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PRODUCT SUMMARY GUIDE



AL FALAH
CHEMICALS
YOUR CHEMICAL PARTNER

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AL FALAH CHEMICALS has developed itself as an industry leader by supplying high performance chemicals to the construction industry. We have specialized constructive solution for virtually any building and infrastructure project combining expert technical support, customer support and innovation.

With 2 production units in, Karachi & Lahore, and a nationwide network of sales, we have achieved remarkable recognition in the construction industry across Pakistan.

Our wide range of constructive solutions include :

- ◆ Concrete Admixture
- ◆ Surface Treatments
- ◆ Grouts & Anchors
- ◆ Concrete Repair
- ◆ Industrial flooring
- ◆ Protective Coating & Waterproofing
- ◆ Joint Sealants & Waterstops
- ◆ Industrial Adhesives

With a fully equipped laboratory and a team of qualified engineers at our own premises, Al Falah Chemicals carries out regular tests to maintain quality of finished products manufactured at our plant.

Besides construction chemicals, we also supply Industrial chemicals to all major industries of Pakistan such as:

- ◆ Agriculture
- ◆ Construction
- ◆ Fertilizer
- ◆ Food
- ◆ Pharmaceutical
- ◆ Water Treatment
- ◆ Textile
- ◆ Sugar Mill

Al Falah Chemicals is constantly striving for new levels of excellence. Our aim is to develop pioneer solutions and products that will open up new opportunities for the company, its employees, and its partners in the industry. Our mission is to help customers and ensure we grow together and to constantly keep one step ahead of the competition.



ALFA

CONCRETE ADMIXTURE

PRODUCT NAME	DESCRIPTION	APPLICABLE STANDARDS	USES	DOSAGE / CONSUMPTION
ALFAPLAST P300	Water reducing admixture	BS5075-Part 1 ASTM C494 Type A	Improves the quality and durability of all types of concrete.	0.50 - 1.50 litre/ 100 kg cementitious material
ALFAPLAST RP310	Retarding water reducing admixture	BS 5075 Part 1 ASTM C494 Type B and D and BSEN 934-2	Improves mixing water efficiency and delays initial set.	0.80 - 1.00 litre/ 100 kg cementitious material
ALFAPLAST SP320	Multi-range high performance superplasticiser	BS 5075 Part 1, BS: EN934-2:1998, ASTM C494 as Type A, B & D	To reduce the water demand of a concrete mix without reducing workability , allowing increased early and ultimate strengths without additional cement.	0.50 - 3.00 litre/ 100 kg cementitious material
ALFAPLAST SPA440	Superplasticising admixture & Accelerator	BS 5075 Part 3 BS:EN934-2: 1998, ASTM C494 as Type A and F	To provide excellent acceleration of strength gain at early ages and major increase in strength at all ages by significantly reducing water demand in concrete mix.	0.80 - 1.20 litre/ 100 kg cementitious material
ALFAPLAST MSP470	High performance superplasticiser	BS 5075 Part 1, BS:EN934 -2: 1998, ASTM C494 as Type B,D & G	To Provide increased ultimate strength gain by reducing water cement ratio in a concrete mix	0.50 - 1.50 litre/ 100 kg cementitious material
ALFAPLAST SP340	High performance water reducing admixture	BS 5075 Part 3, ASTM C494 as Type A, F and G	To significantly improves the workability of concrete without increasing water demand. Improves cohesion, minimising segregation and improving surface finish.	0.50 - 2.00 litre/ 100 kg cementitious material
ALFAPLAST SP350	High performance water reducing admixture	BS 5075 Part 3, ASTM C494 as Type A, F and G	To significantly improves the workability of concrete without increasing water demand. Improves cohesion, minimising segregation and improving surface finish.	0.50 - 2.00 litre/ 100 kg cementitious material
ALFAPLAST SP480	Workability retention superplasticiser	BS 5075 Part 3, ASTM C494 as Type G	Gives increased working life to fresh concrete. Increases workability without extra water, reducing placing time and costs.	0.60 - 2.00 litre/ 100 kg cementitious material
ALFAPLAST SP360	High performance, slump retaining and water reducing admixture	BS 5075 Part 1, ASTM C494 as Type B, D & G and BSEN 934-2.	To improve the effectiveness of the water content of a concrete mix.	0.50 - 1.50 litre/ 100 kg cementitious material
ALFAPLAST SP570	High performance superplasticiser for slump retention and high strength concrete	BS 5075 Part 3 ASTM C494 as Type B, D and G	To provide excellent slump retention properties in tropical conditions even at low water cement ratio. Improves cohesion, minimising segregation and improving surface finish	0.80 - 1.50 litre/ 100 kg cementitious material

