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İstanbul Teknik

Istanbul Teknik is a Turkish building materials and civil engineering company that was founded in 1998 serving to the construction industry.

Istanbul Teknik manufactures and sells products offering maximum benefit to construction industry with the most suitable solution for the projects employed.

Istanbul Teknik has a wide product range from infrastructure to estates and from asphalt applications to waterproofing. Istanbul Teknik comes forward with its high quality products and perfect services, experience and confidence.

Istanbul Teknik started up to 6.20 m width geogrid manufacturing in 2011 April with 4 million sqm/year capacity in its factory.

Products were presented to market with ForTex and AsfaltTex brand names.

Istanbul Teknik operates with manufacturing lines of the latest technology. Istanbul Teknik carries on R&D studies in its laboratory with skilled staff.

Istanbul Teknik exports to more than 50 countries in 5 continents including Europe, Africa, Austraila and Pacific Region, Asia (Middle East and CIS Countries) and America

Istanbul Teknik offers relevant solutions to its customers with over 20 engineers and architects, 80 employees and 1,000 selling points throughout Turkey.

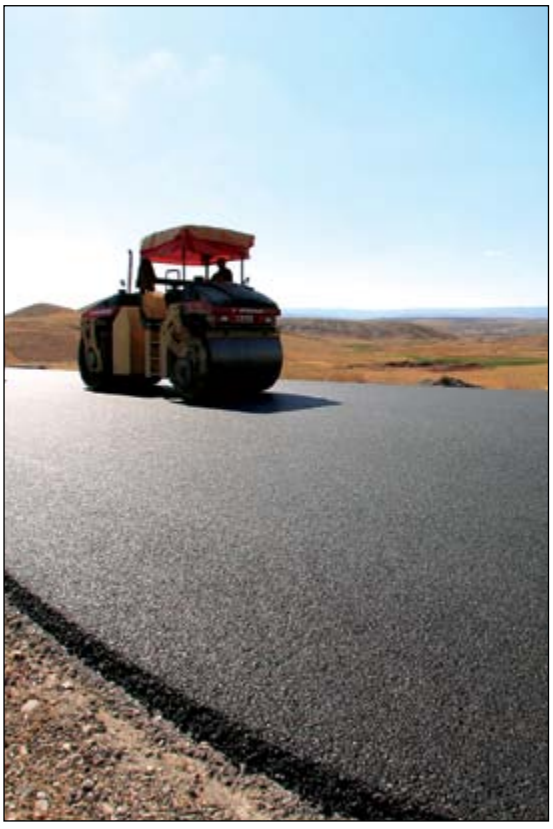
Istanbul Teknik operates according to EN ISO 9001:2008 Quality Management Standards. Also Istanbul Teknik has CE certificate or DoP – Declaration of Performance commitment for all of its products.

Istanbul Teknik maintains its leading position in the market without concession from customer satisfaction with 'Ready to Improve Your Construction' motto.

Asphalt Additives

İstanbul Teknik's asphalt additives offer benefits of more economical cost and more stable and comfortable roadways.

İstanbul Teknik continues its activities with the 'to make that cannot be made' motto offers ideal solutions for road constructions with TeraGrip peeling anti-stripping agents / adhesion promoters, HiperCell high performance cellulose fibers, TeraMuls bitumen emulsifier, Pawma warm mix asphalt additive, AsfaltTex asphalt reinforcement, FlexoDerz hot applied joint sealant and FluxerA cold asphalt patch additive products in its product range.



Product Range

GeoGreen
Green Roof
Systems

Insulation
Products

Geosynthetic
Products

Conrete
Polymer
Reinforcing
Fibers

Marble and
Natural
Stone
Products

Asphalt
Products

Asphalt Additives

TeraGrip Antistripping Agent

Peel strength enhancing admixtures, also known as the Anti-Striping Agent or Adhesion Promoter, establish a stronger bond between aggregates and bitumen. The use of TeraGrip extends the life of the asphalt road with a very small additional cost, prevents cracks and surface deformation.

The major cause of deteriorations such as ondulation, cracking and potholes starting at the surface mainly caused by the bitumen peeling from the aggregate surface and insufficient adhesion.

The physical, chemical and mineralogical characteristics of the aggregate in asphalt concrete with chemical properties of bitumen affect the adhesion forces between aggregate and the bitumen.

Indirect tensile strength (TSR) ratio increased by better adhesion of bitumen.

TeraGrip is produced in liquid (AN, PH) and solid flake (ANG) forms. TeraGrip AN & ANG are polyamine based additives and have very slight odour unlike other amine based additives.

TeraGrip PH is produced with polyphosphoric acid.
Does not have odor nuisance as usual amine additives.

TeraGrip gives excellent results with limestone and a variety of high silica aggregates such as basalt, granite.

