

PT. HISSAN TRADING INDONESIA
PRODUCT GUIDE

support@hissan.co.id
<http://hissan.co.id>



Denka ESTOP®

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ADMIXTURE SELECTION GUIDE**Accelerator**

Estop Admix RS	
Chemistry	Liquid
Specific Gravity (SG)	1.20 - 1.24 g/ml
Size	20 liter pail and 200 liter drum
Dosage/Yield/Coverage	± 2 kg of Estop Admix RS per 50 kg
Description	
Description	Concrete set accelerator
Uses	
Uses	Recommended for use during cold weather to accelerate the set time of mortar and concrete mixes. However, Estop Admix RS can be used any time to accelerate the set time to decrease cycle time



ADMIXTURE SELECTION GUIDE

Estop Admix SF	
Chemistry	Microsilica (Silica Fume)
Specific Gravity (SG)	2.2 kg/L
Size	20 kg/bag (densified)
Dosage	5 - 15% by mass of cement
Description	Microsilica (Silica Fume) concrete additive
Uses	<ul style="list-style-type: none"> • High rise structures columns • Marine structures (piling for bridges, wharfs, piers, great walls, bridge decks) • Chemical plants and nuclear plants • Oil well grouting • Secondary grouting (leak repairs, sealing splits) • Shotcrete applications (tunnels, mines, tanks and domes) • Tidal repair of piles and seawalls • Concrete roofing tiles and siding • Ready mix plant for better concrete performance

ADMIXTURE SELECTION GUIDE

Estop PPF	
Chemistry	Monofilament Fiber
Density	0.91
Size	Length Monofilament 6, 9, 12, 15 mm
Dosage	min. 0.6 kg/m ³ concrete recommendation 0.9 kg/m ³ concrete
Description	PP monofilament fiber for concrete reinforcement
Uses	Recommended for use for reinforcement of concrete mix and mortar with following features and advantages

ADMIXTURE SELECTION GUIDE

High Range Plasticizer + Water Reduction

Estop Admix SP2000	
Chemistry	Superplasticizer
Specific Gravity (SG)	1.12 – 1.20 g/mL
Size	20 L pail and 200 L drum
Dosage/Yield/Coverage	1.0 liter per 100 kg of cement
Description	High range water reducer superplasticising admixture
Uses	<ul style="list-style-type: none"> • To reduce water demand of a concrete mix without reducing workability, allowing increased early and ultimate strengths without additional cement • To significantly improve the workability of concrete without increasing water demand • To reduce concrete permeability and thereby reduce water penetration and enhance durability

ADMIXTURE SELECTION GUIDE**Release Agent**

Estoform OB	
Chemistry	Oil Base
Specific Gravity (SG)	0.9
Size	20 liter pail and 210 liter drum
Dosage/Yield/Coverage	20 to 60 m ² /liter
Description	
Description	High efficient mould releasing agent
Uses	
Uses	It is specially design to provide quick, clean and easy stripping of moulds and formworks



ADMIXTURE SELECTION GUIDE

Release Agent

Estoform WB	
Chemistry	Water Base
Specific Gravity (SG)	0.9
Size	20 liter pail and 210 liter drum
Dosage/Yield/Coverage	13 to 26 m ² /liter
Description	Water based mould releasing agent
Uses	It is specially design to provide quick, clean and easy stripping of moulds and formworks

ADMIXTURE SELECTION GUIDE**Retarder**

Estotard Precor	
Chemistry	Liquid
Size	20 liter/pail
Dosage/Yield/ Coverage	2.5 - 3.0 m ² per liter
Description	Surface retarder for concrete
Uses	General purpose chemical retarder for face down casting

COMPOUND

Curing Compound

Estocure P	
Chemistry	Polyvinyl Acetate
Size	20 kg/pail and 200 kg/drum
Coverage	5 m ² /kg
Description	Liquid curing compounds for the prevention of premature water loss in concrete
Uses	<ul style="list-style-type: none">• Roof & bridge decks• Apron, hard standing & retaining walls• Pre-stressed beams and piers, etc• Highways, runways and taxiways• Column, beam & precast unit



COMPOUND

Curing Compound

Estocure SC	
Chemistry	Sodium Silicate
Size	20 liter/pail and 200 liter/drum
Coverage	5 – 6 m ² /liter
Description	Liquid curing compounds for the prevention of premature water loss in concrete
Uses	<ul style="list-style-type: none">• Building floors• Manufacturing facilities• Warehouses• Parking area



CONCRETE REPAIR SELECTION GUIDE

Bonding Agent

Estobond AR	
Chemistry	Acrylic
Size	20 kg/pail 200 kg/drum
Dosage/Yield/ Coverage	4 – 6 m ² per kg
Compressive Strength	35 N/mm ²
Description	Single component white, milky emulsion based upon modified acrylic type resins
Uses	A bonding agent for estopatch concrete repair system. It may also use as bonding agent for concrete and cement/ sand mortar. It acts as curing compound when sprayed onto freshly applied repair patches



CONCRETE REPAIR SELECTION GUIDE

Bonding Agent

Estobond PVA	
Chemistry	Polyvinyl Acetate
Size	20 kg/pail 200 kg/drum
Coverage	4 – 6 m ² per kg
Description	General purposes bonding agent and adhesives
Uses	<ul style="list-style-type: none">• General purposes adhesive• Concrete and mortar bonding agent



CONCRETE REPAIR SELECTION GUIDE

Bonding Agent

Estobond SBR	
Chemistry	Styrene Butadiene Rubber
Size	20 liter pail 200 liter drum
Coverage	4 - 6 m ²
Compressive Strength	36 N/mm ² @ control 40 N/mm ² @ treated
Description	SBR emulsion bonding agent
Uses	A bonding agent for estopatch concrete repair system. It may also use as bonding agent for concrete and cement/sand mortar. It acts as curing compound when sprayed onto freshly applied repair patches



CONCRETE REPAIR SELECTION GUIDE

Bonding Agent

Estobond EC	
Chemistry	Thixotropic Epoxy
Size	5 kg set
No. of parts	Base and hardener
Dosage/Yield/ Coverage	1 m ² /liter at 1 mm
Compressive Strength	65 N/mm ²
Description	Thixotropic epoxy bonding and sealant
Uses	Used for bonding prefabricated concrete segments to provide a structural and water resistant joint. Estobond EC is also suitable as sealant for epoxy crack injection and a gap filling paste, grouting of starter bars, holding down bolts, etc, where a paste consistency materials is required



CONCRETE REPAIR SELECTION GUIDE

Bonding Agent

Estobond ES	
Chemistry	Epoxy Resin
Size	5 kg/pack
No. of parts	Base and hardener
Dosage/Yield/ Coverage	10 - 12 m ² /pack
Description	Epoxy resin slow set concrete bonding agent
Uses	For bonding new cementitious materials to existing cementitious surfaces. For use to horizontal surfaces and on vertical surfaces where mortar or concrete can be supported by formwork



CONCRETE REPAIR SELECTION GUIDE

Bonding Agent

Estobond PCA	
Chemistry	Thixotropic Epoxy
Size	4.5 liter pack
No. of parts	Base and hardener
Dosage/Yield/ Coverage	1 m ² /L at 1 mm
Compressive Strength	75 MPa @ 1 day 80 MPa @ 7 days
Description	Thixotropic epoxy segmental bridge adhesive
Uses	Used for bonding prefabricated concrete bridge segment to provide a structural and water resistant joint. Is also suitable as a gap filling paste, grouting of starter bars, holding down bolts, etc, where a paste consistency materials is required

CONCRETE REPAIR SELECTION GUIDE**Chemical Anchor**

AzFast E400	
Chemistry	Epoxy Adhesive
No. of parts	2
Compressive Strength	12700 psi
Description	Epoxy adhesive anchoring system
Uses	<ul style="list-style-type: none">• Suitable for dry damp or water filled holes• Excellent chemical resistance• Chemical anchor meet ASTM C881 - 90