ALFA

CONCRETE ADMIXTURE

PRODUCT NAME	DESCRIPTION	APPLICABLE STANDARDS	USES	DOSAGE / CONSUMPTION
ALFAPLAST SP 580 M	High performance superplasticiser for slump retention and high strength concrete	BS 5075 Part 1, ASTM C494 as Type B, D & G and BSEN 934-2.	To improve the effectiveness of the water content of a concrete mix.	0.50 to 1.50 litre/100kg cementitious material
ALFAPLAST SP 870 M	Ultra high-performance water reducing admixture	BS 5075 Part 3 ASTM C494 as A, F & G	To provide excellent slump retention properties in tropical conditions even at low water cement ratio. Improves cohesion, minimising segregation and improving surface finish	0.50 to 1.50 litre/100kg cementitious material
ALFAPLAST SUPER 50	A High performance concrete admixture based on polycarboxylate technology	BS 5075 PART 1, ASTM C494 Type D & G	ALFAPLAST SUPER 50 is a high performance admixture intended for applications where increased early and ultimate compressive strengths are required	0.50 to 1.50 litre/100kg cementitious material
ALFAPLAST SUPER 100	Multi purpose high range admixture based on polycarboxylate technology	BS 5075 PART 1, ASTM C494 Type D & G	To provide high performance concrete for durability, allowing increased early and ultimate strength without additional cement	0.50 to 1.50 litre/100kg cementitious material
ALFAPLAST SUPER 150	Ultra high performance water reducing admixture based on polycarboxylate technology	BS 5075 PART 1, ASTM C494 Type D & G	To provide excellent slump retention at lowest water cement ratio giving ultimate high strength.	0.50 to 1.50 litre/100kg cementitious material
ALFAPLAST AE300	Air entraining agent	BS5075:Part 2 and with ASTM C260 as an air entraining agent	To Produce air entrained concrete for increased durability , resistant to damage by frost and deicing salts, and to improve the cohesion and work ability of concrete mixes whre poorly graded aggregates must be used, and in any sitaution where bleeding, segregation or sand runs occur.	0.60 litre/100kg cement 4½ % 1½ with cement contents of 300-350 kg/m3
ALFAPLAST SPAE	Retarding water reducing and air entraining admixture	ASTM C260 and C494 type B & G	To Produce air entrained concrete for increased durability , resistant to damage by frost and deicing salts.	0.20 to 0.50 litre/100kg cementitious material

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CONCRETE ADMIXTURE

PRODUCT NAME	DESCRIPTION	APPLICABLE STANDARDS	USES	DOSAGE / CONSUMPTION
ALFAPLAST WP150	Concrete integral waterproofing powder admixture	ASTM C260 and C494 type B & D	As and integral water proofer for: Structural and precast concrete Stand : Cement renders Floor screeds Mortars and Plasters	1.0 % -2.0 % by weight of cement.
ALFAPLAST WP160	High performance water proofing admixture for concrete	ASTM C494 and Type A & G	ALFAPLAST WP160 can be used solely or with Alfaplast WP400 for waterproofing, structural and precast concrete.	0.8 to 1.5 litre/100kg cement
ALFAPLAST UW	Underwater concrete admixture system	-	ALFAPLAST UW is an admixture system specially designed to: Allows concrete to be placed underwater Increases the cohesion of concrete mixes and minimizes washout. Produces well compacted high quality concrete.	0.40 %to 1.00 % by weight of Cement
ALFAPLAST CN	Calcium nitrite corrosion inhibiting admixture	ASTM G 109	Where calcium nitrite is specified for addition to concrete as a corrosion inhibiting admixture	7.5 to 22.50 litre
ALFAPLAST SC 210	Power accelerator for sprayed concrete	ASTM G109	ALFAPLAST SC 210 is used to provide a rapid set to sprayed concrete. This improves overhead spraying, permits thicker build in one pass and provides early support strength.	2kg Powder/ 100kg Cement
ALFAPLAST SC 200	Sprayed concrete and shotcrete admixture	-	ALFAPLAST SC 200 is used in sprayed concrete, shotcrete and gunite processes where rapid setting is required.	5 - 8 % cement
ALFAROK MS 720	Densified and Undenified Microsilica for concrete	-	-	5 - 15 % Cement
ALFAFIBER	Polyester fiber mesh for reinforce coating	-	ALFAFIBER is a polyester fiber mesh used to reinforce cementitious waterproofing and epoxy resin coating system , provide excellent crack resistant properties , gives extra strength to the coating system , suitable for use on construction joints, wall and floor joints, internal lining of tanks, reservoirs, drainage pits, RCC pipes, sewerage and water treatment plants, lining of chemical storage tanks etc.	-
ALFAPLAST ANTIFREEZE	Cold weather concrete admixture	ASTM C494-81 Type C	ALFAPLAST ANTIFREEZE is design to be used in concrete in cold weather working conditions such as: Expected overnight frost Expected cold period	1.00 % to 2.50 % by weight of cement



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SURFACE TREATMENT

PRODUCT NAME	DESCRIPTION	APPLICABLE STANDARDS	USES	DOSAGE / CONSUMPTION
ALFACURE WB30	Water Based concrete curing compound	ASTM C 309 Type 1 class D and Type 2 class B	As a spray applied membrane to retain moisture in concrete for effective curing.	4 to 5m ² / litre
ALFACURE WB20	Water based concrete curing compound	ASTM C309 and AASHTO M148	As a spray applied membrane to retain moisture in concrete for effective curing, suitable for all general concreting applications, particular benefit for large area concrete surface, as airport runways, roads and bridge works.	4 to 5m ² / litre
ALFACURE AB	Acrylic based curing compound	—	As a spray applied membrane for interior application on renders or concrete surface. Particularly suitable for situations where after trades, such as paints or renders, are to applied.	4.0 to 6.0 m ² / litre
ALFAFORM CONCENTRATE	Chemical mould release agent	Concrete society notes April-1981	For quick clean & easy stripping of moulds & formwork. For high quality, fair faced & stain free concrete	4.50 litre Concentrate mix with 205.50 Ltr Diesel.