Material properties and external factors that can affect the bitumen/aggregate bond

Aggregate properties	Bitumen properties	Mixture properties	External factors
Mineralogy	Rheology	Void content	Rainfall
Surface texture	Electrical polarity	Permeability	Humidity
Porosity	Constitution	Bitumen content	Water pH
Dust		Bitumen film thickness	Presence of salts
Durability		Filler type	Temperature
Surface area		Aggregate grading	Temperature cycling
Moisture content		Type of mixture	Traffic
Shape		Chemical additives	Design
Weathering		Polymer modifications	Workmanship
			Drainage

Reference: Shell Bitumen Handbook

HiperCell High Performance Cellulose

Gap graded asphalt or Stone Mastic Asphalt (SMA) design improves asphalt road durability against deformations under heavy traffic. SMA design has more bitumen content than usual hot mix asphalt, therefore HiperCell needed to prevent bleeding and drain down of excessive bitumen in the mixture.

Benefits

- Prevents drain down and bleeding of bitumen
- Generates a three-dimensional reinforcement inside asphalt
- Does not create dust when dosing because the pellet form
- Improves fatigue cracking resistance
- Increases mechanical stability
- Increases the modulus of elasticity
- HiperCell has lower dust in pellets, thus contains more fiber.

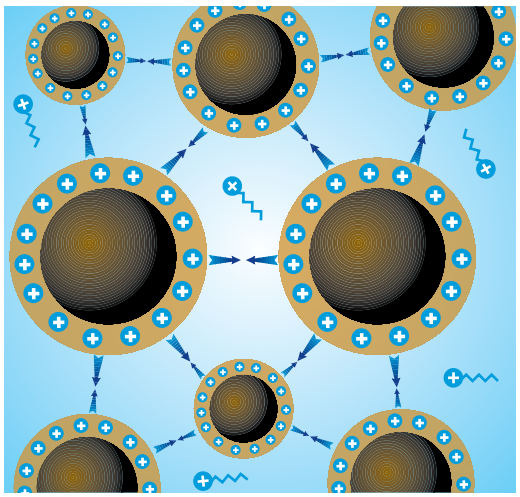
TeraMuls Asphalt Emulsifier

The bitumen used as a binder in asphalt road construction is a solid material at normal ambient temperature. Bitumen is mixed with water to obtain a liquid, sprayable binder. TeraMuls Asphalt Emulsifier is one of the most important components in emulsifying bitumen with water by chemical and mechanical processes.

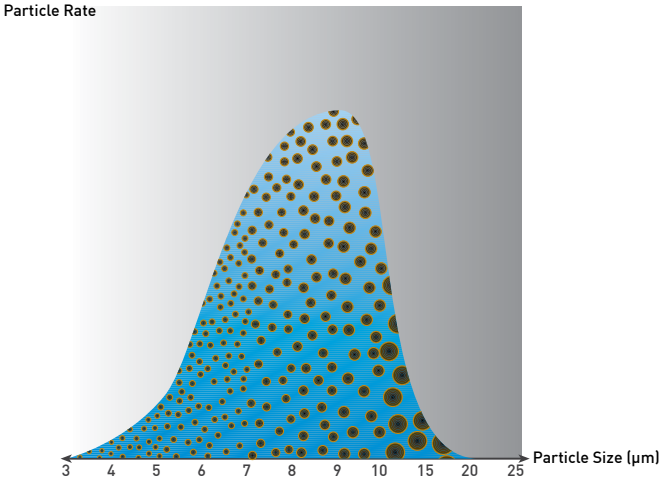
Benefits

- TeraMuls covers surface of micro bitumen particles in water. Positive charged TeraMuls covered bitumen particles repels each other so that particles stays balanced in emulson.
- Desired setting time can be adjusted according to application (tack coat, recycling, etc.).
- Emulsions can be transported to longer distances without setting, while maintaining stability for longer storage period. Emusion sticking capability and stripping resitance can be improved with TeraMuls.
- Different emulsions can be produced to suit different applications.
- It can be applied with the conventional asphalt equipment.

Stable Emulsion



Particle Size




Pawma

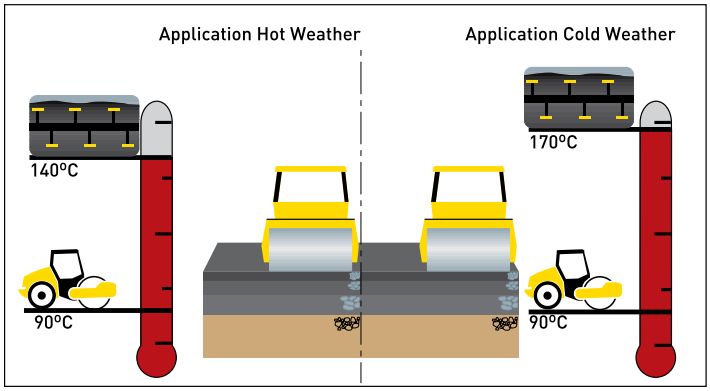

AsfaltTex

Pawma Warm Mix Asphalt Additives

Pawma Warm Mix Asphalt Additive provides ease of application by increasing the workability of the mixture. Ensures asphalt mixture to stay longer in workable form and to obtain a more efficient compression. Pawma gives additional workability to asphalt and allows laying to be made even in low ambient temperatures. Pawma is a liquid chemical additive. Dosage is only %0,20 - 0,30% of bitumen weight.

