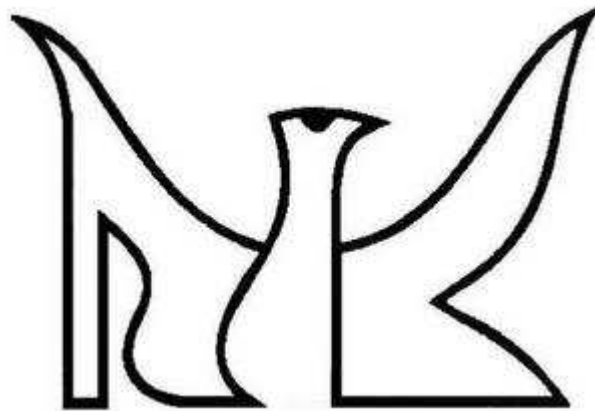

RUIA CHEMICALS PVT. LTD.

An ISO 9001: 2008 Certified Company



**Manufacturer of
Construction Chemicals,
Unsaturated Polyester Resins
& FRP Products**

105/2B Ultadanga Main Road, Kolkata – 700 067, India

☎ : +91 – 33 – 2356 2656 / 7181 / 7182

Fax : +91 – 33 – 2356 3103

Web : www.ruiachemicals.com

Email : info@ruiachemicals.com

Construction Chemicals Product Literature



**RUIA
CHEMICALS PVT. LTD.**



105/2B Ultadanga Main Road, Kolkata – 700067. Ph: (033) 23562656. Fax: (033) 23563103. E-mail: info@ruiachemicals.com

Dear Sirs,

It is a pleasure to introduce ourselves as leading manufacturers of Construction Chemicals and **sole Indian manufacturers of Polycarboxylate Ether** – Third Generation Super-plasticizer.

Our Product '**Indenium 333**' (PCE) outperforms renowned international rivals. It further drives home the advantage of price, delivery and availability over the foreign brands.

Under our roof of Construction Chemicals, we manufacture the following:

- Indegenously developed Polycarboxylate Ether – Third Generation Superplasticizer
- Air entraining agents
- Curing Compounds
- Surface Hardener
- Cement / Resin Capsules
- Light weight repair mortars
- Corrosion Protection Chemicals
- Plasticizers & Other Superplasticizers – (Naphthalene, Melamine, Ligno based)
- Accelerating and Retarding Admixtures
- Shutter Release / Mould Release Oil
- Grouts
- Tile Adhesives
- Polysulphide sealants
- Waterproofing Chemicals

We maintain **ISO 9001:2008** Quality Management System.

Below are some of our valued clients for whom, we are approved suppliers:

1. Indian Oil Corporation Ltd.
2. Paharpur Cooling Towers Ltd.
3. Damodar Valley Corporation
4. Tantia Constructions Ltd.
5. Ordnance Factory, Medak & Ambajhari
6. Kolkata Municipal Corporation

and many more



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Activities other than Construction Chemicals :

Ruia Chemicals P Ltd, was founded in 1975 AD. It started with manufacturing Unsaturated Polyester Resin and soon became a market leader by the grace of its loyal clients, a diligent quality conscious workforce and a technically qualified top management.

It later diversified into GRP Pipes and Tanks, as well as Construction Chemicals.

Ruia Chemicals executed prestigious national projects in GRP like the **20,000 M GRP Pipeline Project** for Indian Oil Corporation Ltd., at Paradeep, Orissa, **worth INR One Hundred Million.**

It has executed bulk export orders for Construction Chemicals.

We are a family of quality conscious workforce and technically educated professionals who endeavour to deliver the best and prize customer loyalty as their greatest assets.

We believe our product guide shall arouse your interest in us and give us an opportunity to serve you.

In anticipation of your kind patronage, we remain.

Yours faithfully,
for **Ruia Chemicals P. Ltd.,**

P. Ruia
Director.

Encl : 1. Company Profile
 2. Construction Chemicals Product Literature.



**RUIA
CHEMICALS
PVT. LIMITED**



105/2B Ultadanga Main Road, Kolkata – 700 067. Ph : +91-33-23562656 / 23567181. Fax : +91-33-23563103. E-mail – info@ruiachemicals.com.

Company Profile

1. Company Name & Address :

RUIA CHEMICALS PRIVATE LIMITED,

105/2B, Ultadanga Main Road,

Kolkata – 700 067. INDIA

Phone No : + 91-33-2356-2656 / 2356-7181

+ 91-33-2356-7182

Fax No. : + 91-33-2356-3103

E-mail : info@ruiachemicals.com

2. Major Products Manufactured :

- A. Unsaturated Polyester Resins.
- B. Epoxy Resin.
- C. FRP Pipes, Tanks & Tubewell Strainers by CNC Filament Winding
- D. FRP Moulded Items.
- E. **Construction Chemicals**

3. Details of Factory Premises & Infrastructure :

A. Area :

(a) Total Area Approx 36,000 Sq. Ft.

(b) Covered Area Approx 22,000 Sq. Ft.

B. Operation :

Factory is run on 3 shifts basis with standby generator in case of power failure.

C. Equipment :

Factory has automated plants and is equipped with appropriate material handling equipment.

D. Quality Control :

All of the chemical testing and mechanical strength tests are done in-house. Laboratory is by trained, technical staff. Regular R & D work is carried out. We interact with the entire spectrum of the Construction & FRP Industry.



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4. Enlisted as approved vendor with :

- A. IOCL - Indian Oil Corporation Ltd.
- B. ONGC - Oil & Natural Gas Corporation
- C. CIDC - Construction & Industrial Development Council
- D. DVC - Damodar Valley Corporation
- E. L&T - Larsen & Toubro
- F. KMC - Kolkata Municipal Corporation
- G. PHED - Public Health Engineering Directorate
- H. OFC - Ordinance Factory, Ambajhari & Medak

5. Certified as approved supplier by :

- A. IRS - Indian Register of Shipping
- B. EIL - Engineers India Ltd.

6. Strengths :

- A. Unit promoted managed by Technocrats.
- B. Our Quality Management System is **ISO 9001:2008** Certified.
- C. **Only Indian manufacturer of Polycarboxylate Ether (Indenium 333 - Third Generation Super-plasticizer) Developed by our competent team of Polymer scientists through consistent R&D of six years.**
- D. First unit in India to indigenously develop, manufacture & market Polyester Resins. All resin manufacturing technology developed in-house, hence better control on all aspects of production and quality.
- E. All machines and equipment for FRP Filament winding also developed in-house. Hence we have better control on all aspects of FRP pipe, FRP strainer and FRP Tank production



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List of some of our Valued Customers

1. Indian Oil Corporation Ltd., Pipelines Division, Noida
2. Essar Construction Ltd., Mumbai.
3. Bridge & Roof Co. (India) Ltd., Mumbai.
4. Aban Constructions Pvt. Ltd., Chennai.
5. Ordinance Factory, Ambajhari & Medak.
6. Gammon India Limited, Mumbai.
7. Rail Coach Factory, Kapurthala.
8. Eastern Railway, Kolkata
9. I.C.F., Perumbur, Tamilnadu.
10. South Eastern Railway, Kolkata
11. Birla Corporation Limited, Kolkata.
12. Paharpur Cooling Towers Ltd., Kolkata.
13. Indian Oil Corporation, Haldia Refinery, Haldia, West Bengal
14. Supreme Paper Mills Ltd., Kolkata
15. Punj Lloyd
16. Tantia Constructions Ltd., Kolkata
17. J K S Fibreglass Pvt. Ltd., Kolkata
18. Fibro Plasticchem India Pvt. Ltd., Kolkata.
19. Kesoram Industry Ltd., Kolkata
20. Synthetic Moulders Ltd., Kolkata
21. M/s. Bhushan Limited, Hooghly
22. Supdt. Engineer (FAWS) C.M.W. & S.A.
P-4, Dobson Lane, Howrah – 711 101



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23. Supdt. Engineer Mechanical – II, P.H.E.D.,
8, Ho-Chi-Minh Sarani, Kolkata – 700 071
24. Society for Sports & Stadiums, Kolkata.
25. Gupta & Associates Tubewells, Kolkata
26. Watertech, Kolkata.
27. P.H.E.D., (Public Health), Govt. of West Bengal.
28. Kolkata Municipal Corporation, Kolkata.
29. Garden Reach Shipbuilders & Engineers Ltd., Kolkata.
30. Harji Engineering Pvt. Ltd., New Delhi,
31. Prashanth Projects Limited., Mumbai.

**INDENIUM 333** : Polycarboxylate Ether (New Generation High Range Superplasticizer)**Description :**

INDENIUM 333 is a ready-to-use high range water reducing concrete admixture emanating from the state-of-the-art Polycarboxylate Technology. **INDENIUM 333** is New Generation Superplasticizer containing carboxylic (COOH) group instead of sulphonic (SO₃H) as in case of Melamine or Naphthalene Formaldehyde Sulphonates.