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GROUTS & ANCHORS

PRODUCT NAME	DESCRIPTION	APPLICABLE STANDARDS	USES	DOSAGE / CONSUMPTION
ALFAGROUT PE100	Plasticised expanding grout admixture	CP110 Part 1 1972 Sectopm 6.12 BS 8110 Part 1, 1985 section 8.9.4.6	For cementitious grouts where fluidity and positive expansion are required	225g / 50kg cement
ALFAGROUT AP	General purpose non-shrink cementitious grout	ASTM C827-78 BS 1881/14550/ 4551/5075 part 2	For heavy duty support beneath machine base plates, crane rails and stanchion base.	Yield: 10.60 litres/20kg Depending on consistency
ALFAGROUT HB90	Non shrink cementitious bearing grout	ASTM C1107 TYPE C , ASTM C940-98	For base plates, sole plate , bridge bearings, anchor bolt & column base	Yield: 10.60/litres/20kg depending upon consistency
ALFAGROUT HQ	High performance shrinkage Hydrogen-Free cementitious grout	As above plus CRD C621-81 91 Type C ASTM C 1107 91 Type C	ALFAGROUT HQ is used for free flow precision grouting in a wide range of heavy duty applications	Yield: 11 litre / 20 kg depending on consistency
ALFAGROUT UWP	Non-shrink, cementitious grout for underwater applications	BS 1881/4550/4551 BS 5075 Part 2	For underwater repair of deteriorated concrete without significant "wash-out"	Yield: 14.5 litre when mixed with 5.5 litre of water
ALFAGROUT EP	Range of epoxy resin free-flow grouts	ASTM C 881-78 Type III	For free flow grouting and crack injection where the crack mechanical properties and chemical resistance of the hardened grout must be of the highest order	EP10 1060 kg/m³ EP40 1950 EP65 2050 EP300 1950 Density (Kg/m ³)
ALFAGROUT EPGP	General purpose epoxy grouts	—	High flexural strength and adhesion to substrate ensures excellent performance under dynamic operating conditions.	Depending on product use



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CONCRETE REPAIRS

PRODUCT NAME	DESCRIPTION	APPLICABLE STANDARDS	USES	DOSAGE / CONSUMPTION
ALFAMORTAR PH	Single component polymer modified cementitious cosmetic repair mortar and pinhole filler	No standards applicable to this product	To reface concrete after repair, and as a render of upto 3mm thick to face up brickwork and blockwork	3m ² at 3mm thick / 20kg yield 9.0 ltr/20kg bad
ALFAPLUG	Rapid setting cement-based, water-stopping mortar	-	Ideal to seal leaks to applying waterproof renderings in basements.	Yield 5 liter/10kg bag
ALFAMORTAR EM	Abrasion and chemical resistant epoxy resin lining mortar	ASTM C267	For Protection of concrete and similar substrates. Ideal for manholes, lining of outfalls, channels.	3.3m ² at 3mm thickness per 10kg pack
ALFAMORTAR EMF	Epoxy resin fairing coat and blow hole filler	—	ALFAMORTAR EMF is designed for application to blow holes and surface imperfections in concrete surface. It is suitable for application in thickness greater than 3 mm	1.6 - 1.8kg / m ² / 1mm thickness
ALFAFILL CIF	Low viscosity epoxy injection resin system	—	To consolidate structural element low viscosity ensures finest of the cracks can be filled.	Depending upon its usage
ALFACOAT ZINC RICH	Two component epoxy zinc primer	—	Alfacoat zinc Primer is an anti-corrosion primer for steel surfaces. The cured film is corrosion resistant, especially designs to use with epoxy resin coating, and with concrete repair system.	4 m ² / kg



ALFA

INDUSTRIAL FLOORING

PRODUCT NAME	DESCRIPTION	APPLICABLE STANDARDS	USES	DOSAGE / CONSUMPTION
ALFACOAT FC100	Acrylic floor sealer/concrete curing membrane	ASTM C-309	To provide a sealing coat on cementitious floor and a dustproof and more easy clean surface with resistance to the penetration of oil and liquids.	4-8m ² / litre/coat
ALFACOAT FC140	High performance epoxy resin floor coating	BS 4800, BS 4247 PT 1 ASTM D2240 Nuclear De-contamination Part A & B	High chemical and abrasion resistant, suitable for foot and vehicular traffic	8m ² / kg @ 100 microns wtf/coat (2 coat application recommended)
ALFA FLOOR 145	High build, solvent based epoxy resin floor coating	ASTM D2240 BS 6319 ASTM D2047	Chemical resistant epoxy coating to provide easy to clean & durable floor, suitable for: production assembly areas. Workshop, Dairies, Kitchens , showroom & etc.	6m ² / kg @ 250 microns wtf/caot. (2 coat application recommended)
ALFAFLOOR DSL2000	flow applied , 2 mm thick epoxy resin flooring topping	BS 4247 PT 1 nuclear Decontamination Part A&B	Attractive, chemical resistant impervious and easy to clean floor topping	2 Ltr/m ² at 2 mm thickness
ALFAFLOOR DSL3000	Flow applied , 3 mm thick epoxy resin flooring topping	ASTM D2240 BS 1881 Part 4 1970 BS 4551 Part 1 1970 BS 12 1985 ARPH	Chemical impact and abrasion resistant and impervious surface which is hygienic and easy to clean.	3 Ltr/m ² at 3mm thickness
ALFAFLOOR DSL4000	Heavy duty flow applied, 4-5mm thick epoxy resin flooring topping	ASTM C 109 -90 BS 6319 ASTM C 501	Chemical impact and abrasion resistant and impervious surface which is hygienic and easy to clean.	4Ltr/m ² at 4 mmthickness 5Ltr/m ² at 5mm thickness
ALFAFLOOR HD5000	Heavy duty 5mm thick, chemical and abrasion resistant epoxy flow screed	BS 784 1953 ASTM E97 BS 1881 PT 4 1970	Ideally suited for heavy engineering plants. Chemical etc.	10kg / m ² @ 5mm thickness
ALFAFLOOR SH	Monolithic-surface hardner and dust proofing compound for fresh concrete	BS 1881 Part 116 ASTM C 779-89	Provides and abrasion resistant surface. Ideal for heaviest traffic	3 -6 kg /m ²
ALFAFLOOR SL	Cement based, self leveling, thin layer, underlayment 2mm to 12mm		Provides self leveling, cementitious underlay for tiles carpeting, linoleum , rubber and sheet flooring	11.75 liter per 20kg bag