CONCRETE REPAIR SELECTION GUIDE**Epoxy Injection**

Estorex DP	
Chemistry	Epoxy Resin
Size	5 kg/set
No. of parts	2
Compressive Strength	50 N/mm ² @ 1 day 70 N/mm ² @ 7 days
Description	Free flow, damp tolerance high performance epoxy resin
Uses	Recommended for cracks and cavities repairs / injection in concrete structures for damp surface with no flowing water



CONCRETE REPAIR SELECTION GUIDE**Epoxy Injection**

Estorex EP10	
Chemistry	Epoxy Resin
Size	5 kg/set
No. of parts	2
Coverage	1 liter pack/ 25 mm
Compressive Strength	70 N/mm ² @ 7 days
Description	Free flow high performance epoxy resin
Uses	Recommended for cracks and cavities repairs / injection in concrete structures with of 0.2 – 10.0 mm with no shrink, high strength and high adhesion to concrete and steel



CONCRETE REPAIR SELECTION GUIDE

Flooring Repair

Estopatch FSR	
Chemistry	Cementitious
Size	25 kg/bag
Water Usage	4 - 5 liter/25 kg bag
Yield	14,4 liter
Compressive Strength	
	22 N/mm ² @ 1 day 38 N/mm ² @ 7 days 48 N/mm ² @ 28 days
Description	
	Polymer modified structural and floor slab repair mortar
Uses	
	Supplied as a grey powder to which water is added on site. It contains blended non-shrink cements, graded sands and chemical additives which provide a mortar with the superior qualities required for structural and floor repair. Setting time of product final = 6 hours

CONCRETE REPAIR SELECTION GUIDE

Fast Setting Repair

Estopatch RSP	
Chemistry	Cementitious
Size	30 kg/bag
Water Usage	3.9 liter/30 kg bag
Yield	15.5 liter
Compressive Strength	
	35 ± 5 N/mm ² @ 3 hours 45 ± 5 N/mm ² @ 1 day 55 ± 5 N/mm ² @ 7 days 65 ± 5 N/mm ² @ 28 days
Description	
	Rapid setting patch repair concret for pavement and floors. Setting time (30°C) : Initial set = 40 minutes final 50 minutes
Uses	
	<ul style="list-style-type: none"> • For the emergency reinstatement of damaged or deteriorated concrete. • The material is particulary suitable for repairs to airport runways, aprons and areas where wheeled traffic requires fast return to service. • It may be used internally and externally

CONCRETE REPAIR SELECTION GUIDE

Fast Setting Repair

Estopatch RSR	
Chemistry	Cementitious Polymer
Size	(Liquid) 1 kg bottle (Powder) 5 kg bag
No. of parts	2
Dosage/Yield/ Coverage	0.37 m ² at 5 mm thick
Thickness Application	2 - 10 mm thickness in single application
Description	Polymer modified fast setting patching material for pavement and asphalt repair. Setting time < 1 hour
Uses	<ul style="list-style-type: none"> • Loading bay area • Parking area • Factory floor • Emergency repair road



CONCRETE REPAIR SELECTION GUIDE

Patching

Estop Skimcoat	
Chemistry	Cementitious Polymer
Size	25 kg/bag
Water Usage	7 - 7.5 liter/25 kg for base coat 7.5 - 8 liter/25 kg for finish coat
Yield	19 - 22 liter
Coverage	3.8 - 38 m ² = thickness 0.5 - 5 m
Description	A ready-mixed polymer modified cementitious plaster
Uses	Designed for use as a skim finish on walls and ceilings. It is widely used in today hotel, condominium, bungalow, luxury apartment and detached houses etc.



CONCRETE REPAIR SELECTION GUIDE

Patching

Estopatch MP	
Chemistry	Cementitious Polymer
Size	25 kg/bag
Water Usage	4 - 4.2 liter/25 kg bag
Coverage	1.6 - 1.8 m ² at 10 mm thick
Compressive Strength	30 N/mm ² @ 3 days 45 N/mm ² @ 7 days 60 N/mm ² @ 28 days
Description	Cementitious polymer modified repair compound
Uses	Recommended for use as a general patch repair mortar in vertical or soffit repair applications. It is suitable for repairing, rendering, patching bedding and pointing of concrete, block-work, brick-work & masonry



CONCRETE REPAIR SELECTION GUIDE

Patching

Estopatch SR	
Chemistry	Cementitious Polymer
Size	25 kg/bag
Water Usage	2.5 - 3.5 liter/25 kg bag
Yield	12.4 liter
Compressive Strength	
	18 N/mm ² @ 1 day 48 N/mm ² @ 28 days
Description	
	Polymer modified structural and floor repair mortar. Setting time final 5 hours.
Uses	
	Supplied as a grey powder to which water is added on site. It contains blended non-shrink cements, graded sands and chemical additives which provide a mortar with the superior qualities required for structural and floor repair



CONCRETE REPAIR SELECTION GUIDE

Patching

Estopatch ST	
Chemistry	Cementitious Polymer
Size	25 kg/bag
Water Usage	2.5 - 3 liter/25 kg bag
Yield	12 liter
Compressive Strength	25 N/mm ² @ 1 day 53 N/mm ² @ 28 days
Description	Polymer modified structural repair mortar. Setting time final 4 hours.
Uses	Supplied as a grey powder to which water is added on site. It contains blended non-shrink cements, graded sands and chemical additives which provide a mortar with the superior qualities required for structural repair



DENKA PRODUCT SELECTION

Accelerator

Denka Natmic AF-S	
Chemistry	Alkali Free Liquid
Size	260 kg/drum (185 L) 1200 kg/tote tank (857 L)
Dosage	3 - 12% of binder weight
Water Usage	For wet mix sprayed concrete water / binder ratio ≤ 0.45
Description	Alkali-free liquid accelerator for sprayed concrete application
Uses	<ul style="list-style-type: none"> • Rock support in tunnels and mines • Slope stabilization • TBM tunnel linings



DENKA PRODUCT SELECTION

Accelerator

Denka Natmic Z-AF	
Chemistry	Alkali Free Powder Based Calcium Sulfoaluminate
Size	25 kg paper bag
Dosage	8% = final set 10 minutes 10% = final set 1 minute - 45 seconds 12% = final set 1 minute
Compressive Strength	> 20.5 N/mm ² @ 7 days > 29.5 N/mm ² @ 28 days
Description	Calcium aluminate-based powder accelerator to be used in shotcrete
Uses	<ul style="list-style-type: none"> • Rock support in underground spaces (tunnels, headraces and mines) • Slope stabilization

Mix Proportion and Accelerator-dosing Position

W/C	s/a	Unit Content (kg/m ³)				SP (Cementx%)	NATMIC Z-AF (Cementx%)
		Water	Cement	Sand	Gravel		
0.45	0.60	203	450	998	673	0.9	10

DENKA PRODUCT SELECTION

Accelerator

Denka Premix Mortar	
Chemistry	Powder
Size	25 kg/bag
Description	Premix mortar used as grouting material for rock bolt installation

Standard Mix Proportion and Technical Data

Standard Mortar Mix Proportion

W/P Ratio (%)	per 1m ³			per bag		
	Denka Pre-Mix Mortar	Water	Mix Volume	Denka Pre-Mix Mortar	Water	Mix Volume
17	1975 kg	336 kg	1011 L	25 kg	4.25 kg	12.8 L
18	1925 kg	347 kg	1001 L	25 kg	4.5 kg	13.0 L

Typical Results for Flow and Compressive Strength at 30°C

W/P Ratio (%)	Flow, mm ASTM C 1437	Compressive Strength, N/mm ² ASTM C 109				
	0 min	1 d	3 d	7 d	28 d	
Spec	140-200	> 20	> 35	> 50	> 60	
17	177	34.9	58.7	60.3	76.8	
18	196	35.7	56.8	65.5	79.8	

*sample size 50x50x50mm

DENKA PRODUCT SELECTION

Anti Shrinkage (Raw Material)