The power packed (COOH) moiety is absorbed on hydrating cement grain in much greater amount than conventional superplasticizers, resulting in excellent fluidity and yielding a Rheoplastic and Self Compacting Concrete (SCC) at low water-cement ratio.

Due to Steric-Hindrance effect imparted by ether-function hydrophilic chain attached to polymer, superior slump (workability) retention is achievable by use of **INDENIUM 333**.

Advantages :

- Cohesive and non-segregating concrete mixtures.
- Reduced water content for a given slump.
- Small dosage.
- Very suitable for High Strength Concrete (M-40 and above)
- Increased compressive and flexural strength of concrete at all ages.
- Linear water reduction through out the recommended dosage.
- Faster setting time and strength development.
- Faster recycle of Formwork owing to accelerated early strength development.
- More than 35% water reduction in high performance concrete.
- Close textured fair-faced smooth concrete.
- Rheoplastic, Self Leveling and Self Compacting Concrete.
- Long workability and extremely good slump retention.

Technical Service :

Ruia Chemicals Pvt. Ltd. is an ISO 9001-2008 Certified organization manned by Polymer Chemists, Concrete Technologists and Material Scientists responsible for maintaining consistency and quality of products by Laboratory and in-process tests to satisfy our valued customers.

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Tel. : +91 – 33 – 2356 2656 / 7181. Fax : +91 – 33 – 2356 3103.

Email : info@ruiachemicals.com Website : www.ruiachemicals.com

Technical Specification :

Appearance	:	Beige Coloured Liquid
Solubility in water	:	100 %
Specific Gravity	:	1.13 ± 0.03
pH Value	:	6.5 ± 1
Chloride Content (%)	:	Complies with BS 5075

Standard :

Confirms to IS : 9103-1999 and ASTM C 494/C. 494M

Dosage :

0.2 to 1.2 Kg / 100 Kgs. cementitious material for most concrete mixes using typical concrete ingredients. However, for silica fume concrete, the dosage may fall outside recommendation and site trials, in case of critical workability and setting time parameters, are pre-requisites to fix optimum dosage.

To be mixed with water and added to cement aggregate mixture.

Packing :

25 Kgs., 225 Kgs.

Material Safety Data :

Non toxic and non flammable.

Avoid skin contact as far as possible. On contact, wash the affected area with water.

Store under shed, away from heat source.

Shelf Life :

Best before 12 months.

Product Bulletin Code : OC: 001

TRIAZINE L10 : Pure Polymelamine Formaldehyde Sulfonate Concrete Superplasticizer

Description :

TRIAZINE L10 is an aqueous solution of poly melamine Formaldehyde Sulfonate manufactured by introducing SO_3H group into precondensate oligomer of Melamine (S-Triamino Triazine) and formaldehyde.

It is a high range water reducing superplasticizer capable of yielding a pumpable rheoplastic concrete without segregation of aggregates from cement paste due to its surface absorption on hydrating cement grains and fine particles. It forms a lubricating film thus reducing the inner friction of heterogeneous concrete mix and thereby imparting waterproofing properties to the concrete.

TRIAZINE L10 is a powerful cement dispersing agent with upto 30 percent water reducing capacity to achieve very high flowability, early strength, as well as permeability resistant durable concrete.

Advantages :

- Super-plasticized concrete without segregation.
- Reduced pour time.
- Earlier knock down of form work.
- Quicker moulds recycle.
- Waterproof characteristics of concrete.
- Cement saving (15 to 20 %) at same workability.
- Water Reduction up to 30 %
- Self leveling concrete without efflorescence and demixing of concrete.
- Significant reduction of internal friction and thixotropy making the concrete pourable into places around congested reinforcement requiring little (or no) vibration to achieve optimum compaction.
- Close textured fair faced surfaces without honey combs.
- Reduction in shrinkage, creep and crack formation.
- High early strength – 7 day strength is $4/5^{\text{th}}$ of 28 day strength (approx.)
- Precast member low slump concrete.

Technical Service :

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RUIA CHEMICALS PVT. LTD.

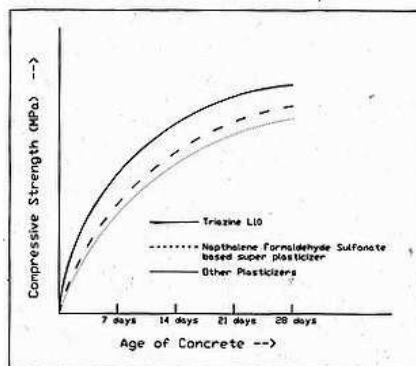
105/2B Ultadanga Main Road, Kolkata – 700 067. India.

Tel. : +91 – 33 – 2356 2656 / 7181. Fax : +91 – 33 – 2356 3103.

Email : info@ruiachemicals.com Website : www.ruiachemicals.com

Technical Specification :

Appearance	: Colourless to Pale Yellow
Solubility in Water	: 100 %
Specific Gravity	: 1.20 ± 0.03
pH Value	: 8.5 ± 1
Chloride Content (%)	: Complies with BS 5075
Solid Content (%)	: 40 ± 2
Air Entrainment	: Almost Nil, detrains air from Harsh mix.



Standard :

Confirms to IS : 9103-1999 and ASTM C 494 Type F

Dosage :

Depending on grade of concrete cement factor and water/cement ratio, the dosage of **TRIAZINE L10** may vary from 0.5 % to 2.0 % by weight of cement. The optimum dose can be evaluated by trial.

Packing :

25 Kgs., 225 Kgs.

Material Safety Data :

Non toxic, non hazardous and non flammable.
Store under shed, away from heat source.

Shelf Life :

Best before 12 months.

Product Bulletin Code : OC: 002



RUIA ULTRAFLOW HS : Slump Retaining Concrete Superplasticizer

Description :

RUIA ULTRAFLOW HS is a high range water reducing and slump retaining concrete admixture based on anionic poly condensate polymers with powerful cement fluidizing characteristics coupled with enhanced workability.

For tropical concreting under stringent conditions of temperature and low humidity, it extends the workability of concrete / mortar effectively without set retardation, associated with development of very good early and long age strength.

RUIA ULTRAFLOW HS is based on Naphthalene Formaldehyde Sulfonate and is adjusted for optimum slump loss control thus retaining workability in concrete mixes even if the mix is low in cement content or includes poorly graded aggregates.

Advantages :

- High slump at low dosage for stiff Mixes with low water – cement ratio.
- More than 20 % water reduction.
- Very good slump Retaining characteristics.
- Accelerated hardening after commencement of setting.
- Higher strength at same water – cement ratio.
- Compatible with OPC, PSC, and PPC grades of cement.
- Cement saving by water-reduction and / or OPC substitution by Fly ash GGBS in case of in-situ concreting or at Batching Plant.
- Excellent for Ready Mix Concrete for keeping the mix pumpable in long haulage / summer concreting.
- No cold joints in slip forming, yielding monolithic concrete.
- Cohesive concrete due to insignificant bleeding.
- Low air entrainment.
- Reduction in shrinkage, creep and crack formation.

Technical Service :

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RUIA CHEMICALS PVT. LTD.

105/2B Ultadanga Main Road, Kolkata – 700 067. India.

Tel. : +91 – 33 – 2356 2656 / 7181. Fax : +91 – 33 – 2356 3103.

Email : info@ruiachemicals.com Website : www.ruiachemicals.com

Use :

- Ready Mix Concrete.
- Small and Large Batching Plants
- In-situ Piling Concrete.
- Slip forming.
- High performance and durable concrete for Hydro and Thermal power plants.
- Concrete pavement and road ways.

Technical Specification :

Appearance	: Brown Liquid
Solubility in Water	: 100 %
Specific Gravity	: 1.20 ± 0.02
pH Value	: 8 ± 1
Chloride Content (%)	: Complies with BS 5075
Solid Content (%)	: 40 ± 1

Standard :

Confirms to IS : 9103-1999 and ASTM C 494 Type G

Dosage :

0.5% to 1.0% by weight of cementitious material depending on cement content and water – cement ratio. At extremely high temperature the dosage can be further increased. Optimum dosage is arrived at, by site trials. **RUIA ULTRAFLOW HS** can be mixed with a portion of gauge water before addition to wet concrete to cause high initial slump

Packing :

25 Kgs., 225 Kgs.

Material Safety Data :

Non toxic, non hazardous and non flammable.
Store under shed, away from heat source.

Shelf Life :

Best before 12 months in unopened condition.

Product Bulletin Code : OC: 003

**RUIA CONPLAST GP** : General Purpose Water Reducing Concrete Admixture**Description :**

RUIA CONPLAST GP is a versatile water reducing admixture, formulated from blend of semi synthetic and natural polymeric substances capable of reducing water-cement ratio (between 10 % and 12 %) to impart fluidity to mixes of medium grade concrete with attainment of high mechanical strength and durability.