ALFA

PROTECTIVE COATING

PRODUCT NAME	DESCRIPTION	APPLICABLE STANDARDS	USES	DOSAGE / CONSUMPTION
ALFAEPC 405	Damp - tolerant, corrosion resistant solvent free depoxy coating	—	As a protective coating for concrete and mildsteel. The cured film is corrosion, chemical and abrasion, resistant, suitable for application to sewage works, marine environment, basement and tunnels.	3.50m ² / kg @ 200 micron wft per coat
ALFACOAT WR666	Penetrating hydrophobic silane-siloxane treatment for concrete and masonry	—	To protect atmospherically exposed reinforced concrete structure from attack by chloride ions and water intrusion. The product is also suitable to protect other cementitious substrates and masonry.	5 to 10 m ² / liter/coat Two counts recommended
ALFACOAT WR555	Non-staining water repellent	No standards applicable to this product	To provide a water repellent surface on exterior building surface such as brickwork, plasters, concrete and natural stone.	5 m ² / litre (total)
ALFABRUSH PMC	Acrylic polymer modified protective and decorative coating for concrete and masonry	ASTM C-230/ 190 / 109 348/ 321/ 241 140/291	To protect atmospherically exposed reinforced concrete structure from attack by acid gases, chloride ions oxygen and water.	Theoretical 1.65 kg /m ² @ 1 mm thickness
ALFACOAT EW	Elastomeric cementitious coating	BS 6920 - 1990 DIN 1048 BS 476-1987 Part 6 and 7	ALFACOAT EW provides a cementitious, elastomeric coating with inherent crack-bridging ability.	Theoretical 1.87 kg /m ² @ 1 mm thickness
ALFAPRIME FS	Epoxy resin primer sealer	—	ALFAPRIME FS is an epoxy resin solvent containing primer sealer to be used on cementitious or metal surfaces prior to the top coat of any epoxy coating system such as ALFACOAT or ALFAFLOOR range of product.	Prime 25 5-8m ² /kg (Depend on surface porosity) prime 28 5-8m ² / kg



ALFA WATERPROOFING

PRODUCT NAME	DESCRIPTION	APPLICABLE STANDARDS	USES	DOSAGE / CONSUMPTION
ALFAPROOF 15	Bitumen emulsion protective coating	ASTM C309-93 as curing @ 2m ² per kg.	Damp-proof membrane , vapour seal and general waterproof. Also protect belowground concrete.	2-5 m ² / litre depending on substrate
ALFAPROOF 25	Multi - purpose, rubberised bitumen emulsion	ASTM C309-93 as curing @ 4m ² per kg.	Cold-applied general purpose waterproofer for walls, floors . Damp proof membrane in sandwich construcion, and vapour seal	1-1.5m ² / kg / coat
ALFAPVC WATER SP	Centrally and externally placed PVC waterstops.	-	ALFAPVC Water SP is designed to provide an integral sealing system of movement and construction joints in concrete cast in-situ.	-
ALFACAST 20	Swellable waterstops for in-situ concrete	-	Integral sealing or consruction joints in concrete cast in-situ, where conventional waterstops are impractical to use because of limited access.	10mm x 20mm x 10mm roll
ALFACOAT CC	Crystalline capillary waterproofing for concrete substrates.	-	This system in used for waterproofing concrete against postive or negative hydrostatic water perssure, foundation dampproofing, repairing hairline crack, filling holes and sealing wall-floor joints.	Brush: 1 to 1.5 kg/m ² per application Dry shake: 1.2 to 1.3 kg/m ² per application
ALFACOAT RP	Acrylic cementitious waterproofing coating for roofs	-	ALFACOAT RP is an Elastomeric cementitious coating specially designed for roof waterproofing.	1.65 - 3.30 kg/m ²
ALFACRETE C65	Crystalline waterproofing admixture	ASTM C494 Type A, B, C, D, F & G BS 5075 Part I	It is a crystalline technology concrete admixture used to produce permanently active waterproof concrete.	W/C RATIO < 0.45 : 2% BY WEIGHT OF CEMENT W/C RATIO > 0.45 : 3% BY WEIGHT OF CEMENT



ALFA

JOINT SEALANTS & WATERSTOPS

PRODUCT NAME	DESCRIPTION	APPLICABLE STANDARDS	USES	DOSAGE / CONSUMPTION
ALFASEAL 650	Multi-component, gun and pouring grade polysulphide sealant	BS 4254: 1983 TT-S-227 e DIN 18540:1980	General use in building and civil engineering structures for sealing expansion and contraction joints.	2.5 litre / can
ALFAPOR 200	Cold applied, high performance, hydrocarbon resistant, polyurethane pavement joint sealant	SS- S- 200E: 1984 5212: 1990 - type N, F and FB.	For the horizontal & vertical sealing and main enhance of joints in concrete roads, concrete runways and hard standing. The excellent fuel resistance of ALFAPOR 200 makes it particularly suitable for sealing area where fuel and oil spillage might occur	5 litre / pack