Denka CSA #20	
Chemistry	Calcium Sulfoaluminate
Size	25 kg paper bag 1,000 kg bulk bag
Coverage	25 kg/m ³
Description	Shrinkage reducing and compensating additive
Uses	<ul style="list-style-type: none"> • Dry mix mortar to minimize cracking due to dry shrinkage • Pre-cast concrete member to improve bending toughness by chemical pre-stress with reinforced rebar • Ready-mixed concrete to minimize cracking due to dry shrinkage and improve water tightness

DENKA PRODUCT SELECTION

Anti Shrinkage (Raw Material)

Denka Power CSA T-S/R	
Chemistry	Calcium Sulfoaluminate
Size	20 kg paper bag 1,000 kg bulk bag
Coverage	20 kg/m ³
Description	High performance additive for the compensation and reduction of shrinkage for concrete and mortar
Uses	<ul style="list-style-type: none"> • Dry mix mortar to minimize cracking due to dry shrinkage • Ready-mixed concrete to minimize cracking due to dry shrinkage and improve water tightness

Concrete Mix Proportion

Ordinary Portland Cement	: 320 kg/m ³
Power CSA Type-S	: 20 kg/m ³
W/(cement + P-CSA)	: 55.0%
Sand-Aggregate ratio	: 45.5%

DENKA PRODUCT SELECTION

CGA (Cement Grinding Aid)

CGA DENKA	
Chemistry	Grinding Aid Quality Enhancers
Size	205 kg/drum 1,000 kg/tote tank
Type	CEM Series : Reduce agglomeration CLS Series : Increase late strenght CPE Series : Improve early and late strenght
Description	Cement grinding aid for strength enhancer and reduce clinker
Uses	Improve performance and reduce factor clinker in cement manufactur company

DENKA PRODUCT SELECTION

Fast Setting (Raw Material)

Denka Quick Set S 30	
Chemistry	Quick Hardening Material Base Calcium Sulfoaluminate
Size	20 kg/bag 500 kg/bulk bag
Setting Time	< 1 hour
Compressive Strength	35 N/mm ² @ 3 hours 40 N/mm ² @ 1 day 45 N/mm ² @ 7 days 50 N/mm ² @ 28 days
Description	Ultra-quick hardening additive comprising a mixture of powdered ordinary Portland cement and calcium sulfo aluminate
Uses	Emergency construction works as road, bridge, airport, railway, bridge, harbors

Mix Proportion and Technical Data

• Standard Concrete Mix Proportion (Arbitrary Values)

Mix No.	Target Slump (cm)	W/C (%)	s/a (%)	Unit Weight (kg/m ³)					
				Water	Quick Set S30	Sand	Gravel	WRA *1	D500 *2
1	10.0	34.0	43.0	170	500	720	960	0.5-10	0.5-5

DENKA PRODUCT SELECTION

Grouting

Denka Cosmic RDM	
Chemistry	Quick Hardening Powder
Size	25 kg bag
Water Usage	8.25 liter/25 kg bag
Initial Setting	< 6 hours
Compressive Strength	> 40 N/mm ² @ 1 day > 90 N/mm ² @ 28 days
Description	Quick hardening cementitious grout for semi-rigid pavement
Uses	Semi-rigid pavement with asphalt

* Typical semi-grid composite design:

Aggregate = ~ 92.9%

Filler = ~ 3.0%

Bitumen = ~ 3.6 - 4.6%

** Open graded asphalt concrete void : 25 - 30%

DENKA PRODUCT SELECTION

Grouting

Denka Pretascon Type M	
Chemistry	Non-Shrink Grout Powder
Size	25 kg bag
Water Usage	3.5 - 4.3 liter/25 kg bag
Yield	13 liter
Compressive Strength	14.9 N/mm ² @ 1 day 37.9 N/mm ² @ 7 days 45.3 N/mm ² @ 28 days
Description	Non-shrink mortar for grout (use for massive mortar)
Uses	<ul style="list-style-type: none"> • Grouting under heavy machinery • Foundation of steel structure • Reinforcement for building • Single pour up to 400 mm in one time application • Under turbin

DENKA PRODUCT SELECTION

Grouting

Denka Pretascon Type1 R	
Chemistry	Non-Shrink Dual Expansion Grout Powder
Size	25 kg bag
Water Usage	4.2 - 4.9 kg/25 kg bag
Yield	13.3 liter
Compressive Strength	34.8 N/mm ² @ 1 day 57.7 N/mm ² @ 7 days 67.8 N/mm ² @ 28 days
Description	Non-shrink dry mortar developed to meet customer needs
Uses	<ul style="list-style-type: none"> • Standard grout work • Large volume/surface area foundations • Long-distance pumping



DENKA PRODUCT SELECTION

Soil Stabilistator

Denka Colloidal Super	
Chemistry	Microfine Cement
Size	20 kg/bag
Water Usage	W/C ratio 4.0
Description	Micro-fine grouting material purposed for rock and soil grouting and can be used in conjunction with DENKA ES
Uses	<ul style="list-style-type: none"> • Tunneling : ground water sealing, pre-excavation grouting, post excavation grouting • Soil stabilization • Consolidation of weak ground

Physical Properties

Cement	Specific Gravity (g/cm ³)	Blane Value (cm ² /g)	Particle Size Distribution (um)	
			Max.	Ave.
COLLOIDAL SUPER	2.98	9000	10	4
COLLOIDAL CEMENT	3.02	6000	40	8
OPC	3.15	3200	100	20

DENKA PRODUCT SELECTION**Soil Stabilistator**

Denka ES	
Chemistry	Rapid Hardening Cement
Size	20 kg/bag
Setting Time	< 2 minutes
Description	High-durability cement-based rapid hardening material developed by the integrated chemical manufacturer
Uses	<ul style="list-style-type: none">• Stabilization of ground• Prevention of leakage and springing of water• Consolidation of weak ground• Tunnels• River banks

DENKA PRODUCT SELECTION

Soil Stabilistator

Denka ESL	
Chemistry	Powder
Size	20 kg paper bag
Setting Time	10 minutes
Description	Soil stabilization hardening accelerator
Uses	<ul style="list-style-type: none"> • Permeation grouting • Soil stabilization • High strength work

Liquid A	Liquid B
DENKA ES-L : 50 kg DENKA SETTER D-300: Optional Water : 483 liter <div style="text-align: right;">500 liter</div>	COLLOIDAL SUPER : 250 kg FT-500 : 2.5 kg Water : 414 liter <div style="text-align: right;">500 liter</div>

DENKA PRODUCT SELECTION

Soil Stabilistator

Denka Quick Capsul	
Chemistry	Stick (Anchor Bolt Fastening Capsul)
Size	D 10 D 12 D 16 D 19 D 22 D 25 D 30 D 36
Description	Encapsulated super quick-setting, expansive, inorganic bolt-fastening capsule
Uses	<ul style="list-style-type: none"> • Machine base plate • Steel tower (column) base • Grand mark base • Soundproof wall base • Support (bracket) • Chimney base • Bracket

FLOORING SELECTION GUIDE

Estogard CS Lining	
Chemistry	Epoxy Flooring
Compressive Strength	More than 80 Mpa
Size	24 kg/pail (2 Component)
Coverage	1.5 kg/m ² per mm
Description	Self-leveling epoxy flooring. Seamless flooring with good chemical and abrasion resistant
Uses	<ul style="list-style-type: none"> • Building, apartment, commercial and shopping area • Car park • Heavy traffic flooring for machinery • Clean room like laboratory

FLOORING SELECTION GUIDE

Estogard Li	
Chemistry	Liquid (Lithium Base) Floor Hardener
Size	10 & 20 liter/pail
Coverage	10 - 15 m ² /liter
Description	
Description	Liquid lithium complex floor hardener and performance improver
Uses	
Uses	<ul style="list-style-type: none">• A new or existing warehouses• Car parks• Show rooms, workshops• Production areas• Balconies

