease pumping. CHRYSO®Quad is also an additional tool to be used with CHRYSO®admixture to enhance pumpability.
Difficult to use different sources of Crush due to inconsistent fines & poor quality?	Use CHRYSO®Optima or CHRYSO®Delta.
High clay content crush sand often increases the dosage of admixture & it's use becomes expensive.	CHRYSO®Optima is most suitable for high grade. CHRYSO®Delta : medium grade (M-30 to M-45) & CHRYSO®HP : low grade(upto M-30).
Workability retention is an issue?	Use CHRYSO®Optima (for high grade) to enhance workability retention upto 3Hrs without setting delay.
Extended workability beyond 4 hrs is an issue?	Use CHRYSO®Optima 1000 Technology without impacting strength.
Mix is too sticky & difficult to place?	Use CHRYSO®Optima (for high grade) or CHRYSO®Delta (for low grade) with Fill Free technology which makes concrete to flow easily without stickiness.
Struggling to achieve early deshuttering?	CHRYSO®Optima (for high grade) and CHRYSO®Delta helps to deshutter early by achieving early strength.
Can't use different brands of cement due to abnormal variation of concrete performance with same admixture.	Use LSS technology based CHRYSO®Optima & CHRYO®Delta to get consistent performance with different brand of cement.
Struggling for good surface finish of concrete?	Use CHRYSO®Optima for good compaction with min. vibration along with less pin & bug holes. Use premium quality demoulding oil CHRYSO®Dem Oleo to improve the surface finish.
Water curing is an issue?	Use wide range of curing agent like Acrylic base CHRYSO®cure AC or Wax based CHRYSO®Cure ST1 or Resin based CHRYSO®Cure AL .





YOUR CHALLENGES	CHRYSO® SOLUTION
Struggling for good surface finish of concrete?	Use CHRYSO®Premia for good compaction with min. vibration along with less pin & bug holes. Use of premium quality demoulding oil CHRYSO®Dem Oleo will further enhance the surface finish.
Struggling to use various sources of Crushed sand due to inconsistent fines & poor quality?	CHRYSO®Premia with special clay inhibiting polymers.
Workability retention vs high early strength gain is an issue?	Use CHRYSO®Premia with special polymer & turbocast technology to boost high early strength.
Pumpability is difficult-High pump pressure?	Use CHRYSO®Premia fortified with fill free technology for easy pumping. CHRYSO®Quad is also an additional pack to be used along with CHRYSO®admixture to enhance pumpability capacity.
Mix is too sticky & difficult to place?	Use CHRYSO®Premia with Fill Free technology which makes concrete to flow easily without stickiness.
Can't use various brand of cement due to abnormal variation of concrete performance with same admixture.	Use LSS technology based CHRYSO®Premia to get almost consistent performance with various brand of cement.
Water curing is an issue?	Use wide range of curing agent like Acrylic base CHRYSO®cure AC or Wax based CHRYSO®Cure ST1 or Resin based CHRYSO®Cure AL .
Want to protect steel formwork?	Use premium quality demoulding agent CHRYSO®Dem Ole before concreting.
Work cycle is getting delayed due to prolonged demoulding of elements?	Use CHRYSO®Premia for high early strength so that the recycling of moulds becomes faster thereby increasing productivity.



YOUR CHALLENGES	CHRYSO® SOLUTION
Concrete workability retention	CHRYSO®Optima 1000 Technology for retention beyond 4 Hrs. CHRYSO®Delta (for low grade) & CHRYSO®Optima (for high grade) to enhance workability retention upto 3-4 Hrs .
Use of poor quality crush sand for regular concrete application	Use CHRYSO®Delta with Rover Technology.
High clay content crush sand often increases the dosage of admixture & it's use becomes expensive.	CHRYSO®Delta for medium grade (M-30 to M-45) & CHRYSO®RMC / CHRYSO®HP for low grade(upto M-30).
Pumpability is difficult-needs high pump pressure?	Use CHRYSO®Quad along with CHRYSO®Optima or CHRYSO®Delta.
Mix is too sticky & difficult to place?	CHRYSO®Optima (for high grade) & CHRYSO®Delta (for low grade).
Struggling to deshutter in overnight?	CHRYSO®Optima (for high grade) or CHRYSO®Delta (for low grade).
Use of multi-branded cement due to abnormal variation of concrete performance with same admixture.	Use LSS technology based CHRYSO®Optima & CHRYSO®Delta for consistent performance with different brand of cement.