ALFA

INDUSTRIAL ADHESIVES

PRODUCT NAME	DESCRIPTION	APPLICABLE STANDARDS	USES	DOSAGE / CONSUMPTION
ALFABOND AR	Acrylic emulsion primer and bonding agent for concrete repair	BS 6920	Recommended primer and bonding agent for the Alfamortar Cementitious Repair System.	6-8 m ² /litre as primer 4-5 m ² /litre as curing compound.
ALFABOND SBR	Polymer bonding aid and additive for mortar, screeds and renders	No standards applicable to this product	For improving the physical properties of cementitious mixes.	Approx. 2 to 3m ² / lie (as slurry primer)
ALFABOND PVA	Multi-purpose P.V.A. adhesive sealer cement admixture	No standards applicable to this product	Bonds asbestos, brick,. Carpet, china, concrete, cork, earthenware, glass, laminated plastic, leather. Reduces hacking, keying and repairs cracks. As primer and admixture to mortars	Depending on uses
ALFABOND EPB	Epoxy resin concrete bonding agent	ASTM C881: type 1, II, III, IV and V, grade 2 class E & F.	For bonding new cementitious materials to existing cementitious surface. For use in horizontal/vertical surfaces where mortar or concrete can be supported by formwork.	3.0 - 3.5m ² / kg
ALFATILE AB	Polymer modified tile adhesive	BS 5980: Type 1	For fixing of ceramic tiles in dry situations.	Yield: 14.48 litres / 20 kg bag
ALFAGROUT TP	Cementitious grout for ceramic tiles	No standards applicable to this product	For filling dry tile joints, in kitchens, bathrooms, swimming pools and similar applications.	Yield: 14.6 liters / 20kg
ALFATILE E890	Epoxy tile adhesive and grout	ANSI A118.3 E5.5	For exceptionally high bonding strength or in chemically aggressive area. Can be used on concrete or steel.	1.75 kg / m ² / 12 kg @ 1 mm tile bed Approx 1.00 kg / m ² as grout





S.H. CORPORATION

IMPORTERS & STOCKISTS OF ACIDS & CHEMICALS



CHEMICAL LIST

(S.H. CORPORATION)

READY STOCK AVAILABLE

Acetic Acid	Melamine
Acid Inhibitor (CLEANJET ACY)	Methylene Chloride
ALFA SBR 30/60	Mono Ethanol Amine (MEA)
Aluminum Sulphate Flakes / Powder	Mono Sodium Glutamate
Amberlite IR 120 (Cation Resin)	Nitric Acid
Amberlite IRA 402 (Anion Resin)	Oleic Acid
Ammonium Chloride	Paraffin Oil
Ammonium Per Sulphate	Paraffin Wax
Ascorbic Acid (Vitamin C)	PEG 6000
Barium Sulphate	Phosphoric Acid 85% Food Grade
Benzoic Acid	Potassium Carbonate
BIOACTIVE (BIOCIDE)	Potassium Chloride
Boric Acid	Potassium Citrate
Calcium Carbonate	Potassium Hydroxide
Caustic Potash	Potassium Per Sulphate
Caustic Soda Flakes	Potassium Sorbate
Celatom - Filter Aid	Propylene Glycol
Chlorine 20 Grams Tablet	PVA-217 / PVA-317
Chlorine Granular	Silica Fume / Micro Silica
Citric Acid Anhydrous	Silica Gel Blue
Citric Acid Mono Hydrate	Silica Gel White
CMC Food Grade	Soda Ash
Di Ammonium Phosphate (DAP)	Sodium Benzoate
Di Ethanol Amine (DEA)	Sodium Chloride
Di Methyl Formamide	Sodium Citrate
Dowex IR-100 (Cation Resin)	Sodium Fluoride
Dowex IR-401Cl (Anion Resin)	Sodium Gluconate
EDTA	Sodium Ligno Sulphonate
Ethyl Glycol	Sodium Meta Bi Sulphite (Food Grade)
Ferric Chloride Anhydrous	Sodium Nitrite
Ferric Chloride Liquid	Sodium Per Sulphate
Ferrous Sulphate Hepta / Mono	Sodium Salt of Poly Naphthalene Sulfonic
Filter Aid	Stearic Acid
Formalin / Formaldehyde	Tartaric Acid food grade
Glycerin	Tri Sodium Phosphate
Hexamine	Urea
Hydrogen Food Grade	Xanthan Gum 200 Mesh
Lactic Acid 80% Food Grade	Xylene
Mecolite PA101 (Pure Anion Resin)	Zinc Chloride
Mecolite PC003 iD (Pure Cation Resin)	Zinc Sulphate Granular

CERTIFICATES

Book No.K 01195

Serial No.K 119403

MEMBERSHIP CERTIFICATE

Karachi Chamber of Commerce & Industry

Aiwan-e-Tijarat Road, Off: Shahrah-e-Liaquat, Karachi-74000, Pakistan

KCCI

Membership Number: **106677**

(Affiliated with the Federation of Pakistan Chambers of Commerce & Industry)

CERTIFIED that **M/s. ALFALAH CHEMICALS**

(name and address of Member Firm / Company)

First Floor, Room # 107, Yousuf Chamber, Union Commercial Area, Shahrah-e-Faisal, Karachi.