FLOORING SELECTION GUIDE

Estogard SP 30	
Chemistry	Liquid Floor Hardener (Silicate Base)
Size	20 liter/pail
Coverage	5 m ² /liter/coat
Description	
Description	Hardening and dustproofing compound for concrete surfaces
Uses	
Uses	As a surface hardener for new and old concrete floors to prevent dusting and to increase durability. Suitable for use on concrete and granolithic surfaces



FLOORING SELECTION GUIDE

Estogard T500e	
Chemistry	Epoxy
Compressive Strength	45 - 50 N/mm ²
Size	15 L/pack (28 kg)
Coverage	2.5 - 3.0 m ² /pack/ 5 mm thick
Description	Heavy duty epoxy resin floor topping
Uses	For floors in environments where high resistance to industrial chemicals and rising damp is required. It is also highly recommended for floors subjected to heavy wear and tear and heavy vehicular traffic

FLOORING SELECTION GUIDE

Estop SL	
Chemistry	Powder
Compressive Strength	20 N/mm ²
Size	25 kg/bag
Coverage	14.7 liter per 25 kg/bag
Description	Self leveling cementitious free to flow property suitable for underlayment application suitable for 2 - 10 mm thickness per layer
Uses	Highly recommended as a thin underlayment, for a wide variety of floor finishes such as tiles, carpets, vinyl sheeting, epoxy coatings and toppings. Can be used for building, apartment, commercial and shopping flooring. Clean room like laboratory. Levelling off screed, concrete slab and terazo floor

FLOORING SELECTION GUIDE

Estop Tile Grout	
Chemistry	Powder
Size	25 kg paper bag
Description	A cement-based, waterproof tile grout, produced from selected materials and additives for grouting between ceramic tiles after the tile adhesive installation
Uses	To provide a waterproof, non-shrink and attractive colors of grout between ceramic tiles, natural stones and granites

FLOORING SELECTION GUIDE

Estoprime LV	
Chemistry	Epoxy
Size	5 kg/pack
Coverage	5 m ² /kg
Description	
Description	Low viscosity epoxy based primer
Uses	
Uses	<ul style="list-style-type: none">• Excellent adhesion to concrete, cementitious screeds and subsequent epoxy overlay• Good bonding on metal surface• Easy to use-simple roller application• Low viscosity ensures maximum primer penetration

FLOORING SELECTION GUIDE

Estotop SQ	
Chemistry	Shake on Floor Hardener
Variant Color	Natural, Red, Green, Light Grey
Size	30 kg
Coverage	4 - 6 kg per m ²
Description	Non metallic dry shake surface floor hardener compound for fresh concrete
Uses	<ul style="list-style-type: none"> • Breweries / heavy industry • Agricultures buildings • Warehouses / workshops • Loading bays / parking lots • Service station / garage



GROUTING SELECTION GUIDE

EstogROUT Admix	
Chemistry	Powder
Size	20 kg/drum 225 g/sachet
Water Dosage	20 - 22 liter
Single/Dual Expansion	Single Expansion 1 - 4%
Compressive Strength	Improve 15%
Description	Plasticized expanding grout admixture
Uses	<ul style="list-style-type: none"> • Ground anchors • Steel columns • Bed grouting • Duct grouting • Infilling and jointing



GROUTING SELECTION GUIDE

EstogROUT CG Admix	
Chemistry	Powder
Size	25 kg bag
Water Dosage	7.5 - 8.5 liter/25 kg bag
Single/Dual Expantion	Single 0.5 - 1%
Compressive Strength	> 40 N/mm ² at 35% W/P > 55 N/mm ² at 30% W/P > 65 N/mm ² at 28% W/P
Description	High performance - high flow grout
Uses	<ul style="list-style-type: none"> • Soil improvements : sleeve pipe injections, injection shields, soil stabilization • Underneat concrete slabs and floors • Tunnel constructions : injection for strengthening & compacting, backfilling injections • Soil nailings and ground anchoring • Civilengineering: diaphragma, pile foundations • Grouting of space between structures • Pre-stressed for precast concrete, injection of cable ducts

GROUTING SELECTION GUIDE

EstogROUT FP 70	
Chemistry	Cementitious
Size	25 kg bag
Water Dosage	4 - 4.5 liter
Single/Dual Expantion	Dual
Yield	13.25 liter
Compressive Strength	> 40 N/mm ² @ 1 day > 55 N/mm ² @ 7 days > 65 N/mm ² @ 28 days
Description	High strength, high flow dual stage shrinkage compensated grout
Uses	<ul style="list-style-type: none"> • Machine foundations • Concrete anchors • Rail beds / bridge bearings • Cavities / gaps / recesses • Honeycombs • Precast wall panels, beams, columns, structural building members and curtain walls • Underpinning

GROUTING SELECTION GUIDE

EstogROUT FP70 Premix (f)	
Chemistry	Cementitious
Size	30 kg/bag
Water Dosage	3.6 - 4 liter
Single/Dual Expansion	Dual
Yield	12.6 liter
Compressive Strength	40 N/mm ² @ 3 days 55 N/mm ² @ 7 days 70 N/mm ² @ 28 days
Description	High strength, high flow dual expansion shrinkage compensated and fibre reinforced
Uses	Used in marine environment structures with thick section where non shrink grout and dual expansion is required. It is recommended for grouting of base plate, strengthening and repairs of structural concrete, such as columns, beams, decks

GROUTING SELECTION GUIDE

EstogROUT MP 50	
Chemistry	Cementitious
Size	25 kg bag
Water Dosage	3.8 – 3.9 liter
Single/Dual Expansion	Single
Yield	13 liter
Compressive Strength	> 18 N/mm ² @ 1 day > 35 N/mm ² @ 7 days > 50 N/mm ² @ 28 days
Description	Multi purpose shrinkage compensated grout
Uses	<ul style="list-style-type: none"> • General repair • Formwork & base plate grouting • Gap filling for non-shrinkage joints • Precast elements/Anchor bolts • Structural repair below or 50 N/mm²

GROUTING SELECTION GUIDE

EstogROUT MP 50 Premix	
Chemistry	Cementitious
Size	30 kg/bag
Water Dosage	3.3 - 3.4 liter
Single/Dual Expansion	Single
Yield	15.5 liter
Compressive Strength	> 18 N/mm ² @ 1 day > 35 N/mm ² @ 7 days > 50 N/mm ² @ 28 days
Description	General use non shrink microconcrete
Uses	General purpose grouting with thick section. It is recommended for grouting of base plate, strengthening and repairs of structural concrete, such as columns, beams, decks

GROUTING SELECTION GUIDE

EstogROUT MP 60	
Chemistry	Cementitious
Size	25 kg/bag
Water Dosage	4 - 4.5 liter
Single/Dual Expansion	Single
Yield	13.15 liter
Compressive Strength	> 20 N/mm ² @ 1 day > 50 N/mm ² @ 7 days > 60 N/mm ² @ 28 days
Description	Multi purpose shrinkage compensated grout
Uses	<ul style="list-style-type: none"> • General repair • Refuse chutes/generators • Presses / milling machines • Precast elements / anchor bolts • Formwork & base plate grouting

GROUTING SELECTION GUIDE

EstogROUT MP 70	
Chemistry	Cementitious
Size	25 kg/bag
Water Dosage	4 - 4.5 liter
Single/Dual Expansion	Single
Yield	13.3 liter
Compressive Strength	> 26 N/mm ² @ 1 day > 55 N/mm ² @ 7 days > 70 N/mm ² @ 28 days
Description	High strength shrinkage compensated grout performance
Uses	<ul style="list-style-type: none"> • Gas or steam turbines • Generators • Presses • Crane rails • Milling machines • Anchor bolts • Bedding for bridge bearing pad • Formwork grouting

GROUTING SELECTION GUIDE

EstogROUT MP 70 Premix	
Chemistry	Cementitious
Size	30 kg/bag
Water Dosage	3.8 - 4.5 liter
Single/dual Expansion	Single
Yield	13.3 liter
Compressive Strength	30 N/mm ² @ 1 day 50 N/mm ² @ 7 days 65 N/mm ² @ 28 days
Description	High strength, high flow, and microconcrete
Uses	General purpose grouting with thick section > 100 mm. It is recommended for grouting of base plate, strengthening and repairs of structural concrete, such as columns, beams, decks