Benefits

- Increases stripping resistance and tensile strength ratio of asphalt.
- Provides the opportunity to work in cold and adverse weather conditions.
- Provides ease of application and more efficient compression.
- Lower mixing temperature allows energy saving thus resources can be used efficiently.
- Much lower greenhouse gas emissions reduce negative impacts on the health, safety and environment.
- It does not adversely affect asphalts chemical and reological structure.
- Asphalt has better workability between laying and compaction.
- Compression can be made by less energy, thus operation cost can be reduced.
- Low operating temperatures reduce bitumen aging.
- Asphalt mixture can be transported to longer distances because asphalt remains workable for longer period of time.
- Low operating temperatures reduce accidents by allowing more convenient and careful use of the asphalt plant and machinery.

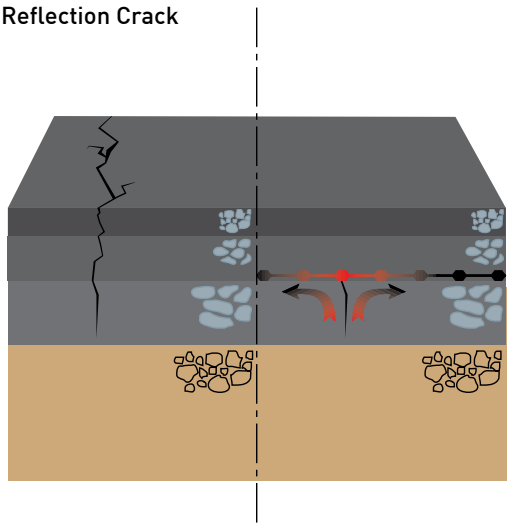


AsfaltTex Asphalt Reinforcement

AsfaltTex is type of geogrid produced by woven glass fibers and coated with polymer bitumen in square shape. The nodes are produced using a specially designed suture method for higher strength. This method achieves higher performance at the nodes.

Implementation and Application Areas

- The surface shall be scraped off and the surface cracks shall be filled. Surface repair required before application of AsfaltTex.
- Application surface shall be free from asphalt pieces, dust and debris.
- The application surfaces shall be completely free from moisture and water.
- The temperature of the application surface shall be higher than +5 °C and lower than +55 °C.



FlexoDerz

FluxerA

FlexoDerz Crack Fillers

FlexoDerz is a rubber modified bitumen filling compound used to fill surface cracks formed in asphalt coatings and concrete joints.

Benefits

- Highly elastic. From -20 °C to +120 °C retains its elasticity.
- Can be heated in a double-walled special vessel or directly on the furnace.

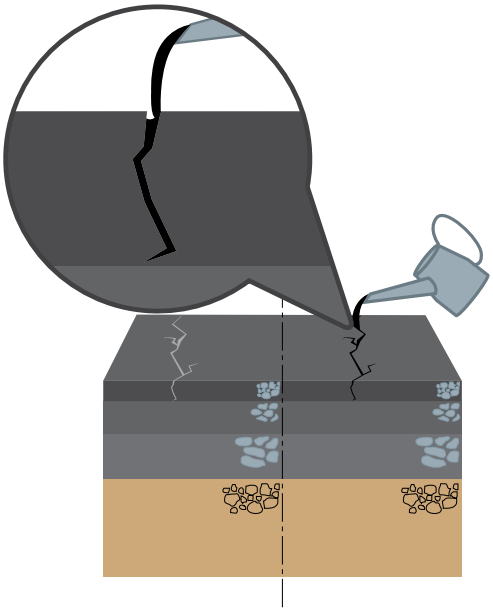
FluxerA Asphalt Cold Patch Additives

FluxerA is an additive which enables asphalt mixture to be stored in bags or in bulk form after cooling for several months without deterioration.

Benefits

- After the asphalt production, during the storage period aggregate coated with bitumen do not stick together. Thanks to special recipe of the FluxerA the asphalt hardens in a short time perfectly when poured into a pothole.
- Asphalt produced with FluxerA is resistant to cracking.
- Application is possible in cold and humid weather conditions thanks to asphalt patch produced with FluxerA additives.
- No need for special equipment to make patches. The application is very simple.
- Road can be opened to traffic immediately after application.

Maintenance of Cracks



Maintenance of Cracks With Ready Cold Asphalt