G.S.T. No. **3277876124892**

N.T.N. No. **72309475**

is a member of this Chamber

THIS CERTIFICATE shall be valid upto the **31-Mar-2021** unless
(date)

otherwise notified to the NTN / GST Registration authority / Scheduled Bank concerned.



30072016

Given on this **20th** day of **May** 20**20**

Signature of Secretary General

Countersigned by

(name and designation)

CERTIFICATES

Book No.B 10026 **2020-2021** Serial No.B 1002591

MEMBERSHIP CERTIFICATE **CORPORATE MEMBER**

Membership No - 1580

Name & address of ~~Chamber~~ **Pakistan Chemicals & Dyes Merchants Association**
Association
PCDMA House, Rambharti Street, Jodia Bazar, Karachi - 74000
(Affiliated with the Federation of Pakistan Chambers of Commerce & Industry)

M/S. ALFALAH CHEMICALS

CERTIFIED that _____
(name and address of Member Firm / Company)
1ST Floor, Room # 107, Yousuf Chamber, Union Commercial Area, Shahrah-e-Faisal, Karachi

G.S.T. No. 32-77-8761-248-92 N.T.N. No. 7230947-5

is a member of this ~~Chamber~~ **Association**
Association

THIS CERTIFICATE shall be valid upto the 31st March, 2021
(date) unless
otherwise notified to the NTN / GST Registration authority / Scheduled Bank
concerned.

Given on this 30 day of MARCH---2020
20

Signature of Secretary General _____
AMIN YOUSUF BALGAMWALA
Chairman
Signature of Secretary General _____
SOHAIL ASHRAF
Secretary General
(name and designation)



CERTIFICATES



Dow Chemical Pacific (Singapore) Pte Ltd
260 Orchard Road
#18-01 The Heeren
Singapore 238855
Co. Reg. No. 199206043M

To Whom It May Concern:

This is to inform that M/s S.H Corporation, located at D-180, Site Karachi Pakistan is our authorized partner for the supply of Dowex and/or Amberlite ion exchange resins.

Thank you

Yours Sincerely,

EuniceChoy

Eunice Choy
Regional Marketing Manager, SEA/ANZ/IBPS
Ion Exchange Resin
Dow Water & Process Solutions

DOW CONFIDENTIAL - Do not share without permission

OUR PARTNERS



OUR CLIENTS



ICI PAKISTAN LTD.



FWO

Frontier Works Organization



Engineers and Constructors



Artistic
Milliners



We create chemistry



Koi Addu Power Company Limited



CONVERSION TABLE

Example: to convert 10 miles to Kilometers. find 1 mile in the 'length' table. Numbers on that same horizontal are equal units to 1 mile, therefore 1 mile = 1.6094 km. 10 miles = 16.094 km.

LENGTH

km	m	mm	mile	yard	ft	in	10 ⁻³ in
1	1000	10 ⁶	0.6214	1094	3281	3.937x10 ⁴	3.937x10 ⁷
10 ⁻³	1	1000	6.214x10 ⁻⁴	1.0936	3.281	39.370	3.937x10 ⁴
10 ⁻⁶	10 ⁻³	1	6.214x10 ⁻⁷	1.094x10 ⁻³	3.281x10 ⁻³	3.937x10 ⁻²	39.37
1.6094	1609.4	1.609x10 ⁶	1	1760	5280	63360	6.336x10 ⁷
9.144x10 ⁴	0.9144	914.41	5.682x10 ⁻⁴	1	3	36	36000
3.048x10 ⁻⁴	0.3048	304.8	1.894x10 ⁻⁴	0.3333	1	12	12000
2.54x10 ⁻⁵	0.0254	25.4	1.578x10 ⁻⁵	2.778x10 ⁻²	8.333x10 ⁻²	1	1000
2.54x10 ⁻⁸	2.54x10 ⁻⁵	0.0254	1.578x10 ⁻⁸	2.778x10 ⁻⁵	8.333x10 ⁻⁵	10 ⁻³	1

AREA

km ²	m ²	cm ²	mm ²	sq.mile	acre	yd ²	ft ²	in ²
1	10 ⁻⁶	10 ¹⁰	10 ¹²	0.38612	247.11	1.196x10 ⁶	1.076x10 ⁷	1.550x10 ⁹
10 ⁻⁶	1	10 ⁴	10 ⁶	3.86x10 ⁻⁷	2.471x10 ⁻⁴	1.1960	10.764	1550
10 ⁻¹⁰	10 ⁻⁴	1	100	3.86x10 ⁻¹¹	2.471x10 ⁻⁸	1.16x10 ⁻⁴	1.076x10 ⁻³	0.1550
10 ⁻¹²	10 ⁻⁶	10 ⁻²	1	3.86x10 ⁻¹³	2.47x10 ⁻¹⁰	1.196x10 ⁻⁶	1.076x10 ⁻⁵	1.550x10 ⁻³
2.590	2.59x10 ⁶	2.59x10 ¹⁰	2.59x10 ¹²	1	639.96	3.097x10 ⁶	2.788x10 ⁷	4.01x10 ⁹
4.047x10 ⁻³	4047	4.047x10 ⁷	4.047x10 ⁹	1.536x10 ⁻³	1	4840	43560	6.273x10 ⁶
8.36x10 ⁻⁷	0.8361	8361	8.36x10 ⁵	3.228x10 ⁻⁷	2.066x10 ⁻⁴	1	9	1296
9.29x10 ⁻⁸	9.29x10 ⁻²	929	92900	3.587x10 ⁻⁸	2.296x10 ⁻⁵	0.1111	1	144
6.45x10 ⁻¹⁰	6.45x10 ⁻⁴	6.4516	645.16	2.491x10 ⁻¹⁰	1.594x10 ⁻⁷	7.716x10 ⁻⁴	6.944x10 ⁻³	1