GROUTING SELECTION GUIDE

EstogROUT MP 90	
Chemistry	Cementitious
Size	25 kg/bag
Water Dosage	4 - 4.25 liter
Single/dual Expansion	Single
Yield	13.55 liter
Compressive Strength	> 30 N/mm ² @ 1 day > 60 N/mm ² @ 7 days > 80 N/mm ² @ 28 days
Description	High strength shrinkage compensated grout
Uses	<ul style="list-style-type: none"> • Crane rails • Gas or steam turbines • Generators • Milling machines • Bedding for bridge bearing pad grouting

GROUTING SELECTION GUIDE

EstogROUT UW	
Chemistry	Cementitious
Size	25 kg/bag
Water Dosage	3.5 - 4 liter
Single/dual Expansion	Single
Yield	11 - 13 liter
Compressive Strength	35 Mpa @ 1 day 45 Mpa @ 7 days 60 Mpa @ 28 days
Description	Non-Shrink cementitious grout for under water installations
Uses	Used for free or pumped grouting applications underwater or intidal zones. There will be no significant 'wash-out' of the cement phase. Applications include bridge columns, quay pillars, concrete pilling, shipways and dams

GROUTING SELECTION GUIDE

Estorex EPS	
Chemistry	Epoxy Grouting
Size	20 kg/set
Yield	± 10 L
Setting Time	30 - 45 minutes @ 30°C
Compressive Strength	> 90 N/mm ² @ 1 day > 110 N/mm ² @ 7 days > 115 N/mm ² @ 28 days
Description	High strength, epoxy resin grout
Uses	Free flowing epoxy grout, for use where physical properties and chemical resistance of the hardened grout are of utmost importance. It is suitable for a wide range of heavy duty applications



PROTECTIVE COATING SELECTION GUIDE

Estokote SC	
Chemistry	Cementitious
Thickness	1 - 1.5 mm
Size	25 kg/bag
Water Usage	7.5 - 8.75 liter/25 kg bag
Yield	22 liter
Coverage	22 m ² at 1 mm thick
Description	Cementitious waterproofing coating, fairing coating, and concrete protection
Uses	Recommended for use as polymer modified waterproof coating, fairing coating and concrete protection. Use on horizontal, vertical both interior and exterior. Use as protective coating to reduce the affect of deicing salt on concrete

PROTECTIVE COATING SELECTION GUIDE

Estotect CT 407	
Chemistry	Epoxy Polyamine
Maximum Thickness	128 micron
Size	5 and 20 liter
Coverage	7.8 m ² /liter – 100 micron
Description	Epoxy polyamide cured tank coating for potable water retaining structure
Uses	Designed as finish coat for internal tank coating, such as fresh / potable water tank, solvent / chemical tank, fuel and ballast tank, reservoirs, tanks, silo, meat and processing plant. The material is non toxic

PROTECTIVE COATING SELECTION GUIDE

Estotect CT 450	
Chemistry	Epoxy Resin Coating
Thickness Recommendation	200 - 250 micron/coat WFT
Size	20 liter pack
Coverage	3.0 - 3.5 m ² /L/coat
Description	High solid epoxy corrosion protective coating and lining for concrete and metal. Has chemical resistance
Uses	<ul style="list-style-type: none"> • Sewage treatment plant • Manhole • Underground pipe lining • Effluent plants • Dock & harbor structure

PROTECTIVE COATING SELECTION GUIDE

Estotect EN600	
Chemistry	Epoxy Novolac Protective Lining
Variant Color	Light Grey, White
Size	4 L sets
Coverage	4 m ² /liter at 250 micron
Description	Chemical resistant 100% solids low odour epoxy coating system
Uses	Suitable for chemical manufacturing plants, food processing, laboratories, hospital clean room, breweries, wastewater treatment plants, desalination plants, chemical storage warehouse, pulp & paper mills, showrooms, petroleum refineries and other industrial sectors where chemical resistance is required

PROTECTIVE COATING SELECTION GUIDE

Estotect MMA	
Chemistry	Methacrylate Protective Coating
Thickness	> 200 micron/coat
Size	20 liter/tin
Coverage	5 - 6 m ² per liter
Description	High performance methacrylate protective and decorative coating
Uses	To protect exposed reinforced concrete structures from acid gases, chloride ions, sulphates, oxygen and water. Estotect MMA is suitable for use on structures in aggressive marine and coastal environments. It is suitable for new existing structures



PROTECTIVE COATING SELECTION GUIDE

Estotect PC Concrete	
Chemistry	Polymer Cementitious Concrete Protection
Size	30 kg/set
Coverage	2 - 5 m ² per kg
Description	Polymer modified concrete protection coating and weather resistant
Uses	<ul style="list-style-type: none"> • Basement walls and water retaining • Supporting walls • Supporting walls • Ponds, bathrooms • Exposed concrete walls • Precast structures (columns, girders, beams)



PROTECTIVE COATING SELECTION GUIDE

Estotect SWR	
Chemistry	Water Repellent
Size	20 liter/pail 200 liter/drum
Coverage	2.8 m ² - 4.6 m ² per liter
Description	A surface water repellent and waterproofer
Uses	Silane-siloxane based surface water repellent and waterproofer for the invisible protection of brickwork, cement plaster, concrete etc., including limestone and chalks. It is particularly useful for dipping precast work, tiles etc.

PROTECTIVE COATING SELECTION GUIDE

Estotect UW	
Chemistry	Epoxy
Maximum Thickness	500 – 2,000 micron
Size	5 and 20 liter
Coverage	2 m ² /liter for 500 micron
Description	Under water coating protection
Uses	Under water application for protection of metal, concrete, cement renders, masonry in extremely aggressive environment

SEALANTS SELECTION GUIDE

Estocell	
Chemistry	Joint Fiber Bitument Impregnated
Non-Sag or Pourable	Comprasion 0.69 - 8.62
Size	<ul style="list-style-type: none"> • 10 mm • 12.5 mm • 20 mm • 25 mm
Uses	<ul style="list-style-type: none"> • Concrete roads, ramps and runways • Bridges and pedestrian areas • Concrete pavement and floors • Building basement stucture and sub-ways • Concrete reatining walls

SEALANTS SELECTION GUIDE

Estoliastic	
Chemistry	Rubber Bitumen
Non-Sag or Pourable	Pourable
Density	1.03
Movement Accomodation Factor	10%
Pouring Temperature	160 - 180°C
Uses	<ul style="list-style-type: none"> • Pavements • Water retaining structures & resevoirs • Basement / car park • Water excluding structures • Floor joint in tunnel / subway



SEALANTS SELECTION GUIDE

Estop Backer Rod	
Chemistry	Circular Cord Polyethylene Foam
Color	White
Cord Diameter	<ul style="list-style-type: none">• 8 mm• 10 mm• 13 mm• 15 mm• 20 mm• 25 mm• 30 mm• 35 mm• 40 mm• 50 mm
Uses	They enable the correct width to depth ratio of the sealing slot to be obtained and provide a firm backing to ensure that sealants are forced against the sides of the joint during application

SEALANTS SELECTION GUIDE

Estoseal 109	
Chemistry	One Part Polyurethane
Variant Color	Black, Grey, White
Single(S) or Multi (M) Component	Single
Movement Accomodation Factor	25%
Elongation at Break	400%
Uses	For sealing vertical and horizontal movement joints in pre-cast concrete panels and curtain walls, window and door frame surrounds and other building components

SEALANTS SELECTION GUIDE

Estoseal C200PF	
Chemistry	Polyurethane 2 Component
Color	Black
Single(S) or Multi (M) Component	Multi
Movement Accomodation Factor	25% Butt Joints
Description	Estoseal C200PF cold applied high performance pitch free
Uses	<ul style="list-style-type: none"> • Concrete airfield pavement, runways and taxiways • Car parks • Chemical industries, workshops and warehouses • Particularly for fuel and chemical spill age areas • Sewage treatment plants and sewage lines