At same water-cement ratio **RUIA CONPLAST GP** is an excellent workability Aid.

Advantages :

- Increased strength – water reduction (up to 12 %) leads to high ultimate strength without increase of cement factor.
- Improved durability by increase of density and decrease of permeability.
- Improved workability at same Water/Cement ratio.
- High Mechanical strength at same Water/Cement ratio.
- Chloride Free.
- Compatible with all types of Portland cement including slag and pozzolana.

Use :

- General Purpose Concrete
- Small on-site Batching Plants
- Useful as a workability aid
- Low cost admixture for increasing strength of concrete.

Technical Specification :

Appearance	: Brown Liquid
Solubility in Water	: 100 %
Specific Gravity	: 1.20 ± 0.02
pH Value	: 8 ± 1
Chloride Content (%)	: Complies with BS 5075
Solid Content (%)	: 40 ± 1

Standard :

Confirms to IS : 9103-1999

Dosage :

Usually 0.2 % to 0.5 % by weight of cementitious material.

Packing :

25 Kgs., 225 Kgs.

Material Safety Data :

Non toxic, non hazardous and non flammable.
Store under shed, away from heat source.

Shelf Life :

Best before 12 months in unopened condition.

Product Bulletin Code : OC: 004

Technical Service :

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105/2B Ultadanga Main Road, Kolkata – 700 067, India.

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Email : info@ruiachemicals.com Website : www.ruiachemicals.com

**RUIA FAST PLAST** : Accelerating Water Reducing Admixture (Chloride Free)**Description :**

RUIA FAST PLAST is an accelerating-cum water reducing admixture for early setting and strength gain of concrete.

RUIA FAST PLAST is completely free from all forms of chloride which are responsible for corrosion of metal rebars of RCC. **RUIA FAST PLAST** is based on inorganic accelerators, which not only speed up setting of ordinary Portland cement (OPC) but are equally capable of promoting hydration of Portland Slag Cement (PSC) and Portland Pozzolana Cement (PPC) composites. It is internally admixed with Melamine based high range water reducer, which imparts high strength to concrete, at all ages, together with high impermeability against water seepage and chemical attack.

Advantages :

- Chloride Free, therefore safe for reinforced and pre-stressed concrete.
- Generates exceptionally high early strength.
- Useful for Low temperature concreting (e.g, 5^oC)
- Frost resistant.

Test Data :

Temperature : 20 °C
Cement : OPC 43.
Grade of Concrete : M-30

Dosage % Ruia Fast Plast	Initial Setting (Hrs.)	Final Setting (Hrs.)
Nil	3	4 ¹ / ₂
2.5 %	1 ¹ / ₂	3 ¹ / ₂

Dosage % Ruia Fast Plast	Compressive Strength Data (MPa)				
	12 Hr.	24 Hr.	3 Day	7 Day	28Day
Nil	1.1	6	17	27	38
2.5 %	1.2	12	25	36	47

Technical Specification :

Appearance : Brown Liquid
Solubility in Water : 100 %
Specific Gravity : 1.26 ± 0.02
pH Value : 8 ± 1
Chloride Content (%) : Complies with BS 5075

Standard :

Confirms to IS : 9103-1999

Dosage :

2.0 to 3.5 Kg. per 100 Kg. cement depending on targeted strength, concreting temperature and workability requirement.

Packing :

25 Kgs., 225 Kgs.

Material Safety Data :

Non toxic, non hazardous and non flammable.
Avoid skin contact as far as possible. On contact, wash the affected area with water.
Store under shed, away from heat source.

Shelf Life :

Best before 12 months

Product Bulletin Code : OC: 005

Technical Service :

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Email : info@ruiachemicals.com Website : www.ruiachemicals.com



RUIAIREN 50 : Air Entraining Concrete & Mortar Admixture

Description :

RUIAIREN 50 is an Air Entraining admixture based on synthetic organic surface active agents for intentional introduction of controlled amounts of minute air bubbles into a concrete or mortar mix.

The principal advantage of air entrained concrete is its enhanced durability against cycles of climatic freezing and thawing (frost resistance) as well as improvement of cohesion and workability of concrete mixes where poorly graded aggregates have to be used at construction sites.

RUIAIREN 50 introduces plenty of non-coalescing air bubbles which act as flexible ball bearings and modify the properties of plastic concrete in respect of workability, segregation, bleeding and finishing quality of the concrete.

Advantages :

- Increased frost, crack and deicing salt resistance
- Improvement in workability.
- Reduction in tendency of segregation.
- Increased resistance to chemical attack.
- Reduction in sand content.
- Reduction of unit weight.
- Reduction in water content.
- Reduction in alkali aggregate reaction.
- Decreased permeability.
- Better Flowability of cement sand mortar.
- As Mortar Plasticizer – reduction in rebound loss and increase in productivity of masons.

Technical Specification :

Appearance	: Brown Liquid
Solubility in Water	: 100 %
Specific Gravity	: 1.10 ± 0.03
Chloride Content (%)	: Complies with BS 5075

Standard :

Confirms to IS : 9103-1999 and ASTM C 233-00

Dosage :

0.05% to 0.3% by weight of cement for most mixes. Optimum dose is to be determined by air meter test at site. Plain concrete may contain 3% to 6% and reinforced concrete upto 4% air respectively. The dosage of **RUIAIREN 50** has to be adjusted with water reduction of mix to compensate for loss of strength, at desired level of air incorporation.

Packing :

25 Kgs., 225 Kgs.

Material Safety Data :

Non toxic, non hazardous and non flammable.
Avoid skin contact as far as possible. On contact, wash the affected area with water.
Store under shed, away from heat source.

Shelf Life :

Best before 12 months

Product Bulletin Code : OC: 006

Technical Service :

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Email : info@ruiachemicals.com Website : www.ruiachemicals.com



RUGUNIT LIQUID : Alkali Free Accelerator for Guniting & Shotcreting

Description :

RUGUNIT LIQUID is a state-of-the-art quick setting and water proofing admixture in liquid form for direct use in wet shotcreting / guniting operations. It is added to the water prior to its addition to dry cement – aggregate mixture.

RUGUNIT LIQUID is completely free from alkali silicate, aluminate, carbonate and caustic alkalis which are detrimental for development of mechanical strength of hardened mortar or concrete. Uses of such chemicals not only lower the strength but may result in spalling of structure in course of time due to alkali – aggregate reaction in contact with reactive siliceous rocks.

Design Engineers and Concrete Technologists are wary of such risk and advocate use of alkali free admixture for guniting work to ensure long term durability of structure.

RUGUNIT LIQUID is thus tailor-made keeping in view the strength, durability and impermeability of structure.

Advantages :

- Completely free from Alkali metal salts.
- Allows spraying to take place even on wet surface subject to slight infiltration.
- Speeds up work and contributes to superior water tightness of sprayed concrete linings.
- Improves overhead spraying and reduces rebound loss.
- Rules out Alkali-Silica Reaction with reactive siliceous rocks resulting in spalling of Concrete at any age.

Use :

- Wet shotcrete.
- Grouting (Back Filling).
- Tunnels, Galleries, Milling.
- Slope stabilization & pit protection.

Technical Service :

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Use :

- Embankment and excavations.
- Concrete repair work.
- Shoring operation.
- Swimming Pool.

Technical Specification :

Appearance	: Creamy aqueous dispersion
Solubility in Water	: Freely miscible
Specific Gravity	: 1.4 ± 0.05
pH Value	: 2 to 3
Chloride Content (%)	: Complies with BS 5075
Free from Sodium, Pottasium and Lithium salts.	

Dosage :

Normal dosage is 5% to 10% by weight of cement. The optimum dosage should be determined by trials at site. **RUGUNIT LIQUID** is to be admixed by means of a suitable dispensing pump. It is compatible with **TRIAZINE L10** superplasticizer for accelerated strength development.

Packing :

25 Kgs., 225 Kgs.

Material Safety Data :

Non toxic, non hazardous and non flammable.
Avoid skin contact as far as possible. On contact, wash the affected area with water.
Use of goggles and hand gloves while handling is strongly recommended

Shelf Life :

Best before 12 months

Product Bulletin Code : OC: 007

**RUGUNIT POWDER : Alkali Free Accelerator for Guniting & Shotcreting****Description :**

RUGUNIT POWDER is a state-of-the-art quick setting and water proofing admixture in Powder Form. It is in ready-to-use state for dry spray/guniting mixes of concrete and mortar.

RUGUNIT POWDER is completely free from alkali silicate, aluminate, carbonate and caustic alkalis which are detrimental for development of mechanical strength of hardened mortar or concrete. Uses of such chemicals not only lower the strength but may result in spalling of structure in course of time due to alkali – aggregate reaction in contact with reactive siliceous rocks.

RUGUNIT POWDER is thus tailor-made keeping in view the strength, durability and impermeability of structure.