CHRYSO

INNOVATION IS OUR CHEMISTRY

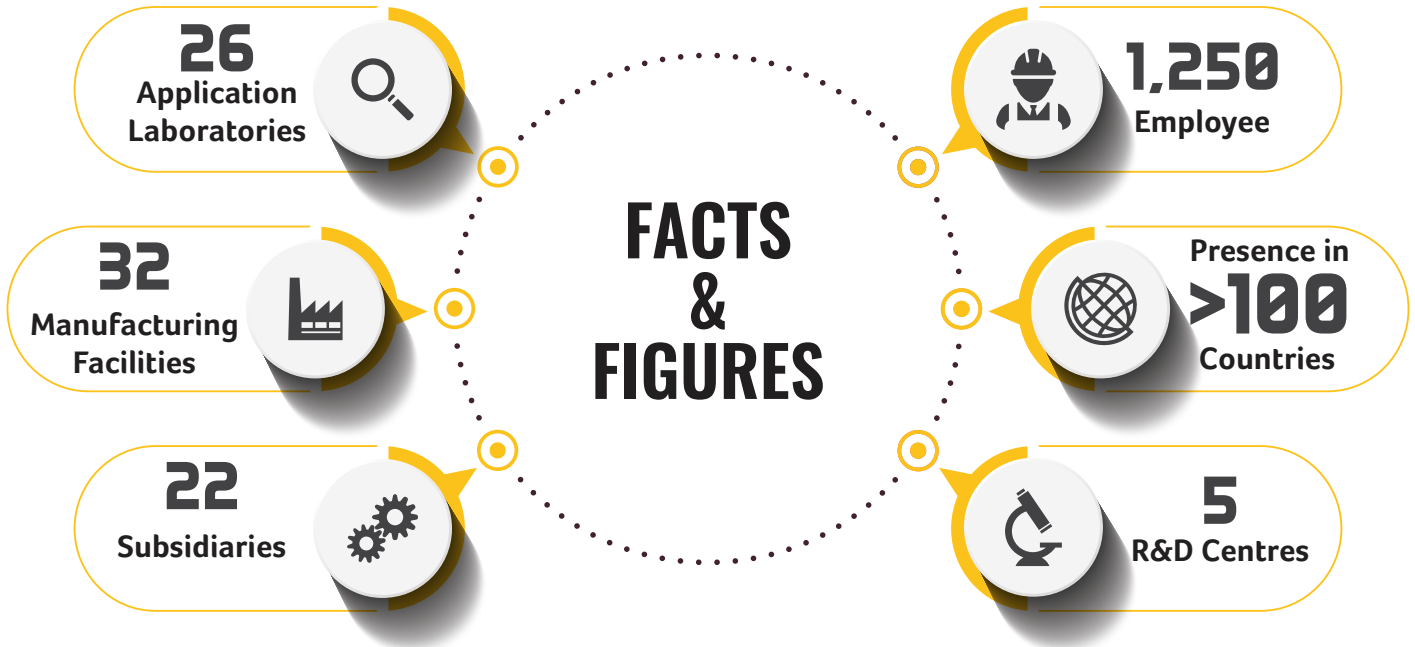
CHRYSO
INNOVATION IS OUR CHEMISTRY

**CHRYSO Solutions
for all your construction needs**

▲ We are CHRYSO

Founded in 1942, CHRYSO is the Global Leader in Innovative Chemistries and services. Our motto is to enhance the performance of cement and concrete.

We provide our customers – Cement Manufacturers, Ready-mix concrete producers, Precast manufacturers and Construction companies – with our expertise in chemistry, formulation and knowledge of construction materials.



▲ CHRYSO India

CHRYSO India is fully committed to maintain a leading position in technical Innovation of Construction chemicals. Our modern production units, situated in the four corners of India provide national market coverage to our customers. Each of our units are designed, engineered and managed to optimize quality and meet our customer's demand. CHRYSO India is accredited and certified for Quality (ISO 9001), Environment (ISO 14001) and Safety (OH SAS 18001). We have four physical laboratories supporting our regional markets across India, equipped with the latest state-of-the-art tools. We conduct extensive testing to ensure the most optimized formulations to meet our customer's precise requirements taking into account intricacy of local raw materials and mix design.