SEALANTS SELECTION GUIDE

Estoseal E77	
Chemistry	Bitumen
Non-Sag or Pourable	Pourable
Single(S) or Multi (M) Component	Single
Movement Accomodation Factor	25% Butt Joints
Description	Hot poured fuel resistant joints sealant
Uses	<ul style="list-style-type: none"> • Pavements • Water retaing structures & reservoirs • basement / car park • Water excluding structures • Floor joint in tunnel / subway • Airfield aprons • Cargo terminal • Warehouses • Parking areas

SEALANTS SELECTION GUIDE

Estoseal T600	
Chemistry	Polysulphide Sealant
Color	Grey
Single(S) or Multi (M) Component	Multi
Movement Accomodation Factor	25% Butt joints 50% Lap joints
Modulus	Low
Uses	Sealing movement joints in building and civil engineering structures, including superstructures, resevoirs, floors, base-ments and subways

STRENGTHENING SELECTION GUIDE

EstoGlass 450 & 900	
Chemistry	Glass Fiber
Tensile Strength	3400 N/mm ²
Size	EstoGlass 450 = 40 m ² /roll EstoGlass 900 = 20 m ² /roll
Description	High strength carbon fiber sheet for structural strengthening system at concrete structure
Uses	<ul style="list-style-type: none"> • Commercial • High rise Industrial plants warehouse bridges • Tunnels • Jetties Pipes • Culvert • Chimneys power station plants

STRENGTHENING SELECTION GUIDE

EstoWrap Series	
Chemistry	Carbon Fiber
Tensile Strength	4900 N/mm ²
Size	0.5 m(W) x 100 m(L)
Variant	<ul style="list-style-type: none"> • 150 • 200 • 230 • 300 • 450 • 600
Description	High strength carbon fiber sheet for structural strengthening system at concrete structure
Uses	<ul style="list-style-type: none"> • Commercial • High rise Industrial plants warehouse bridges • Tunnels • Jetties Pipes • Culvert • Chimneys power station plants

STRENGTHENING SELECTION GUIDE

EstoWrap Primer	
Chemistry	Epoxy Primer
Size	Hardener (5 Kg) Base Resin (10 Kg)
Coverage	0.3 kg/m ²
Description	Solvent free epoxy primer for carbon and glass wrap application
Uses	Primer for EstoWrap and EstoGlass Series



STRENGTHENING SELECTION GUIDE

EstoWrap Resin	
Chemistry	Epoxy Resin
Flexural E Modulus	> 3500
Size	Hardener (5 Kg) Base Resin (10 Kg)
Coverage	1.2 kg/m ² /2 coats
Description	Solvent free impregnation epoxy resin for carbon and glass wrap application
Uses	Resin for EstoWrap and EstoGlass Series



STRENGTHENING SELECTION GUIDE

Estowrap Resin UW	
Chemistry	Epoxy Resin
Size	15 kg pack
Coverage	1.0 – 1.4 kg/m ²
Description	Underwater and wet impregnation epoxy resin for carbon and glass wrap application
Uses	Used for underwater and wet impregnation immediately before placing carbon and glass wrap that need to be applied on concrete, reinforced concrete or masonry elements to repair or strengthen

STRENGTHENING SELECTION GUIDE

Estoplate Series	
Chemistry	Composite Laminate Carbon
Tensile Strength	> 3100 Mpa
Type	CLS Series = High Strength Type CLM Series = High Modulus Type
Description	High strength composite laminate structural strengthening system for concrete structure
Uses	<ul style="list-style-type: none"> • Commercial, high rise • Industrial plants • Warehouses • Bridges, tunnels, jetties • Pipes, culverts, chimneys • Power station plants

STRENGTHENING SELECTION GUIDE

Estoplate Adhesive	
Chemistry	Epoxy Resin
Tensile Strength	> 30 Mpa
Size	Base (10 Kg) Hardener (10 Kg)
Coverage	1:1 (20 Kg set)
Description	Solvent free epoxy resin for carbon plate application
Uses	Adhesive for Estoplate Series

WATERPROOFING SELECTION GUIDE

Estoflex Dymeric	
Chemistry	Acrylic
Size	20 liter/pail
Variant Color	White, Grey, Green
Coverage	3 - 4 m ² /L/coat
Description	Single component water borne, high solids, acrylic copolymer waterproof membrane which offers excellent sunlight and UV resistance. Estoflex dymeric may be applied over a wide range of construction materials by brush, roller or airless spray
Uses	As a sunlight exposed waterproofing membrane for decks, balconies, corrugated metal roofs, concrete roofs and gutters. On roofs and balconies, estoflex dymeric provides a durable, slip resistant, water finish which will accept regular foot traffic



WATERPROOFING SELECTION GUIDE

Estoflex GP	
Chemistry	Rubberized Bitumen (Non-Expose)
Size	20 liter/pail 200 liter/drum
Coverage	1.5 m ² /liter
Description	One component rubberized bitumen emulsion sealing membrane. It is easy to apply, free of solvents and plasticizers compound. Estoflex GP is an elastic water-tight membrane
Uses	<ul style="list-style-type: none"> • New R.C roof & re-roofing • Basements wall • Ground water insulation / wet rooms • Foundation / bridge abutment or pier • Damp proof sandwich membrane in concrete floors • Vapour barrier to cladding panels • Repairing the cracks and crazing in asphalt surfaces < 5 mm. If otherwise, estojoint or estolastic sealant should be used • Retaining wall and tunnel

WATERPROOFING SELECTION GUIDE

Estoflex PU 850	
Chemistry	Polyurethane (Non-Expose)
Size	20 L/pail
Coverage	1.3 L/m ² / 2 coats
Description	Single component which is newly developed polymer of MMA, natural rubber, and polyurethane form elastic waterproof membrane
Uses	<ul style="list-style-type: none"> • Ground and suspended floor slabs • Terraces and balconies • Patios • Bathrooms and kitchens • RC gutters and planter boxes • Swimming pools and fountains • Water tanks • Basements and floors and walls • Retaining walls • RC roof deck



WATERPROOFING SELECTION GUIDE

Estoflex PU 880	
Chemistry	Acrylic Modified - Polyurethane (Expose)
Size	18 kg per pail
Coverage	0.5 – 1.0 kg/m ²
Description	One component moisture-cured UV resistant modified acrylic-polyurethane with excellent waterproofing property
Uses	<ul style="list-style-type: none"> • Building or apartment with light duty (foot traffic) exposed roof • Structure that require waterproof and elastic protective coating • Suitable for flat or sloping roof and podium deck • Bathroom • Others concrete and mortar media and absorbent surface

WATERPROOFING SELECTION GUIDE

Estoflex PU 980	
Chemistry	Polyurethane (Expose)
Size	18 kg/pail (1 Component)
Coverage	1.5 kg/m ² per mm
Description	One component pure polyurethane waterproofing
Uses	<ul style="list-style-type: none"> • Building or apartment with light duty (foot traffic) exposed roof • Structure that require waterproof and elastic protective coating • Suitable for flat or sloping roof and podium deck • Others concrete and mortar media and absorbent surface

WATERPROOFING SELECTION GUIDE

Estoflex PU 980 (AR)	
Chemistry	Polyurethane (Expose)
Size	20 kg/set (2 Component)
Coverage	1.10 – 1.50 kg/m ² per mm
Description	One component moisture-cured UV resistant modified acrylic-polyurethane with excellent waterproofing property
Uses	<ul style="list-style-type: none"> • Building or apartment with light duty (foot traffic) exposed roof • Structure that require waterproof and elastic protective coating • Suitable for flat or sloping roof and podium deck • Bathroom • Others concrete and mortar media and absorbent surface