Advantages :

- Completely free from alkali metal salts.
- Allows spraying to take place even on wet substrate subject to slight infiltration.
- Reacts in the mix to promote cement hydration process resulting accelerated strength development within 24 hours.
- Improved overhead and lateral surface spraying.
- Reduced Rebound loss.
- Steady development of strength with age.
- Rapid setting on Work Face.

Use :

- Dry spray guniting mixes for tunnels and galleries.
- Securing rock Faces, embankment and excavation.
- Swimming pool.
- Concrete repair and rehabilitation work.

Method of Use :

The required amount of **RUGUNIT POWDER** is mixed with dry cement-sand-gravel mixture. Large quantity of dry – mix can be prepared, provided all dry aggregate is used and protected from moisture. When guniting is interrupted, care must be taken to ensure that water does not flow back in the supply hose, causing the mix to set.

Technical Service :

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RUIA CHEMICALS PVT. LTD.

105/2B Ultadanga Main Road, Kolkata – 700 067. India.

Tel. : +91 – 33 – 2356 2656 / 7181. Fax : +91 – 33 – 2356 3103.

Email : info@ruiachemicals.com Website : www.ruiachemicals.com

Test Data :

Temperature : 28 °C
 Relative Humidity : 62%
 Cement : OPC 43.
 Method of Test : Gilmore Needle Penetration,
 ASTM C 1102-68

Dosage % Rugunit Powder	Initial Set Time (mins)	Final Set Time (mins)
3% to 4%	3 to 4.5 mins	25 to 30 mins
5% to 7%	2 to 3 mins	17 to 22 mins

Technical Specification :

Appearance : Free flowing white powder
 Solubility in Water : Freely miscible
 Specific Gravity : 1.6 ± 0.02
 pH Value : Less than 7
 Chloride Content (%) : Complies with BS 5075
 Free from Sodium, Potassium and Lithium salts.

Dosage :

Dosage is usually 3% to 4% by weight of cement. When increased to 5% to 7%, the setting is faster with reduced curing time. However, optimum dosage should be evaluated at site by trial with the specified cement.

Packing :

25 Kgs. Bag

Material Safety Data :

Non toxic, non flammable.

Avoid ingestion.

On contact with skin, wash the affected area with water.

Use of goggles and hand gloves while handling is strongly recommended.

Store in a cool and dry place.

Shelf Life :

Best before 12 months in unopened condition.

Product Bulletin Code : OC: 008



RUIA POLYCURE WP : Concrete Curing Compound – Synthetic Resin Based

Description :

RUIA POLYCURE WP is a liquid membrane forming compound for curing concrete. It is composed of water soluble synthetic resin and micro-ionized leafing aluminium metal powder dispersed in water.

RUIA POLYCURE WP, when sprayed or brushed on newly laid concrete surface, forms a tough and elastic membrane, thereby reducing the loss of water from concrete during early-hardening period. Being a white pigmented membrane forming compound, it serves the additional purpose of reducing the temperature rise in concrete exposed to radiation from sun.

It is a water based coating with the unique feature that it is totally free from volatile and flammable organic solvents such as mineral hydrocarbons (Petroleum and Coal Tar distillates) which are not only highly toxic to environment, but also their exposure is considered a health and safety hazard to workers.

Use :

- Concrete Roads and Highways.
- Airport Runway.
- Apron and hard standing.
- Roof decks and shell-roofs.
- Retaining walls.
- Pre-stressed Beams and Peers.
- Canal Lining.
- Exposed surface of dams.
- Sloping, angular and vertical surfaces.

Application Equipment :

Low Pressure spray or soft brush.

Clearing liquid: Water, the universal solvent.

Standard :

ASTM C 309-98a (Liquid membrane forming compound for curing concrete), Type 2 (white – Pigmented) class B (Resin as defined in terminology D883).

Technical Service :

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Email : info@ruiachemicals.com Website : www.ruiachemicals.com

Technical Specification :

Appearance	: Silver Coloured Liquid
Solubility in Water	: Freely miscible
Specific Gravity	: 1.03 ± 0.02
Viscosity @ 25 °C	: 190-220 Centipoises
Drying Time	: 60 Minutes (max)
Resin	: Polyester Vinyl Graft Co-polymer
Reflectance	: Not less than 75% of day light.
Water retention efficiency index (Typical)	: 95% (ASTM – 156-98)

Coverage :

Depending on surface porosity, wind speed, humidity and temperature, coverage of a single spray-coat of **RUIA POLYCURE WP** varies from 6 to 8 sq. m / kg. It is to be sprayed or brushed when the surface water has disappeared from concrete and the surface has hardened sufficiently and before it starts to dry.

Special Instruction :

Before start of work the contents are thoroughly mixed to ensure uniform dispersion of Pigment.

Packing :

25 Kgs., 225 Kgs.

Material Safety Data :

Non toxic, non flammable.

On contact with skin, wash the affected area with water.

Use of goggles and hand gloves while handling is strongly recommended.

Shelf Life :

Best before 12 months in unopened condition.

Product Bulletin Code : OC: 009



RUIA WAXCURE WP : Concrete Curing Compound – Wax Emulsion Based

Description :

RUIA WAXCURE WP is a liquid membrane forming compound for curing concrete. It is based on an aqueous emulsion of microcrystalline wax in which opaque rutile grade Titanium-di-oxide pigment is uniformly dispersed (white pigmented)

RUIA WAXCURE WP when sprayed, brushed or roller coated on newly laid concrete surfaces quickly forms a barrier film to reduce the loss of water during early hardening stage, without interference to normal process of curing. The water of the concrete matrix is held for longer period restricting surface water evaporation enabling homogeneous curing. It serves the additional purpose of reducing the temperature rise in concrete exposed to radiation from sun due to superior light reflecting character of opaque TiO_2 Pigment.

Use :

- Concrete Roads and Highways.
- Airport Runway.
- Bridge Decks
- Roof decks and shell-roofs.
- Retaining walls.
- Pre-stressed Beams and Peers.
- Canal Lining.
- Exposed surface of dams.
- Sloping, angular and vertical surfaces.

Application Equipment :

Low Pressure spray, soft brush and roller.
Automatic spray equipment attached to paver machines for concrete highway.

Standard :

ASTM C 309-98a (Liquid membrane forming compounds for curing concrete), Type 2 (White Pigmented), Class A and BS 7542.

Technical Service :

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Technical Specification :

Appearance	: Milky White Liquid
Solubility in Water	: Freely miscible
Specific Gravity	: 1.02 ± 0.02
Drying Time	: Within 2 hours (max)
Reflectance	: Not less than 70% of day light.
Water retention efficiency index (Typical)	: 90% (ASTM – 156-98)

Coverage :

8 to 12 square meter per kg based on multiplicity of coat, ambient temperature, humidity and wind speed.

Special Instruction :

Before start of work the contents are thoroughly mixed to avoid settlement of Pigment.

Packing :

25 Kgs., 225 Kgs.

Material Safety Data :

Non toxic, non flammable.

On contact with skin, wash the affected area with water.

Use of goggles and hand gloves while handling is strongly recommended.

Shelf Life :

Best before 12 months.

Product Bulletin Code : OC: 010



RUIA MRA OB : Oil Based Mould Releasing Agent

Description :

RUIA MRA OB is a low viscosity mineral oil based shutter release agent. **RUIA MRA OB** is ready for direct application and use.

Advantages :

- Minimum cleaning of shutters before re-use
- Extended life of frame work.
- Can be used on all types of frame work.
- Improved finish : stain and air free, fair faced concrete
- Non corrosive to steel.
- Dirt-free concrete surface.
- High Coverage

Use :

- To provide quick, clean and easy stripping of moulds or frame work.
- To obtain a clean and smooth concrete surface.
- To protect steel and wooden frame work.

Application :

Apply only one coat of **RUIA MRA OB** by brush, roller or spray on the clean surface.

After application, **RUIA MRA OB** should be allowed to dry, before concreting is carried out.

Technical Specification :

Appearance : Dark Brown Liquid
Specific Gravity : 0.82 ± 0.03 at 27°C

Coverage :

For Wood : 35 to 40 sq. mtr/ltr
For Steel : 40 to 50 sq. mtr/ltr

Packing :

25 Kgs., 225 Kgs.

Material Safety Data :

Non toxic, non flammable.
On contact with skin, wash the affected area with water.
To be stored under shed, away from heat and light source.

Shelf Life :

Best before 12 months.

Product Bulletin Code : OC: 011

Technical Service :

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RUIA MRA WT : Water Thinnable Mould Releasing Agent

Description :

RUIA MRA WT is a combination of refined emulsified mineral oil. When diluted with water, it produces a chemical release agent. It has the economy of conventional oil with outstanding properties of a stable release agent.

Advantages :

- Can be diluted with water for use.
- Minimum cleaning of shutters before re-use
- Extended life of frame work.
- Can be used on all types of frame work.
- Improved finish : stain and air free fair faced concrete
- Non corrosive to steel.
- Dirt-free concrete surface.