VOLUME

m ³	dm ³ (litre)	cm ³ (ml)	yd ³	ft ³	in ³	UK gallon	US gallon
1	10 ⁻³	10 ⁶	1.3079	35.311	6102	219.97	264.17
10 ⁻³	10 ⁻³	10 ³	1.308x10 ⁻³	3.531x10 ⁻²	61.02	0.2203	0.2642
10 ⁻⁶	10 ⁻³	1	1.308x10 ⁻⁶	3.531x10 ⁻⁵	6.102x10 ⁻²	2.199x10 ⁻⁴	2.642x10 ⁻⁴
0.7646	764.6	7.646x10 ⁵	1	27	46650	168.19	201.99
2.832x10 ⁻²	28.32	2.832x10 ⁻⁴	3.704x10 ⁻²	1	1728	6.229	7.481
1.639x10 ⁻⁵	1.639x10 ⁻²	16.387	2.144x10 ⁻⁵	5.787x10 ⁻⁴	1	3.605x10 ⁻³	4.329x10 ⁻³
4.546x10 ⁻³	4.546	4.546x10 ³	5.946x10 ⁻³	0.1605	277.42	1	1.2008
3.758x10 ³	3.785	3.785x10 ³	4.951x10 ⁻³	0.1337	231	0.8327	1

MASS

Tonne(Mg)	kg	g	UK ton	US ton	cwt	lb	oz
1	1000	10 ⁶	0.9842	1.1011	19.66	2.205x10 ⁴	3.527x10 ⁴
10 ⁻³	1	1000	9.842x10 ⁻⁴	1.101x10 ⁻³	1.966x10 ⁻²	2.2046	35.274
10 ⁻⁶	10 ⁻³	1	9.842x10 ⁻⁷	1.101x10 ⁻⁶	1.966x10 ⁻⁵	2.204x10 ⁻³	3.527x10 ⁻²
1.016	1016	1.016x10 ⁶	1	1.12	20	2240	35840
0.9081	908.1	9.081x10 ⁵	0.8928	1	17.856	2000	32000
5.085x10 ⁻²	50.85	5.085x10 ⁴	0.05	0.0560	1	112	1792
4.536x10 ⁻⁴	0.4536	453.6	4.46x10 ⁻⁴	5x100	8.92x10 ⁻³	1	16
2.835x10 ⁻⁵	2.835x10 ⁻²	28.349	2.79x10 ⁻⁵	3.125x10 ⁻⁵	5.580x10 ⁻⁴	6.25x10 ⁻²	1

CONVERSION TABLE

PRESSURE, STRESS AND MODULUS OF ELASTICITY

MN / m ²	kN / m ²	kp								psi
Mpa	kPa	kgf / cm ²	bar	atm	mH ₂ O	ftH ₂ O	mm Hg	Ton/ ft ²	lbf/ in ²	lbf/ ft ²
1	1000	10.197	10	9.869	102.2	355.2	7500.6	9.320	145.04	20886
0.001	1	1.019 x10 ⁻²	0.0100	9.87x10 ⁻³	0.1022	0.3352	7.5006	0.0093	0.14504	20.886
9.807 x 10 ⁻²	98.07	1	0.9807	0.9678	10.017	32.866	735.56	0.9139	14.223	2048.1
0.100	100	1.0197	1	0.9869	10.215	33.515	750.06	0.9320	14.504	2088.6
0.1013	101.33	1.0332	1.0132	1	10.351	33.959	760.02	0.9444	14.696	2116.2
9.788 x 10 ⁻³	9.7885	9.983 x 10 ⁻²	9.789x10 ⁻²	9.661x10 ⁻²	1	3.2808	73.424	9.124x10 ⁻²	1.4198	204.45
2.933 x 10 ⁻³	2.9835	3.043 x 10 ⁻²	2.984x10 ⁻²	2.945x10 ⁻²	0.3048	1	22.377	2.781x10 ⁻²	0.43275	62.316
1.333 x 10 ⁻⁴	0.1333	1.3595 x 10 ⁻³	1.333x10 ⁻³	1.315x10 ⁻³	1.362x10 ⁻²	4.465x10 ⁻²	1	1.243x10 ⁻³	1.934x10 ⁻²	2.7846
0.1073	107.3	1.0942	1.0730	1.0589	10.960	35.960	804.78	1	15.562	2240
6.895 x 10 ⁻³	6.895	7.031 x 10 ⁻²	6.895x10 ⁻²	6.805x10 ⁻²	0.7043	2.3108	51.714	6.426x10 ⁻²	1	144
4.788 x 10 ⁻⁵	4.788 x 10 ⁻²	4.883 x 10 ⁻⁴	4.788x10 ⁻⁴	4.725x10 ⁻⁴	4.891x10 ⁻³	1.605x10 ⁻²	0.3591	4.464x10 ⁻⁴	6.944x10 ⁻³	1