WATERPROOFING SELECTION GUIDE

Estofam PU Series	
Chemistry	One Part Polyurethane
Size	20 kg/pail
Type	<ul style="list-style-type: none"> • Estofam PU • Estofam PU 300 • Estofam PU 500
Maximum Expansion	3000%
Reaction Time	@ 25°C : 30 - 90 second
Description	One part polyurethane foam grout
Uses	Seal water leakage : <ul style="list-style-type: none"> • Floor slabs • Bath room • Swimming poll • Water tank • Basement • Retaining walls

WATERPROOFING SELECTION GUIDE

Estokote Flexi	
Chemistry	Cementius Polymer Modified
Size	30 kg pack
Coverage	1 kg/m ² /coat
Description	High performance polymer modified elastomeric waterproofing membrane system
Uses	<ul style="list-style-type: none"> • R.C Flat roof & gutter • Reservoir, swimming pool and water tank • Basement wall and floor • Water retaining and excluding structure



WATERPROOFING SELECTION GUIDE

Estokote Grey	
Chemistry	Cementitious Polymer Modified
Size	20 kg pack
Coverage	10 m ² per pack per two coats
Description	Polymer modified cementitious waterproofing slurry & protective coating
Uses	<ul style="list-style-type: none"> • Potable water tanks, reservoirs and water treatment plant • Basement, retaining wall and tunnels • Planter boxes, terraces and balconies • Swimming pools & R.C gutter • Bathrooms and kitchens



WATERPROOFING SELECTION GUIDE

Estomax MX100	
Chemistry	Crystallization Powder
Size	20 kg/pail
Dosage	0.7% weight of cement content
Description	Crystallization admixture waterproofing
Uses	<ul style="list-style-type: none"> • Basements - floor and wall • Swimming pools, reservoirs and dams • Waste tanks / water storage structures • Underground tunnel structures • Marine and coastal structures • Roof garden or any fresh concrete

WATERPROOFING SELECTION GUIDE

Estomax MX200	
Chemistry	Crystallization Powder
Size	25 kg bag
Coverage	1.5 kg/m ² 15.0 – 16.0 m ² /25 kg bag (Dry Shake)
Description	Crystallization cementitious waterproofing
Uses	<ul style="list-style-type: none"> • Basements – floor and wall • Swimming pools, reservoirs and dams • Waste tanks / water storage structures • Underground tunnel structures • Marine and coastal structures • Roof garden or any fresh concrete • Planter boxes, balconies and concrete slabs

WATERPROOFING SELECTION GUIDE

Estomix	
Chemistry	Hydrophobic
Size	210 liter/drum 20 liter/pail
Dosage	1%
Description	High performance hydrophobic waterproofing system
Uses	<ul style="list-style-type: none"> • For complete and permanent waterproofing of mass and reinforced concrete • Estomix drastically reduces water absorption in structural and pre cast concrete • It is recommended to be used in multi-storey basement, tunnel, water retaining/excluding structure, bridge deck, civil and building structure

WATERPROOFING SELECTION GUIDE

Estop Admix WP 2000	
Chemistry	Liquid Naphtalene Sulfonate
Size	20 liter pail 200 liter drum
Specific Gravity (SG)	1.2 ± 0.03
Dosage	0.6% - 2% cementitious content
Mix Proportion	Cement > 350 kg/m ³ W/C ratio 0.4 Initial slump 80 ± 20 mm
Description	Integral liquid waterproofer and plasticizer
Uses	<ul style="list-style-type: none"> • To improve waterproofing property of concrete and mortar • Acost effective means of reducing concrete permeability and thereby reducing penetration



WATERPROOFING SELECTION GUIDE

Estop Carbon Proof 300	
Chemistry	Extruded Polystyrene (XPS)
Density	30 - 35 kg/m ³
Size	Length : 1180 - 4500 mm Width : 580 mm Thickness : 25, 50, 60, 70, 80, 100 mm
Description	Extruded polystyrene
Uses	Thermal insulating material widely used in building and construction while arranging thermal protection of the basement, roofs, floors, facades, thermal insulation of railways and highways

WATERPROOFING SELECTION GUIDE

Estop Carbon Proof 300 HD	
Chemistry	Extruded Polystyrene (XPS)
Density	38 - 50 kg/m ³
Size	Length : 1180 - 4500 mm Width : 580 mm Thickness : 50 mm
Description	Extruded polystyrene
Uses	Thermal insulating material widely used in building and construction while arranging thermal protection of the basement, roofs, floors, facades, thermal insulation of railways and highways

WATERPROOFING SELECTION GUIDE

Estop EasyProof	
Chemistry	Crystallisation
Size	20 liter/pail
Description	Dampness sealing and waterproofing chemical for concrete and masonry substrate
Uses	<ul style="list-style-type: none">• Toilet and kitchen• Basement walls and floor• Retaining and tunnel walls• Concrete rooftop and car park deck• Cement fibre boards• Concrete roads and bridge decks• Bricks end walls



WATERPROOFING SELECTION GUIDE

Estop RootProof	
Chemistry	Membrane
Size	22 kg/tin
Coverage	0.5 kg/m ² /coat
Description	
Description	Root resistant waterproofing membrane
Uses	
Uses	<ul style="list-style-type: none">• Roofs• Balconies• Decks• Green roof system• Can be added directly to cement for the purpose of constructing structures such as planter box

WATERPROOFING SELECTION GUIDE

Estop Urdin MP 1.5 (Estoproof PVC)	
Chemistry	PVC
Size	2.1 x 20 m (42 sqm/roll)
Variant Color	Light Grey, Dark Grey
Description	PVC waterproofing membrane
Uses	Suitable for waterproofing roofs and ballasted system, both in new construction and reconditioning

WATERPROOFING SELECTION GUIDE

Estoproof 200	
Chemistry	Polyethylene
Size	1 m x 20 m/roll
Primer	Estoproof Primer WB / Estoproof Primer SB, Coverage 5 m ² /liter
Description	Polyethylene finished cold applied self adhesive waterproof sheet membrane
Uses	A continuously bonded waterproof membrane for building and civil engineering structures

WATERPROOFING SELECTION GUIDE

Estoproof 30	
Chemistry	Membrane
Size	90 m ² per roll
Description	High performance multi-purpose damp proof membrane
Uses	<ul style="list-style-type: none"> • Under reinforced concrete ground, basement slabs and underground structures • On top of the slab and below 50 mm thick (minimum) cement and sand floor screed • On top of insulation foam board as separation and protection layer • On top of lean concrete as separation layer and vapour barrier in the application of spray waterproofing membrane system • On top compacted earth as supplemental vapour barrier in basements and underground structures waterproofed with hydrophobic waterproofing admixture system • On top soil as protection layer against erosion

WATERPROOFING SELECTION GUIDE

Estoproof 3P & 4P Granule	
Chemistry	Elastomeric Torch Mineral Granule
Size	1 m x 10 m roll
Primer	Estoproof Primer WB / Estoproof Primer SB, Coverage 5 m ² /liter
Variant Color	Green, Grey
Description	APP high performance elastomeric torch, applied waterproofing sheet membrane
Uses	<ul style="list-style-type: none"> • Concrete roofs and floor slab • Retaining walls • Plaza decks • Balconies / terraces • Basement tanking • Tunnels and subways



WATERPROOFING SELECTION GUIDE

Estoproof 3P & 4P Sanded	
Chemistry	Elastomeric Torch Sand
Size	1 m x 10 m roll
Primer	Estoproof Primer WB / Estoproof Primer SB, Coverage 5 m ² /liter
Description	APP high performance elastomeric torch, applied waterproofing sheet membrane
Uses	<ul style="list-style-type: none"> • Concrete Roofs and floor slab • Retaining walls • Plaza decks • Balconies / terraces • Basement tanking • Tunnels and subways



WATERPROOFING SELECTION GUIDE

Estoproof EPDM	
Chemistry	EPDM Rubber Membrane
Size	1.2 mm x 1.5 mm x 20 mm 1.5 mm x 1.5 mm x 20 mm 2 mm x 1.5 mm x 20 mm 3 mm x 1.5 mm x 20 mm
Adhesive	Estobond AC221 Dosage 0.2 liter/m ²
Description	Waterproofing membrane
Uses	<ul style="list-style-type: none"> • Roof • Swimming pools • Construction basements • Tunnels, etc

