



High-tech additives for the road industry

www.iterchimica.it



The civil engineering application's field in which Iterchimica works is summarized in infrastructures such as railways, streets, ports, airports, bridges and tunnels, using products, methods and innovative technologies.

Innovative road-construction products and methods -additives

## anti stripping agents to modify the chemical structure of bitumen

They are complex chemicals that oppose the disgregating action of water and guarantee a perfect adhesion of the bitumen film on the aggregate surface. They increase the wettability of bitumen and the resistance to the mechanical and cyclic strains.

#### rejuvenators for hot mixes modify the chemical and physical structure of aged bitumen

Modify the chemical and physical structure of aged bitumen and reduce the stiffness of new courses produced with RAP. Improve adhesion between aggregate and bitumen, the wettability and the workability.

# special cold binders for the production of mixes for road maintenance 100% RAP

Allow the production of plastic and workable cold asphalt mix, using 100% RAP.



### adhesion bitumen-aggregate where

Road pavings in general

All types of asphalt concrete



Iterlene PE 31 polyphosphoric Iterlene IN/400 amino Iterlene SL/100 plus







### rejuvenation bitumen-oxidized where

Road pavings in general Where the specifications require it





Iterlene ACF HP green







cold production from RAP asphalt concrete-road maintenance

where

Urban-extra urban roads Road pavings in general

#### additive for warm mixes

Reduce the working temperatures of asphalt concrete during the production and laying phase, contribute to reduce emissions in the atmosphere.

#### -for high concentrations of RAP

Additives for warm mixes which, besides reducing the production temperature, allow to use high percentages of RAP.

#### traditional flux oils, modify the physical structure of bitumen

Modify the physical structure of bitumen, lowering the viscosity and giving to the mix a workability lasting in time.

#### ecological flux oils

Ecological flux oils are plasticizers of vegetable nature for cold asphalt's production. 100% Vegetable formulation.

#### packed cold mix, ready to be used

Plastic cold asphalt concrete for road maintenance, produced with ecological flux oils.

production of warm asphalt concrete, RAP recovery, reduce CO2 emissions where

Road pavings in general



modify the physical structure of bitumen, lowering the viscosity where

Urban – extra urban roads Road pavings in general



modify the physical structure of bitumen, lowering the viscosity where

Urban – extra urban roads Road pavings in general



road maintenance plugging holes on road surface where

Urban – extra urban roads Road pavings in general



Iterlow - T warm mixes Iterlow-RS warm mixes asphalt with high concentrations of RAP



Iterlene IN/200 Special Iteroil | Stabiloil











#### surface active anionic, cationic and non-ionic emulsifiers

Surface-active emulsifiers for production of standard and special bitumen emulsions. Used for tack coat, cold recycling, slurry-seal, single-double layer, bituminous pastes.

#### bituminous emulsions traditional | special | transparent

Traditional and special emulsions for the realization of tack coat, impregnating emulsions, cold recycling, slurry-seal, single-double layer, cold mixes.

#### synthetic latex

Modify the physical characteristics of bitumen, improving the performance properties.





production of traditional and special bitumen emulsions where

Road pavings in general



tack coat | cold recycling slurry-sea'l single-double layer, cold mixes where Road pavings in general



production of elastomeric and modified emulsions.



**Cationic emulsifiers** -quick setting Iteracid ID/10-K Iteracid L12 -quick/medium setting Iterstab SS 1180 medium setting Iterstab SF 1058 -slow setting Iterstab SF 1050 Non-ionic emulsifiers -medium setting Iteral AL/98-N Iterbas 40/50 -slow setting Iterspecial PB/L Iterspecial CB **Bitumen emulgators** Iterpitch B +



-quick setting Item acida -slow setting Item recycling -medium setting Item slurry **Transparent emulsion Itergrip-s trasparente** 



Iterlatex AF Iterlatex E1120 Iterlatex 1140|S









#### cellulose fibers natural - mineral -synthetic reinforce and thicken the bitumen

The fibers are used as thickeners in improved paving, where a high percentage of bitumen is required. The fibers are supplied with suitable dosing plants.

#### copolymers for mixes modification

Modify the physical structure of the mix, improving its performance properties. Used for the modification of mix in the realization of open, semi-open and closed asphalt mixes, with high performance properties. The copolymers are supplied with suitable dosing plants.

#### multifunctional compound for the modification of mixes

Customizable compound of structural modifiers (e.g. polymers and fibers). Modify the physical structure of the mix, improving its performance properties. Used for the modification of the mix in open, semi-open and closed asphalt mixes, with high performance properties. The compound are supplied with suitable dosing plants.



modify and improve the physical structure of the mix | improved hot bitumen mixes | semi-open | SMA | hiah modulus where

Urban, extra urban roads Roads with heavy traffic | carrying capacity Highways with heavy traffic | carrying capacity heavy traffic | static loads



modify and improve the physical structure of the mix | improved hot bitumen mixes | semi-open | SMA | high modulus where

Urban, extra urban roads Roads with heavy traffic carrying capacity Highways with heavy traffic | carrying capacity heavy traffic | static loads



modify and improve the physical structure of the mix | improved hot bitumen mixes | semi-open | SMA | high modulus

where

Urban, extra urban roads Roads with heavy traffic | carrying capacity Highways with heavy traffic | carrying capacity heavy traffic | static loads





Superplast











#### polymers for bitumen modify the physical structure of bitumen

Improve the characteristics (Ring and Ball, penetration, Fraass). Used for the realization of open, semi-open or closed mixes with high performance properties.