Use :

- To provide quick, clean and easy stripping of moulds or frame work.
- To obtain a clean and smooth concrete surface.
- To protect steel and wooden frame work.

Technical Specification :

Appearance	: Light Brown Liquid
Solubility in Water	: Freely miscible
Specific Gravity	: 0.84 to 0.86 at 27°C
Dilution Ratio	: RUIA MRA WT : Water = 1:6 (max)

Coverage :

After Dilution -

For Wood : 30 to 40 sq. mtr/ltr

For Steel or Plastic : 20 to 60 sq. mtr/ltr

Packing :

25 Kgs., 225 Kgs.

Material Safety Data :

Non toxic, non flammable.

On contact with skin, wash the affected area with water.

To be stored under shed, away from heat and light source.

Shelf Life :

Best before 12 months.

Product Bulletin Code : OC: 012

Technical Service :

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RUIA FERRO FLOOR M : Metallic Abrasion Resistant Floor Hardener

Description :

RUIA FERRO FLOOR M is a specially manufactured metallic aggregates admixture containing cement and stone / granite chips to provide a very hard and tough surface to flooring and paving, making them wear proof, dust proof, waterproof and grease proof.

Advantages :

- Provides built-in wear resistance to Concrete Floor.
- Eliminates dusting.
- Makes Floor water-proof / oil resistant.
- Imparts high abrasion resistance which makes the floor suitable for movement of Steel Wheel, Heavy Truck, Forklift, Crane etc.
- Economical.
- Easy to apply.

Use :

Used for pavements and floors where hardness, anti-skid, abrasion and impact resistance properties are required.

For example footpaths, godowns, warehouses, roadways where metal wheeled carts ply, runway, heavy traffic lanes, service stations, parking lots, skating rinks, playing courts, garages, work shops, foundries, etc.

Technical Specification :

Appearance	: Metallic Gray
Water Absorption	: 5% to 6%
Abrasion Resistance	: 1.6 (mean)

Application :

The substrate concrete on which **RUIA FERRO FLOOR M** is to be broadcast, should be a least M-20 grade, prepared with a low water-cement ratio, preferably admixed with a water reducing superplasticizer like **TRIAZINE L10**.

Technical Service :

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Application :

For Light Duty Flooring :

After the bleed water has evaporated a dry mix of 1 part **RUIA FERRO FLOOR M** and 4 parts of cement has to be sprinkled and finished with steel trowel.

The Thickness of the hard top flooring varies from 3 to 6 mm over a substrate concrete of 35 to 45 mm

For Heavy Duty Flooring :

After the bleed water has evaporated a mix of 1 Part **RUIA FERRO FLOOR M**, 4 parts of cement and 2 Parts of 6 mm down aggregate to be mixed with 0.45 water:cement ratio has to be laid and finished with steel trowel.

Broadcasting is to be done by hand and immediately the floor top should be smoothed either by hand or mechanically.

Over-trowelling should be strictly avoided.

Finishing should be done competently and power float can be used, if desired.

Curing should be done as per standard practice for 28 days.

The floor can be opened to light vehicular traffic from 7 days onwards and can be put to full use after 28 days.

Coverage :

For Light Duty Flooring : 1.5 Kgs for 1 sq. M

For Heavy Duty Flooring : 2.0 Kgs for 1 sq. M

Packing :

50 Kgs. Bag

Shelf Life :

Best before 12 months in unopened condition.

Product Bulletin Code : OC: 013



RUIA FERRO FLOOR NM : Non Metallic Industrial Flooring Aggregate

Description :

RUIA FERRO FLOOR NM is a factory processed and specially graded non-oxidizing, non-magnetic, non-metallic and chemically inert mineral aggregate floor topping, free from oil and grease.

Advantages :

- Provides built-in wear resistance and produces high abrasion resistant floor surface.
- Imparts extreme surface density, which resists oil and water penetration.
- May be used for areas in the open and areas which get continuously wet.
- Creates non-rusting and easy to maintain surfaces.

Use :

RUIA FERRO FLOOR NM, when trowelled into the surface of concrete floors, forms a toughened hard-wearing surface, suitable for industrial use.

It is recommended for factory floors, warehouses, hangers and car parks that are subjected to heavy traffic and where there is a high concentration of electrical installations.

Technical Specification :

Appearance	: Grayish Granular Powder
Water Absorption	: 1% to 2%

Properties :

Improvement of Abrasion Resistance/Wear Resistance :
215% - 320% over controlled concrete
(Tested as per IS – 1237, 1980)

Compressive Strength : 50 – 75 N / Sq.mm
(Tested per IS – 516, 1959)
Applicable for M-30 to M-45 grade of concrete

Technical Service :

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Application :

RUIA FERRO FLOOR NM is dry mixed in the ratio 2:1 with cement, broadcast evenly over the surface of freshly laid concrete and then the trowel led to a uniform and smooth finish. The floor concrete should be structurally sound and placed in accordance with good concrete practice. The water:cement ratio should be kept to a minimum consistency with the need to produce a fully compacted concrete without excess water coming to the surface. Particular care must be taken at the corners and edges of bays, hand ramming and firm troweling being carried out to ensure that the level can be maintained throughout the subsequent troweling operations.

Two Bags (100 Kg) of **RUIA FERRO FLOOR NM** one bag (50 Kg) of Portland cement should be thoroughly dry mixed on a clean, flat surface. Water must not be added.

The **RUIA FERRO FLOOR NM** / Cement mix should be broadcast in two equal stages evenly over the surface of freshly laid concrete as soon as the surface water has evaporated. Immediately after each stage of broadcasting of **RUIA FERRO FLOOR NM** / Cement mixture the first trowelling should be carried out, either by hand or by means of a power float. This should be followed by a final hand trowelling to remove any disc marks. The floor must be thoroughly cured.

Coverage :

This varies from 3 to 7 Kg per Sq. Mtr. depending on the type of floor as under :

Moderate Duty	: 3 Kg/m ²
Medium Duty	: 5 Kg/m ²
Heavy Duty	: 7 Kg/m ²

Packing :

50 Kgs. Bag

Shelf Life :

Best before 12 months in unopened condition.

Product Bulletin Code : OC: 014



RUIA GROUT GP : General Purpose Cementitious Grout

Description :

RUIA GROUT GP is a general purpose ready mix, cementitious, ready to use grout in powder form which when mixed with requisite quantity of water, provides free flow and non shrink properties.

Advantages :

RUIA GROUT GP is a most economical and easy to use material, requiring simple addition of water. It is easy to mix and apply and exhibit high flow characteristics, rapid strength development, adjustable consistency and high final strength of up to 40N/mm^2 (28 days)

It does not segregate and bleed on impact. It is vibration resistant, non-corrosive to steel and iron, non-toxic and safe to handle.

Use :

RUIA GROUT GP is used for anchoring of bolts base plate grouting under foundations. It is an expansive grout to counteract the cement shrinkage and hence should be retained from all sides. Normal curing should be carried out in the vicinity of applications. **RUIA GROUT GP** achieves 50% to 60% strength in 3 days.

Technical Specification :

Appearance	:	Gray Powder
Bulk Density	:	2080 to 2180 Kg/M ³ .
Expansion	:	0.1% to 0.5%
Compressive Strength		
After 3 Days	:	25 N/mm ²
After 28 Days	:	40 N/mm ²

Application :

Measured quantity of water and grout powder should be thoroughly mixed for 5 minutes to get free flow grout. Plastic grout can be obtained with less water. For dry packing still less water should be used. The water powder ratio can be varied from 0.18 to 0.26

Packing :

25 Kgs., 50 Kgs. Bag

Shelf Life :

Best before 6 months in unopened condition.

Product Bulletin Code : OC: 015

Technical Service :

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RUIA GROUT HS : Non Shrink High Strength Cementitious Grout

Description :

RUIA GROUT HS is an ultra-high strength, cementitious, non-shrink, ready-to-use grout in powder form, with a free flow property.

Advantages :

RUIA GROUT HS is a most economical and easy to use material, requiring simple addition of water. It is easy to mix and apply and exhibit high flow characteristics, rapid strength development, adjustable consistency and high final strength of up to 55N/mm^2 (28 days)

It does not segregate and bleed on impact. It is vibration resistant, non-corrosive to steel and iron, non-toxic and safe to handle.

Use :

RUIA GROUT HS is used for grouting under the bolt pockets and base plates, grouting for all equipments, all types of machineries in cement textile paper and steel industries, bridge bearing pads, columns, precast construction etc.

Technical Specification :

Appearance	:	Gray Powder
Bulk Density	:	2200 to 2230 Kg/M ³ .
Expansion	:	0.1% to 0.5%
Compressive Strength		
After 3 Days	:	35 N/mm ²
After 28 Days	:	55 N/mm ²

Application :

Measured quantity of water and grout power should be thoroughly mixed for 5 minutes to get free flow grout. Plastic grout can be obtained with less water. For dry packing still less water should be used. The water powder ratio can be varied from 0.18 to 0.26

Packing :

25 Kgs., 50 Kgs. Bag

Shelf Life :

Best before 6 months in unopened condition.