Our Central Research Centre, Navi Mumbai, extensively equipped and manned by research specialists ensures CHRYSO India's commitment as a leading innovator in the launch of new technologies to meet local demands across the core business segments of Cement, Concrete and Construction Systems.

▲ Indian Manufacturing Footprints

We ensure Delivery in Full & On Time to our valued customer with 5 State of art manufacturing facilities across the country

Production Facilities

ALWAR

POLBA

VAPI

PATALGANGA

CHENNAI

R&D Facility

MUMBAI



▲ CHRYSO Range of Construction System Products

Intergal Waterproofing Compounds

CHRYSO® Struco Excel
CHRYSO® Xel 03
CHRYSO® CWA 10

Sheet Membranes for Waterproofing

CHRYSO® Armourshield
CHRYSO® Armourflex EPDM
CHRYSO® Armourflex PVC
CHRYSO® Armourshield STICK
CHRYSO® Bitcote
CHRYSO® Prime EPDM
CHRYSO® Bituthane PU

Cement Based Repair Mortar

CHRYSO® Excem PMC 40
CHRYSO® Excem MC 40
CHRYSO® Excem PMC 60
CHRYSO® Excem MC 60

Protective Coatings

CHRYSO® Carboguard
CHRYSO® Conguard P
CHRYSO® Elastothane PUR
CHRYSO® Elastothane PUR 60
CHRYSO® Elastothane ECC
CHRYSO® Elastothane EPU
CHRYSO® Aquasil
CHRYSO® Armourcote 560
CHRYSO® Resicrete 51
CHRYSO® Sealcote

Liquid Applied Membranes For Waterproofing

CHRYSO® Armourcrete
CHRYSO® Tapelastac
CHRYSO® Tapelastac Premia
CHRYSO® Proof Acrylic
CHRYSO® Proof Acrylic Primer
CHRYSO® Elastothane
CHRYSO® Elastothane AR
CHRYSO® Crystalseal
CHRYSO® Bituthane BI

Epoxy Based Repair Mortars

CHRYSO® Resicrete 215
CHRYSO® Resicrete 218 NS
CHRYSO® Resicrete 219
CHRYSO® Resicrete 2112
CHRYSO® Resicrete 2115
CHRYSO® Resicrete 2118
CHRYSO® Resicrete EPF
CHRYSO® Resicrete EC 31

Adhesives and Bonding Agents

CHRYSO® Struco Latex
CHRYSO® Segbond SBA
CHRYSO® Stick SBA
CHRYSO® Polyflex EPA
CHRYSO® DP Bonding Agent
CHRYSO® Gripfix
CHRYSO® Gripfix ETA
CHRYSO® Gripfix FLEX

Epoxy Based Floor Coatings

CHRYSO® Armourcote 418
CHRYSO® Armourcote 525
CHRYSO® Armourcote Screed SL
CHRYSO® Armourcote Screed
CHRYSO® Armourcote PRIMER

Epoxy Grouts and Anchorage

CHRYSO® Resicrete 21
CHRYSO® Resicrete 211V
CHRYSO® Resicrete 21 ULV
CHRYSO® Resicrete 212
CHRYSO® Polygrout
CHRYSO® Resicrete 215
CHRYSO® Acrylate Gel
CHRYSO® Resicrete HES 80

Thermal Insulation

CHRYSO® Thermoshield
CHRYSO® Foamcrete
CHRYSO® Elastothane SF
CHRYSO® Elastothane SF 10

Cement Based Floor Hardeners

CHRYSO® Armourtop
CHRYSO® Emalite SOF

Cementitious Grouts and Anchorage

CHRYSO® Excem C
CHRYSO® Excem GP
CHRYSO® Excem GP 80
CHRYSO® Excem CGA
CHRYSO® Excem 60 HES

Construction Joint System

CHRYSO® Polyband
CHRYSO® Polyflex EPA
CHRYSO® Reinjecto
CHRYSO® Swellseal

Joint Sealants

CHRYSO® Polycaulk PS
CHRYSO® Polycaulk PU

Blockbuster Products for Waterproofing & Repair Mortar



CHRYSO® ARMOURCRETE

Acrylic Polymer Based Waterproof Protective Coating and Repairing Compound.