WATERPROOFING SELECTION GUIDE

Estoproof Primer SB	
Chemistry	Solvent Bitumen
Size	200 liter drum 20 liter pail
Coverage	0.25 – 0.3 liter/m ²
Description	Bitumen primer for waterproofing sheet membrane
Uses	The recommended primer for the estoproof range torch-applied or self-adhesive waterproofing sheet membranes. The primers “wet out”, form a film, seal the substrate and promote adhesion

WATERPROOFING SELECTION GUIDE

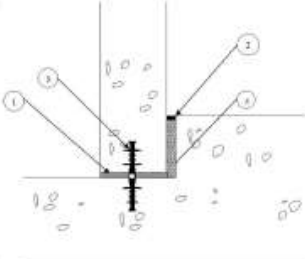
Estoproof Primer WB	
Chemistry	Water Bitumen
Size	200 liter/drum 20 liter/pail
Coverage	4 - 6 m ² /liter
Description	Bitumen primer for waterproofing sheet membrane
Uses	The recommended primer for the Estoproof range torch-applied or self-adhesive waterproofing sheet membranes. The primers "wet out", form a film, seal the substrate and promote adhesion



WATERPROOFING SELECTION GUIDE

Estop Water Plug	
Chemistry	Chloride Free
Size	5 kg/tin
Water Usage	1 part water : 3 part Estop Water Plug
Compressive Strength	10 N/mm ² @ 30 minutes 13 N/mm ² @ 1 day 23 N/mm ² @ 23 days 35 N/mm ² @ 28 days
Coverage	0.15 m ² at 15 mm
Description	Fast set, hydraulic cementitious mortar
Uses	<ul style="list-style-type: none"> • Stopping leaks in subways, culverts, tunnels, dams, basements, water tank and swimming pools, etc • Repairing honeycombs, cracks and spalls • Filling holes left by tie wires • Making rigid joints watertight • Repairing water retaining structures

WATERSTOP & JOINT FILLER SELECTIONGUIDE

Estop Slip Membrane	
Chemistry	Joint Separating Membrane
Size	2.0 ± 0.5 mm thick x 300 mm wide
Length	50 m per roll
Elongation at Break	> 100%
Shapes	 <p>1. 2 layers of Estop Slip Membrane 2. Estoseal 109/ T60D/ C200PF 3. Estopper EJ Waterstop 4. Estocell RBCF</p>

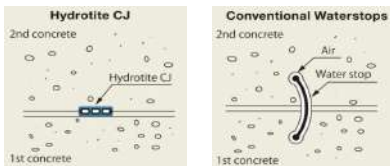
WATERSTOP & JOINT FILLER SELECTION GUIDE

Hydrotite CJ Series (Takiron)	
Chemistry	Swellable
Size	CJ-0725-3K : 7 mm/25 mm CJ-0720-2K : 7 mm/20 mm CJ-1020-2K : 10 mm/20 mm CJ-1030-4M : 10 mm/30 mm CJ-2020-M : 20 mm/20 mm CJ-3030-M : 30 mm/30 mm
Elongation at Break	min. 550%
Expansion	min. 500%
Uses	<ul style="list-style-type: none"> • Wall Joint • Joints of lining concrete for NATM Tunnel and shield tunnels • Pipes • Slab joints • Precast concrete joint

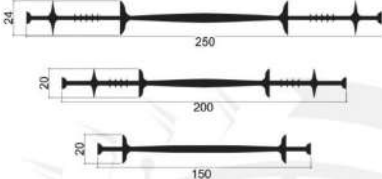
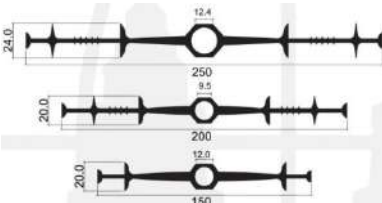
Note :

* Hydro CJ is not a sealing material for expansion joints and should not be used as such

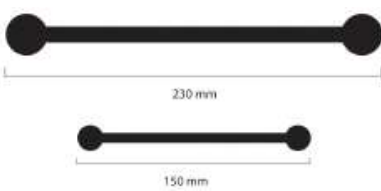
* Keep minimum of 100mm concrete coverage on both sides of Hydrotite CJ position



WATERSTOP & JOINT FILLER SELECTION GUIDE

Estopper CJ / EJ	
Chemistry	PVC Waterstop
Size	Variable
Length	Variable
Elongation at Break	> 300%
Shapes	<p>Estopper CJ</p> 
	<p>Estopper EJ</p> 

WATERSTOP & JOINT FILLER SELECTION GUIDE

Estopper Dumbbell	
Chemistry	PVC Dumbbell Waterstop
Size	Variable
Length	Variable
Elongation at Break	> 250%
Shapes	<ul style="list-style-type: none">• Estopper 230 dumbbell• Estopper 150 dumbbell  <p>The diagram illustrates two dumbbell-shaped waterstops. The top one is labeled '230 mm' and the bottom one is labeled '150 mm'. Each dumbbell consists of a central horizontal bar with a circular end on each side. Dimension lines with arrows indicate the length of the central bar for each size.</p>

WATERSTOP & JOINT FILLER SELECTION GUIDE

Estopper Hydrophilic	
Chemistry	Swellable Hydrophilic Waterstop
Size	S 10 : 5 mm x 20 mm x 20 m roll S 20 : 10 mm x 20 mm x 6 m roll
Unrestrained Volumetric Expansion	170 - 200%
Solid Content	100%
Uses	Integral sealing system for construction joint where conventional PVC Waterstop are not practical or impossible to be installed



WATERSTOP & JOINT FILLER SELECTION GUIDE

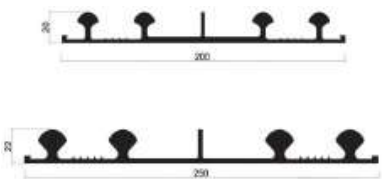
Estopper Hydrowell S47	
Chemistry	Swellable Hydrophilic Waterstop
Size	25 mm x 20 mm
Length	5 m/roll
Elongation at Break	300%
Covarage	20 - 30 m/liter
Uses	<p>Waterstop ideal for use in horizontal and vertical expansion joints for cast in situ concrete structure include :</p> <ul style="list-style-type: none"> • Tunnels / retaining walls / basements • Underground structures • Pits / box culverts • New to old concrete manholes • Poured in-situ construction joints • Above and below grade precast panels



WATERSTOP & JOINT FILLER SELECTION GUIDE

Estopper Hypatite	
Chemistry	Elastomeric Membrane System for Expansion Joints Waterproofing
Size	1 mm x 200 mm x 20 m/roll
Elongation at Break	> 350%
Adhesive	Estobond Hya 3 m x 200 mm/2 liter pack
Shapes	<p>The diagrams illustrate the application of Estopper Hypatite in three scenarios:</p> <ul style="list-style-type: none"> Crack: Shows a cross-section of a crack in a concrete slab. The Estopper Hypatite membrane is applied to both sides of the crack, overlapping by at least 25mm. Expansion Joint: Shows a cross-section of an expansion joint. The Estopper Hypatite membrane is applied to both sides of the joint, overlapping by at least 25mm. Cold Joint: Shows a cross-section of a cold joint. The Estopper Hypatite membrane is applied to both sides of the joint, overlapping by at least 25mm.

WATERSTOP & JOINT FILLER SELECTION GUIDE

Estopper Rearguard	
Chemistry	Externally Placed PVC Waterstop
Size	C200 : 200 mm x 15 m roll C250 : 250 mm x 12 m roll E200 : 200 mm x 12 m roll E250 : 250 mm x 12 m roll
Elongation at Break	> 250%
Shapes	<p>Estopper Rearguard C</p>  <p>Estopper Rearguard E</p> 