Product Bulletin Code : OC: 016

Technical Service :

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RUIA ULTRAFLOW PGA : Non Shrink Polymeric Waterproof Grouting Admixture

Description :

RUIA ULTRAFLOW PGA is a non-shrink plasticizing admixture in powder form, for incorporation in neat cement grout, or for injection, to make concrete waterproof and to consolidate structural stability.

Due to the presence of polymer, it imparts high fluidity to the mix and strong adhesion property, at the time of hardening of concrete.

Advantages :

- Drastically improves the fluidity and flowability of the mix.
- Ensures high early strength and rapid gain of later strength.
- Increases flexural and tensile strength of concrete.
- Provides additional resistance to dynamic and repetitive loading.
- Compensates cement shrinkage by controlled expansion.

Use :

RUIA ULTRAFLOW PGA is used as an admixture for injection grouting to effectively waterproof and stop leaks in underground structures, basements, tunnels, walls of elevators, retaining walls, dams, water reservoirs, pressure ducts and other water retaining structures.

Technical Specification :

Appearance	:	Yellow/Ash coloured powder
Compatibility with Cement	:	Compatible with all grades of cement like OPC, PPC or PSC

Dosage :

The dosage varies from 0.5% to 2% by weight of cement. The optimum dosage depends on the nature of the work.

Application :

RUIA ULTRAFLOW PGA is admixed with neat cement mixes to a suitable consistency and injected under pressure, preferably by a positive displacement pump through nozzle. The surface of the concrete/rock should be properly sealed/patched to prevent the grout from coming out. **RUIA ULTRAFLOW PGA** should be mixed uniformly with dry cement, before use.

Packing :

1 Kg., 5 Kgs., 25 Kgs. Bag

Material Safety Data :

Non toxic and non flammable.
Avoid skin contact as far as possible. On contact, wash the affected area with water.
Store under shed, away from heat source.

Shelf Life :

Best before 12 months in unopened condition.

Product Bulletin Code : OC: 017

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Tel. : +91 – 33 – 2356 2656 / 7181. Fax : +91 – 33 – 2356 3103.

Email : info@ruiachemicals.com Website : www.ruiachemicals.com



RUIA SEALANT PS : Polysulfide Sealant for Expansion Joint

Description :

RUIA SEALANT PS is a two-component system. After mixing the two components, the mixed material provides a strong and highly elastic sealant through cross-linking process. It is available in two grades.

Gun grade is applied on non-sag-type surfaces like vertical and inclined expansion-contraction joints.

Pouring type is applied for horizontal joints, conforming to IS 12118 – 1987 & BS 4254-1983.

Use :

RUIA SEALANT PS is used for both horizontal & vertical expansion-contraction joints in all types of building and civil engineering construction, such as :

- Retaining wall
- Precast Concrete Element.
- Underpasses and Tunnels.
- Bridges.
- High and Low Rise buildings and wherever a permanently flexible seal is required.
- **RUIA SEALANT PS** pouring grade is designed specially for runways, subways, rigid pavements joints, horizontal joints etc.

Application :

Surface Preparation :

Entire surface must be clean, dry and free from loose particles. Correct joint depth can be determined by inserting compressible board tightly into the joint. Protect the prepared surface with a masking tape.

Priming :

RUIA SEALANT PS primer is recommended for the surface namely, concrete, brickwork, asbestos, cement/gypsum board, stone, glass, timber, rigid PVC, anodized aluminum, ceramics etc. Primer is needed for better bonding between the surface and **RUIA SEALANT PS**. Primer is not required for Epoxy and Polyester surfaces.

Technical Service :

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Application :

Mixing & Applying :

Both components are pre-measured. Use a suitable instrument for mixing. Mix for 8 to 10 minutes or until smooth and homogeneous material results. Using a pressure gun install the sealant into the joint without trapping air. Tool-off with a joint.

Design :

Minimum joint depth	: 8 mm
Maximum joint width	: 50 mm
Width to depth ratio for joints upto 10 mm wide	: 1 : 1
Width to depth ratio for joints from 10 mm to 50 mm wide	: 2 : 1

Technical Specification :

Appearance

Component A	: White paste.
Component B	: Dark brown paste Hardener
Mixing Ratio	: A : B = 92 : 8
Shore "A" Hardness	: 20 to 25
Pot Life at 27°C	: 4 Hours (Minimum)
Curing Time at 27°C	: 7 days. Traffic can ply after 24 Hours

Packing :

1 Kg., 5 Kgs., 25 Kgs.

Shelf Life :

Best before 12 months in unopened condition.

Product Bulletin Code : OC: 018



RUIA FGW : Fire, Gas & Waterproof Sealing Compound

Description :

RUIA FGW is a cementitious sealing / caulking preparation suitable to prevent spreading of fire via cable duct in bulk head and decks especially in ship building sector. When **RUIA FGW** seals cable duct, it becomes Fire, Gas and Water proof.

RUIA FGW is composed of in-organic substances with hydraulic setting properties. When poured into cable duct, in the form of grout, it fills-up the hollow space and sets into a hard & tough impervious mass impregnating the electrical cable network adhering firmly with duct walls. The cables get protected from the ingress of fire, gas and water permanently. The sealant develops sufficient mechanical strength after being cured for a couple of days in air before the cable ducts are put into service.

RUIA FGW is a 2-pack system composed of a powder component (**FGW-S**) and a liquid component, called accelerator (**FGW-L**).

Instructions for use :

The **FGW-S** is added to the liquid accelerator **FGW-L** slowly, under stirring, to obtain a self-flowing-consistency grout which is poured into cable duct.

The working time after mixing is usually 30 minutes.

The setting time for the fluid sealant turning into a hard, stony mass without volume shrinkage is usually 24 hours.

A plastic container is to be used to prepare the sealant mix with the help of a clean metal or wooden trowel for intimate mixing and grinding action.

The ducts should be cleaned from oil and dirt before pouring the mixed grout.

Mixing Ratio :

FGW-S : FGW-L = 100 : 25

Packing :

Pre-weighed 2 packages of **FGW-S** and **FGW-L** to form 5Kgs., 50 Kgs., 100 Kgs. packs

Material Safety Data :

Non toxic, non hazardous and non flammable.

Shelf Life :

RUIA FGW is sensitive to moisture exposure. When stored in unopened condition in a dry atmosphere, a storage life of 12 months is expected.

Product Bulletin Code : OC: 019

Technical Service :

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RUIA RESIN CAPSULE : Resin Capsules – Polymer Anchoring Systems

Description :

RUIA RESIN CAPSULE is used primarily as an anchoring medium for rockbolt and long tendons to provide roof and sidewall support in mines and tunnels. It can be used with both hydraulic and Pneumatic roof bolters.

RUIA RESIN CAPSULE consists of two paste components, housed in a single outer skin. The capsule becomes functional after in-hole mixing with the roofbolt. The rapid set and strength gain possible from the resin allows the openings where early support is critical for overall stability. Typically such conditions apply to mining of stratified deposit such as coal and potash.

Advantages :

- Full encapsulation with pre-tensioning utilizing combination of fast and slow speed capsule.
- Point anchor installation with fast capsule.
- Full encapsulation without pre-tensioning using slow speed capsule.
- A unique design of capsule configuration enabling extremely effective mixing of resin mastic and catalyst compartments.
- Rapid insertion, easy and quick to use.
- Higher compressive strength, Strong, rapid and consistent anchorage.
- Higher modulus.

Use :

- Mines of stratified deposits like coal, potash etc.
- Tunnels, Underground pathways
- Marine fixing above or below water.
- Ground anchor in rock.
- Fixtures to building structures.
- Pipe and cable support fixings.
- Crane and rail track fixing.
- Anchoring bolts for machinery.

Technical Service :

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Technical Specification :

Gel Time & Setting Time

For FAST SET Type : 23 to 54 seconds
For SLOW SET Type : 134 to 202 seconds

Reaction Temperature (°C) : 80 °C (max)

Compressive Strength

After 30 minutes : 30.0 MPa
After 24 hours : 80.0 MPa

Standard :

Confirms to DGMS Technical Specification

Installation Procedure :

- Drill hole to correct depth and diameter as recommended.
- Clean hole thoroughly with compressed air and/or water and a bottle brush.
- Insert appropriate number of capsules individually inside the hole,
- Attach bolt to rotary machine by means of a spinning adopter and commence rotation progressively thorough capsules until end of the hole is reached. Detach drill from spinning adopter (recommended speed of the rotation 150-250 r.p.m.)
- Leave bolt undisturbed until resin has cured.
- Remove adopter.

Shelf Life :

Shelf Life is usually 3 months if stored in a cool and dry place, away from sunlight.