Application: CHRYSO® ARMOURCRETE polymer modified mortar is ideal to use in new works, renovations and waterproofing activities. The polymer can be a major part of surfacing, waterproofing, bonding old and new concrete, guniting, sprayed mortar manufacture, concrete repairs, brick work, masonry, joint filling and groove filling.

Coverage: as waterproof coating: 2 - 2.5 m² /kg in two coats

Curing after application of CHRYSO ARMOURCRETE system, initial air drying shall be done for 3-6 hours with no water. Protect the coating by covering with waterproof plastic sheet in case of rain or high temperature. After a maximum period of 6-8 hours after the final application, moist curing shall be done for the next 2-3 days, either by spraying water or by using wet burlap.

Available Packaging: 1kg, 5kg, 20kg, 100kg and 200kg HDPE drum.

CHRYSO® STRUCO EXCEL

Normal Setting Integral Waterproofing Compound for Cement Mortar & Concrete in Liquid Form.

Application: Used in rendering / plastering work of all brick walls in residential and industrial structures including silos of basement structures and in damp proof course in residential buildings. Effective in repair/maintenance works of existing damp walls, in saltpetre of brick work of marine structures and sea facing buildings.

Coverage: 200gm per 50kg bag of cement.

STRUCO EXCEL is supplied as a ready for use compound. For maximum dispersion throughout the mix, recommended quantity of STRUCO EXCEL should be added into the mixer with water, simultaneously.

Available Packaging: 1 kg, 5 kg, 20 kg and 200 kg container.



CHRYSO® TAPELASTIC

Two Part Acrylic Polymer Based Elastomeric Waterproof Coating.

Application: CHRYSO TAPELASTIC is used as a waterproofing treatment for roofs, basements rafts against rising dampness, retaining structures, water bodies, reservoirs, balconies, bathrooms, sunken areas, fountains, dome structures, decks and terraces. It can be reinforced with fiber glass mats.

Coverage: CHRYSO TAPELASTIC LIQUID PART (polymer) is mixed with the POWDER PART in the ratio of 1:2.5 by weight with a help of low speed (300-400 rpm) paddle mixer. After the application of CHRYSO TAPELASTIC system, initial air-drying shall be done for 3-6 hours without water. After a maximum period of 6-8 hours after the final application, moist curing shall be done for the next 2-3 days, either by spraying water or by using wet burlap.

Available Packaging: 15 kg kit.

CHRYSO® STRUCO LATEX

SBR Latex Based All-Purpose Waterproofing and Binding Compound.

Application: Used in rendering / plastering work of all brick walls in residential and industrial structures including silos of basement structures and in damp proof course in residential buildings. Effective in repair/maintenance works of existing damp walls, in saltpetre of brick work of marine structures and sea facing buildings.

Coverage: STRUCO LATEX is a versatile product which can be mixed with cement slurry, mortar, concrete or grout. In Cement Slurry: Dilute 100 gms STRUCO LATEX with 400 gms of clean water. Pour 1 kg Cement to this milky solution and keep mixing till it forms a uniform slurry. As Direct Bond Coat: The surface should be thoroughly cleaned and roughened for mechanical key. Mix 2 parts of cement with 1 part of diluted STRUCO LATEX (Latex: Water = 1:1 to 1:4,) and apply evenly over the substrate, using a brush.

Available Packaging: 1 kg, 5 kg, 20 kg and 200 kg container.





CHRYSO® EXCEM V1

Non-Shrink High Strength Ready to Use Cementitious Free Flow Grout.

Application: Machine and steel column foundation.
Anchorage of bolt and steel bar.
Base plate grouting of cold as well as hot rolling mills in steel plants.
Grouting of bearing pads.
Grouting of heavy turbines base.

Coverage: Use mechanical mortar mixers, preferably of the slow speed (250-350 rpm) paddle mixer or revolving drum type mixer. Hand mixing for five minutes rarely achieves the desired result.
For Flowable Mix: 3.75 – 4.75kg of water to 25 kg of EXCEM V1 (W/P Ratio : 0.15 to 0.19).
For Plastic Mix: 3.50 – 4.00kg of water to 25 kg of EXCEM V1 (W/P Ratio: 0.14 to 0.16).
For Drypack Mix: 3.00 – 3.75kg of water to 25 kg of EXCEM V1 (W/P Ratio: 0.12 to 0.15).

Available Package: 25kg waterproof laminated HDPE bag.