DENSITY

Tonne / m ³					
g/cm ³	Kg / m ³	lb / in ³	UK tone / yd ³	Us tone / yd ³	lb / ft ³
1	1000	0.03613	0.75247	0.8428	62.43
10	1	3.613x10 ⁻⁵	7.525x10 ⁻⁴	8.428x10 ⁻⁴	6.243x10 ⁻²
27.680	27680	1	20.828	23.328	1.728x10 ⁻³
1.3289	1.328x10 ⁻³	4.801x10 ⁻²	1	1.12	82.955
1.1865	1.186x10 ⁻³	4.287x10 ⁻²	0.8929	1	74.074
1.602x10 ⁻²	16.019	5.787x10 ⁻⁴	1.205x10 ⁻²	1.35x10 ⁻²	1

FORCE AND WEIGHT

MN	kN	N	kgf	tonf	lbf
1	1000	10 ⁶	1.0196x10 ⁵	100.4	2.248 x 10 ⁵
10 ⁻³	1	10 ³	101.96	0.1004	224.82
10 ⁻⁶	10 ⁻³	1	0.10196	1.004x10 ⁻⁴	0.2248
9.807x10 ⁻⁶	9.807x10 ⁻³	9.807	1	9.842x10 ⁻⁴	2.2048
9.964x10 ⁻³	9.964	9964	1016	1	2240
4.448x10 ⁻⁶	4.448x10 ⁻³	4.448	0.45455	4.464x10 ⁻⁴	1

VISCOSITY, DYNAMIC

1 Pas (NS/M) ²	0.0208854 lbf s/ft ²	1 m ² /s	10.7639 ft ² /S
1 cp (centipoise)	2.08854 x 10 ⁻⁵ lbf s/ft ²	1 cSt (Centistokes)	5.58001 in ² /h
	0.001 Pas		1 mm /S
1 lbfs/ft ²	47.8803 Pas		10 m ⁻⁶ /s
1 lb/fts	1488.16 cP	1ft ² /h	0.092903 m ² /h
	1.48816 kg/ms	1in ² /S	645. 16 mm ² /s

ENERGY

1 MJ	0.277778 kWh	ft ³ /S	2.832x10 ⁻² m ³ /s
1 J	0.737562 ft ibf	ft ² /S	2.832x10 l/s
1 kgfm	9.80665 J	U.S. gal/min	6.309x10 ⁻⁵ m ³ /s
	7.23301 ft ibf	U.S. gal/min	6.309x10 ⁻² l/s
1.therm	105.506 MJ	U.K. gal/min	7.576x10 ⁻⁵ m ³ /s
1 kWh	3.6 MJ	U.K. gal/min	7.576x 10 ⁻² l/s
1 Btu (british thermal unit)	1.05506 k.j		

CONVERSION TABLE

HYDRAULIC CONDUCTIVITY

ft/S	3.048×10^{-1} m/s
U.S. gal/day/ft ²	4.720×10^{-7}

POWER

1 hp (horse power)	745.700 W (J/S)
1 lb/sbf/s	1.35582 W

WATER QUALITY

1 ppm	1 mg/l
1 grain/U.S. gal	17. 1 ppm
1 taf	735 ppm
Equivalent wt of ion	Atomic wt of ion
meq/l of ion	Valence of ion
	ppm of ion/equivalent wt of ion
1 meg/l	1 me/ 1
	1 epm
1 meg/l of cations	100 ECx 10 ⁶
1 ppm	1.56 ECx 10 ⁸

(Approximations for most natural water in the range of 100 to 5000 umho/cm at 25°C

TRANSMISSIVITY

ft ² /S	9.290×10^{-2} M ⁻² /s
U.S. gal/day/ft	1.438×10^{-7} m ⁻² /s

TEMPERATURE

Kelvin (K)	$= (t_F + 459.67) / 1.8$
	$= t_C + 273.15$
Celsius (C)	$= (t_F - 32) / 1.8$
Fahrenheit (F)	$= (t_C \times 1.8) + 32$

PERMEABILITY

m/s	cm/s	m / year	Darcy	Ft/yr	ft/day
1	100	3.156×10^7	1.04×10^5	1.035×10^8	2.835×10^5
0.01	1	3.156×10^5	1.04×10^3	1.035×10^6	2.834×10^3
3.169×10^{-8}	3.169×10^{-6}	1	3.28×10^3	3.281	8.982×10^{-3}
9.66×10^{-6}	9.66×10^{-4}	304	1	1000	2.74
9.658×10^{-9}	9.659×10^{-7}	0.3048	10^{-3}	1	2.738×10^{-3}
3.527×10^{-6}	3.527×10^{-4}	111.33	0.365	365.25	1

DENSITIES (at 20°C) g/cm³

Pure Water	0.99820	Kerosene (approx)	0.80
Sea Water	1.04	Paraffin wax (m.p. 52.53 °C)	0.912
Mercury	13.546	Microcrystalline wax (m.p. 60.63 °C)	0.915

MULTIPLYING PREFIXES

Prefix symbol	Name	Multiplying factor
G	giga	1 000 000 000 = 10 ⁹
M	mega	1 000 000 = 10 ⁶
k	kilo	1 000 = 10 ³
h	hecto*	100 = 10 ²
da	deca*	10
d	deci*	10 ⁻¹ = 0.1
c	centi*	10 ⁻² = 0.01
m	milli	10 ⁻³ = 0.001
u	micro	10 ⁻⁶ = 0.000001
n	nano	10 ⁻⁹ = 0.000 000 01

* Not recommended is SI



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