Product Bulletin Code : OC: 020

**RUIA NO. 1 : Integral Cement Water Proofing Compound (With Cement Mortar or Concrete)****Description :**

RUIA NO. 1 is a semi-paste, water proofing compound which is used as an additive in cement concrete and plastering.

Use :

- Rendering / plastering work on all brick walls of residential structures.
- Concreting / plastering work of all underground and overhead water tanks
- For repair / maintenance work of existing damp-wall, salt petre, fungus growth in brick work
- Roof concreting work of residential & industrial structures.
- Damp proofing of residential building, basements and soils.
- Most versatile to waterproof structures such as tunnels, basements, culverts, water tanks, canals swimming pools etc.

Advantages :

- Total waterproofing of concrete is obtained against water pressure.
- Concrete is protected from weak solution of acid / chemicals
- Eliminates / reduces dampness from the plastered surface of brick-work.
- Eliminates / reduces fungal growth, sweating efflorescence, salt petre action on the plaster surface of the brick work.

Application :**A. Plastering**

- **RUIA NO. 1** to be diluted with clean fresh water. The proportion of mixing is 1 : 12 to 16 i.e. 1 part of **RUIA NO. 1** : 12 to 16 parts of water.
- The mix as stated above should be stirred uniformly and thoroughly so that the whole of **RUIA NO. 1** is dissolved in the solution.
- The solution should be added to dry mix of cement and Mortar.

Technical Service :

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Application :

- 1 to 1.5 kg of **RUIA NO. 1** should be mixed with 12 to 16 Litres of water for a mix of one bag of cement mortar and the balance 15 to 20 Litres of water must be added separately to get the desired consistency.

B. Concreting

- The solution should be made as mentioned above.
- Aggregate, sand and cement should be added in the mixer and mixed thoroughly. Then the solution should be added gradually to get the desired consistency and workability.
- Do not add any extra water so that the water : cement ratio remains unchanged from that specified.
- 1 Kg. **RUIA NO. 1** is added if cement content is 350 Kg/m³ and 1.5 Kg. is added for concrete with cement less than 350 Kg/m³

Technical Specification :

Appearance	:	Light Yellow Emulsion
Solubility in water	:	Forms an emulsion
Specific Gravity	:	1.06 ± 0.02
Setting Time	:	No Change in setting time of concrete.
Chloride Content (%)	:	Complies with BS 5075

Standard :

Confirms to IS : 2645-2003

Packing :

1 Kg., 5 Kgs., 25 Kgs. and 225 Kgs.,

Shelf Life :

Best before 12 months.

Product Bulletin Code : OC: 201

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RUIA CONCRETO EXCEL : High Strength Water Reducing & Waterproofing Compound

Description :

RUIA CONCRETO EXCEL is ready – to – use powerful superplasticizer based formulation which when used as an admixture in concrete or mortar, imparts excellent flowability (slump), cohesiveness, high strength and complete waterproofing character against positive pressure. Imparts high early strength to the concrete.

Advantages :

- Completely free from chlorides and sulfates.
- Protects reinforcing metal wire mesh/rod by keeping interfaces in highly alkaline state minimizing the chance of corrosion.
- Extremely low dosage – 100 gm per 50 Kg. Bag of Cement. **RUIA CONCRETO EXCEL** is economical than other competitive products which have a much higher recommended dose.
- The consumption of cement can be reduced by reducing both cement and gauge water at a lower water : cement ratio
- Imparts high early strength to concrete, thereby reducing construction time and cost.
- It is equally effective for Portland as well as blended cements like Slag or Pozzolona.

Instructions for use :

1. Dry mix Cement and Sand or Cement, sand and stone chips as the case may be.
2. Add **RUIA CONCRETO EXCEL** in gauging water (100 gm per 50 kg Bag of cement). Stir well to make a solution.
3. Pour the above solution in the dry mix and agitate to get a cohesive mix.
4. For best results, restrict water to 23 to 25 Litres per 50 kg Bag of cement.
5. Use the mix within 30 minutes from the time of its preparation.
6. Adjust water as per desired flow and consistency.

Technical Service :

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Technical Specification :

Appearance	: Brown Liquid
Solubility in Water	: 100 %
Specific Gravity	: 1.20 ± 0.03
pH Value	: 8.5 ± 1
Chloride and Sulfate Content (%)	: Complies with BS 5075
Solid Content (%)	: 40 ± 2

Dosage :

0.2% by weight of cement.
I.e. 100 gm. for 50 kg Bag of cement.

Standard :

Confirms to IS : 9103-1999

Safety Data :

RUIA CONCRETO EXCEL is neither hazardous nor toxic
Direct Contact with skin must be avoided.
In case of accidental contact or spillage, wash with water.
Store in a cool and dry place, away from direct sunlight.

Packing :

1 Kg., 5 Kgs., 25 Kgs.

Shelf Life :

Best before 12 months in unopened condition.

Product Bulletin Code : OC : 204

**RUIA ACRYLEX : Protective and Waterproof Coating****Description :**

RUIA ACRYLEX is a multi functional acrylic polymer emulsion which, when added to cement mortar / concrete / cement slurry, provides excellent waterproofing and adhesion.

Use :

RUIA ACRYLEX is recommended for roofs, toilets, basements, swimming pools, roof gardens, terraces underground tunnel in thermal & hydro electric power projects and water towers in general concrete repairs, It protects concrete against salt and chemical attacks and corrosion.

Advantage :

- Extremely good bonding.
- Improved mechanical flexural strength.
- Resistant to ultra violet rays and suitable for external coating.
- Thixotropic – Can be applied in uniform thickness in vertical & horizontal surfaces.
- Arrests salt petre and prevents penetration of salt into concrete mortar.
- Eco friendly - harmless to workers.

Application Details :

Application	Ruia Acrylex	RA:W:C	Dilution with Water	Application area
Coating	Approx 0.50 kg. per kg of cement	1 : Nil : 2	-	Water proofing Coating.
Slurry / Bond	Approx 0.30 kg. per kg of cement	1 : 2 : 3	1 : 2	Bonding Coat
Mortar (1 : 4)	Approx 0.16 kg. per kg of cement	-	1 : 4	Repair Mortar
Concrete (1: 2:4)	Approx 0.12 kg. per kg of cement	-	1 : 4	Repair Concrete & Screed

Technical Specification :

Appearance	: Milk White Liquid
Specific Gravity at 30 ⁰ C	: 1.03 ± 0.02
pH Value	: 7± 1

Curing :

3 to 5 days with wet burlap or water spray.

Standard :

Confirms to IS : 9103-1999 and ASTM C 494/C. 494M

Packing :

1 Kg., 5 Kgs., 25 Kgs.

Shelf Life :

Best before 12 months.

Product Bulletin Code : OC : 205

Technical Service :

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**RUIA LATEX : All Purpose Waterproofing and Bonding Compound (Cement Mortar or Concrete)****Description :**

RUIA LATEX is a SBR (styrene butadiene rubber) based all purpose waterproofing and bonding compound

Use :

RUIA LATEX has wide range of uses for waterproofing, as a grout admixture, in putties and in either form in the repair and rehabilitation industry, rendering and tile fixing etc. and bonding old surface to new ones.

Advantages :

- Outstanding resistance to water and moisture.
- Excellent adhesion to a wide range of substrates.
- Improves flexibility of the treated area.
- Improves mechanical properties and abrasion resistance.
- Improves chemical resistance of substrates.
- Low permeability makes mortars / concrete waterproof.
- Improves workability and adhesion of mortars.
- Strength remains unaffected.
- Resists freeze-thaw phenomenon in cold climates.
- Prevents finished surfaces from cracking.
- Improves bond to mother substrates.
- Weatherproofs walls from rising dampness/salt petre action.

Application Details :

Ingredients	Bonding Coat/Water Proof Coating	Polymer Mortar for Plastering	Polymer Concrete / Overlay
Cement	3 to 3.5 Parts by weight	10 Parts by weight	10 Parts by weight
Zone II sand	Nil	40 Parts by weight	15 Parts by weight
10 mm nominal size coarse aggregate	Nil	Nil	30 Parts by Weight
Water	1 Part by weight	4 Parts by weight	4 Parts by weight
Ruia Latex	1 Part By weight	1 Part by weight	1 Part by weight
Ruia Latex : Water : Cement	1 : 3 : 3 to 3.5	1 : 04 :10	1 : 04 :10
Coverage	0.25 to 0.50 Kg/Sqm	0.45 to 0.50 Kg/SqM/10 mm thk.	1 Kg/SqM/ 25 mm thk.

Product Bulletin Code : OC : 206**Technical Service :**

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Application :

The substrate must be structurally sound, clear and dust free. Oil, grease and contaminants must be removed mechanically. Smooth surface must be scrubbed and the surface should be damped with water prior to application of the bonding primer, modified mortar or concrete. All excess water should be removed from the surface.