CHRYSO® EXCEM MC40

Single Component General Purpose Pre-mixed Flowable Micro Concrete.

Application: EXCEM MC40 is a cementitious repair compound which is used to reinstate damaged and deteriorated concrete for structural repairs and strengthening.

How to Use: Surface laitance and unsound concrete must be chipped away and smooth surface should be made reasonably roughed to provide proper bonding between old concrete to new micro concrete,. After cleaning, saturate the concrete surfaces with clean water. Ensure that the formwork has suitable drainage outlet for excess water so that no free standing water is present on surfaces before applying of EXCEM MC40.

Available Package: 25kg waterproof laminated HDPE bag.



CHRYSO® EXCEM MC60

Single Component General Purpose Pre-mixed Flowable Micro Concrete.

Application: EXCEM MC60 is a cementitious repair compound which is used to reinstate damaged and deteriorated concrete for structural repairs and strengthening.

How to Use: Surface laitance and unsound concrete must be chipped away and smooth surface should be made reasonably roughed to provide proper bonding between old concrete to new micro concrete, After cleaning, saturate the concrete surfaces with clean water. Ensure that the formwork has suitable drainage outlet for excess water so that no free standing water is present on surfaces before applying of EXCEM MC60.

Available Package: 25kg waterproof laminated HDPE bag.

CHRYSO® EXCEM PMC40

Polymer Modified Fiber Reinforced Non- Structural Concrete Repair Mortar.

Application: CHRYSO EXCEM PMC40 is a general purpose cementitious repair compound which is used to reinstate damaged and deteriorated concrete. This product is suitable where above average corrosion and carbonation resistance is required.

How to Use: All surface laitance and unsound concrete must be chipped away so that a reasonable rough, but strong sound surface is provided. All surfaces must be free from oil, grease and dust, this particularly applies to the underside of bed plates, bolts, pipes or concrete surfaces which may have surface contact with the CHRYSO EXCEM PMC 40. Ensure that no free standing water is present on surfaces of foundations or in bolt holes or on the concrete surfaces which to be repaired / encased before applying CHRYSO EXCEM PMC 40.

Available Package: 25kg waterproof laminated HDPE bag.





CHRYSO® EXCEM PMC60

Polymer Modified Fiber Reinforced High Strength Concrete Repair Mortar.

Application: CHRYSO EXCEM PMC60 is a cementitious repair compound which is used to reinstate damaged and deteriorated concrete for structural and cosmetic repairs. This product is suitable where above average corrosion and carbonation resistance is required.

How to Use: All surface laitance and unsound concrete must be chipped away so that a reasonable rough, but strong sound surface is provided. All surfaces must be free from oil, grease and dust, this particularly applies to the underside of bed plates, bolts, pipes or concrete surfaces which may have surface contact with the CHRYSO EXCEM PMC 60. Ensure that no free standing water is present on surfaces of foundations or in bolt holes or on the concrete surfaces which to be repaired / encased before applying CHRYSO EXCEM PMC 60.

Available Package: 25kg waterproof laminated HDPE bag.

CHRYSO® EMALITE SOF

Pre-Mixed Non-Metallic Dry Shake Floor Hardener.

Application: The top surfaces of flooring and paving can be made wear resistant and dustproof. It is ideally suited for use in all types of industrial floors, which are subjected to heavy traffic movement. It can withstand the impact load due to movement of heavy load over the floor topping. It is specially recommended in heavy engineering factories or as workshop floor toppings, hangers, car parks, in warehouses and gangways where frequently trolleys with metal wheels or forklifts carrying heavy load.

Coverage: Type of floor consumption (kg/m²): Light Duty 3.0 – 3.5kg/m², Moderate Duty 4.0 – 5.0kg/m², Heavy Duty 6.0 – 8.0kg/m²

Available Package: 25kg waterproof laminated HDPE bag.



CHRYSO® CWA10

Crystalline Integral Waterproofing Compound for Cement Concrete and Mortar.

Application: Foundations, Sewage treatment plants, Tunnels and subway systems, Underground structures, Dams, Pre-cast structures, Swimming pools and reservoirs, Plastering of exterior walls, Bridge decks, columns beams, Roof and podium slabs and any other areas where high hydrostatic pressure is present.

Dosage: 0.8 to 1 % by wt. of cement /cementitious binder. Curing Follow normal curing.

Available Package: 20 kg laminated waterproof HDPE bag.