Technical Specification :

Appearance	:	Milky White Liquid
Specific Gravity	:	1.02 ± 0.01
pH Value	:	6 to 9
Chloride Content (%)	:	Complies with BS 5075

Standard :

Confirms to IS : 2645-2003

Packing :

1 Kg., 5 Kgs., 25 Kgs. and 225 Kgs.

Shelf Life :

Best before 12 months.



RUIA TILO 1 : Single Component Waterproofing Adhesive (For Tile Fixing)

Description :

RUIA TILO 1 is a ready to use, thin and thick bed, water resistant, pre-mixed, single component, cementitious polymer high strength tile adhesive in powder form.

Use :

RUIA TILO 1 suitable for instant fixing of ceramic, mosaic, marble, and granite tiles over roof as well as vertical and overhead application. It can be used in shower recesses and swimming pools.

Advantage :

- Easy to use. Only water is to be added.
- Excellent waterproofing characteristics.
- Self curing properties.
- Good mechanical strength.
- Tropicalized and eco-friendly. Offers no health hazards to users.

Application :

Surface preparation :

The surface should be structurally sound and free from dust, grease, oil, loose particles etc. Mix two parts by weight of **RUIA TILO 1** with one part by weight of water and stir till a smooth paste is obtained. Spread the paste on the surface to a uniform thickness of 3 to 4 mm with a notched trowel to remove any trapped air. Place the tile firmly into position by twisting action. Excess adhesive is to be removed by using damp cloth. Powder should be added to water and not vice versa.

Application :

Mixing :

For 1 kg of **RUIA TILO 1**, about 200 to 500 ml of water is to be mixed. A slow speed paddle is recommended. Add the powder gradually to water and mix until a uniform slum-free consistency is obtained. This must be used up within an hour.

Coverage :

2.5 to 3 Kgs. per Sq. feet (Approx) for 3 mm tile bed thickness.

Packing :

5 Kgs., 25 Kgs. Bag

Shelf Life :

12 months if kept in dry conditions.
Store in original un-opened bag.

Product Bulletin Code : OC : 207

Technical Service :

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RUIA RUST PROOF : Anti Corrosive Coating

Description :

RUIA RUST PROOF is a single component anti corrosive coating which provides excellent waterproofing properties to steel reinforcements, thereby preventing cracking of concrete due to water ingress and therefore increasing the life of reinforced concrete.

Advantages :

- Easy to use
- Excellent bonding and adhesion to steel and concrete.
- Large coverage area.

Use :

- Used as anti corrosive coating for steel and concrete.
- Prevents corrosion for all types of reinforcements.
- Provides corrosion protection for embedded, corroded reinforcement at the time of repairing of damaged structures.

Application :

Before application, the substrate should be properly cleaned and all loose particles / rust must be removed from the surface. The first coat is to be applied with a medium stiff brush. The second coat is to be applied after 2 to 3 hours. On air curing for 2 to 3 hours after application of the second coat mortar, plaster or concrete may be done

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Technical Specification :

Appearance	:	Colourless Liquid
Specific Gravity	:	1.15 ± 0.02
Chloride Content (%)	:	Complies with BS 5075

Coverage :

150 to 180 sq. ft. / kg.

Packing :

1 Kg., 5 Kgs., 25 Kgs.

Material Safety Data :

Non toxic and non flammable.

Avoid skin contact as far as possible. On contact, wash the affected area with water.

Store under shed, away from heat source.

Shelf Life :

Best before 12 months.

Product Bulletin Code : OC: 208



JADAVPUR UNIVERSITY

Department of Construction Engineering

2ND CAMPUS SALLAKE,

BLOCK-LB, PLOT NO. 8, SECTOR-III

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Telephone : (033) 2335 5211 } Exl. 117, 116
2335 5215 }

Fax : 0332335 7254

LABORATORY TEST RESULT

Date: 24.06.2005

Testing done for: RUIA Chemicals Pvt. Ltd.,
105/2B Ultadanga Main Road, Kol- 67

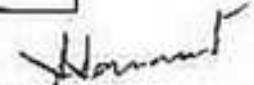
Type of Material :- Chemical Admixture (Brand :-RUIA INDENIUM 333 of RUIA
Chemicals)

Letter Ref. No.- RCC/Test Report/05-06/1 Dated: 05-05-2005

Type of Test :- Physical Test of Concrete Admixture.

Sl. No.	Type of Test	Test Result
1.	Water Content percent of control Sample, Max	80%
2.	Slump	15 mm below that of the control mix concrete
3.	Time of Setting Initial Final	1.5 Hour more than that of control sample. 1 Hour more than that of control sample.
4.	Compressive Strength 1 day 3 days 7 days 28 days	145 % of the control sample 135 % of the control sample 130 % of the control sample 117 % of the control sample
5.	Flexural Strength 3 days 7 days 28 days	110 % of the control sample 108 % of the control sample 105 % of the control sample
6.	Length Change 28 days	0.0085% increase over control sample
7.	Bleeding percent increase over control sample	2 % increase over control sample
8.	Loss of workability	At 45 min the slump is higher than that of control mix concrete at 15 min.
9.	Air Content (%) over control mix.	1.0 %

Remarks:- All Result satisfied the requirement of Superplasticizer of IS-9103
Test were conducted sample supplied by client.


(S. Saraswati)
Senior
Construction Engg.
Jadavpur University



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LABORATORY TEST RESULT

Date: 24.06.2005

Testing done for.: RUIA Chemicals Pvt. Ltd.,
105/213 Ultradanga Main Road, Kol- 67

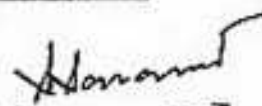
Type of Material :- Chemical Admixture (Brand :-RUI ULTRAFLOW SR of RUIA
Chemicals)

Letter Ref. No.- RCC/Test Report/05-06/1 Dated: 05-05-2005

Type of Test :- Physical Test of Concrete Admixture.

Sl. No.	Type of Test	Test Result
1.	Water Content percent of control Sample, Max	78%
2.	Slump	20 mm below that of the control mix concrete
3.	Time of Setting Initial Final	2.5 Hour more than that of control sample. 3/4 Hour more than that of control sample.
4.	Compressive Strength 1 day 3 days 7 days 28 days	135 % of the control sample 130 % of the control sample 118 % of the control sample 105 % of the control sample
5.	Flexural Strength 3 days 7 days 28 days	115 % of the control sample 105 % of the control sample 105 % of the control sample
6.	Length Change 28 days	0.0087% increase over control sample
7.	Bleeding percent increase over control sample	3% increase over control sample
8.	Loss of workability	At 120 min the slump is higher than that of control mix concrete at 15 min.
8.	Air Content (%)	NIL

Remarks:- All Result satisfied the requirement of Superplasticizer of IS-9103
Test were conducted sample supplied by client.


(S. Saraswati)
Reader
Construction Engg.
Jadavpur University



Government Of India

राष्ट्रीय परीक्षण शाला (पूर्वी क्षेत्र)

National Test House (Eastern Region)

ब्लॉक-सी.पी., सेक्टर-5, साल्ट लेक सिटी, कोलकाता-700 091.

Block - CP, Sector -V, Salt Lake City, Kolkata - 700 091.



परीक्षण प्रमाण पत्र

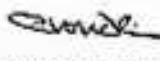
TEST CERTIFICATE

प्रमाण पत्र सं. : Test certificate no	कार्य जारी की तिथि Date of Issue	कोड सं. Code No	पृष्ठ Page	पृष्ठों की सं. No. of pages
NTH(ER)/CIV(G)/2008 /00342 जिसके जारी करने का : Issued to	01/10/2008	1216715295294	1	4
Address	RUIA CHEMICALS PVT.LTD. Atghara, Rajarhat, 24 Parganas(N), 700138			
ग्राहक का संदर्भ सं. : Customer's Ref. No.	RCPL/08/NTH/0721 dt.2008-07-21			
नियंत्रण सं. एवं दिनांक : Register No. & Date	00342/NTH(ER)/CIV(G)/25/07/2008			
परीक्षण सामग्री का विवरण : Description of the test item	Water proofing compound.			
परीक्षण सामग्री की पहचान : Identification of the test item	"Rula Waterproof GP" brand waterproofing Compound in the form of liquid received in a one kg. poly bottle pack stated as from Batch No.L/RWP/170708			
परीक्षण सामग्री प्राप्त की तिथि : Date of receipt of the test item	22/07/2008			
परीक्षण परीक्षण प्रणाली : Method used for test	IS:2645-2003			
उपरोक्त प्रक्रिया जहाँ प्रासंगिक हो : Sampling procedure where relevant	Not applicable.			

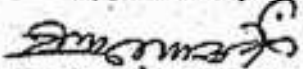
Tested By


 Deepak Srivastava

Checked By


 Anok Kumar De
 Scientist

Approved By


 Tarachand Sukhlaji Sukhadeo
 Scientist-SD(Civil)