#### chemical modifiers for bitumen

Allow to reach performances comparable to those obtained with normal elastomers through a chemical and not physical interaction, affecting the parameters of Ring and Ball and penetration, without changing the visco-elastic characteristics of bitumen.

#### pmb (polymer modified bitumen) stabilizers

Used to stabilize bitumen-polymer mixtures (modified bitumen) increasing the polymerization of SBS. Avoid the separation of polymer from bitumen in the storage tank.



modify and improve the physical structure of the mix | improved hot bitumen mixes | semi-open | SMA | high modulus where

Urban, extra urban roads Roads with heavy traffic carrying capacity Highways with heavy traffic | carrying capacity

heavy traffic | static loads



**Iterprene SBS** 

- -radial
- -linear





modify the chemical structure of bitumen | improved hot bitumen mixes | semi-open | SMA | high modulus where

Urban, extra urban roads Roads with heavy traffic | carrying capacity *Highways with heavy traffic | carrying capacity* heavy traffic | static loads



#### stabilization of modified bitumen where

Urban, extra urban roads Roads with heavy traffic | carrying capacity Highways with heavy traffic | carrying capacity

heavy traffic | static loads



**Iterfort PH 17 Iterfort PH 20** 







#### colorings | urban design

Surface colorings for road paving, available in all color variations.

#### clear binders

The synthetic clear binders replace the bitumen allowing the coloring in the mass of the mixes, in all color variations.

#### oxides for mixes

The oxides are used for the coloring of bituminous mix in the mass.

#### soil stabilization with organic and inorganic products

Ecological systems and technologies with low environmental impact for white pavements. Improve the stabilization of clayey or arid soils, treated with cement and lime, increasing their mechanical properties.



create pleasant color effects on asphalt concrete pavements integration with surrounding environment where

Cycle paths | parking | urban design



mixes where

Cycle paths | urban design



production of colored mixed where

Cycle paths | parking | urban design



White roads

stabilization and consolidation of white pavements *Integration of the landscape* dust fixing where



Malta itercolor **Vernice itercolor** 



Resina LT Iterlene LT



Iteroxid



Iterstab Itercol







#### deodorizing additive

Deodorizing additive for bitumen.

It's a product based on essential oils, whose mixture is able to eliminate the smell of hot bitumen.

It's effective against organic and inorganics smells, it is not toxic and it's biodegradable.

It's certified by US authorities EPA and USDA.

#### surface treatments

Special protection and roughening treatments, made with epoxy resins.

Bituminous mastics for the treatment of mix's cracking.

#### detergents for mix encrustations

*Products for cleaning:* 

- -anti-sticking substances
- -detergents



deodorizing additive eliminates smells of hot bitumen where

It's added to the bitumen during the mix's production phase



protect, repair, roughen where

Dangerous pavements | cracked pavements



anti-sticking substances and detergents for bituminous mix encrustations

where

Equipment and site building tools for roads | rubbery-metal compaction rollers, vibratory finishing machines, bodies of trucks



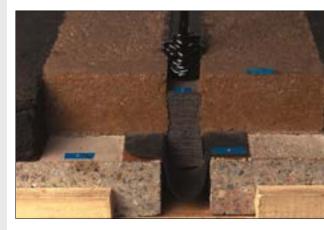


Itermastik sealant











#### additives for production of foamed bitumen



**Iterfoam** Iterfoam



additional additives for bituminous emulsions thixotropic agents with high stability

Used to increase the density of the emulsions.



bituminous emulsions

where

Road pavings in general

Road pavings in general -in treatments of cold recycling

-need to produce thick emulsions







#### antikerosene in the mass of asphalt mixes

Production of asphalt concrete resistant to the solvent action of fuels and oils in general in the mass.



production of pavings resistant to the solvent action of fuels and oils in general

where

Airport areas, parking, autobus lanes, parking areas of heavy vehicles



Iterkerosin powder additive





Innovative road-construction products and methods -technologies

### low- noise products and technologies for road surfaces

Innovative technology for the preparation of wearing courses, with the use of rubber dust from PFU wich reduces noise emissions.

### protective treatment of bituminous pavements

"Antikerosene" surface treatment for protection of the mixes from the solvent action of fuels and | or oils in general.

#### antismog additive

Innovative antismog product, which allows the catalysis of the most dangerous polluting agents coming from the emissions of engines (such as NOx), reducing the dangerous effects. Reduces the atmospheric pollution.

action

production of sound absorbing mixes | halves the noise level | stability | resistance to deformation and rutting

- adherence
- -acoustic lowering
- -material saving
- -noise reduction where

*Urban and heavy traffic roads* | *Special roads* 



surface treatments | mixes protection | where

Airports | industrial parking | service area and gas stations



antismog | antioxidant decrease the atmospheric pollution where Urban roads















Innovative anti-freeze additive studied to delay the adhesion of ice to the road surface.

It lowers the freezing point of water and interferes with the formation of ice crystals. It is dispersed homogeneously within the mix without changing its structural characteristic. Ice can be easily removed by snow clearing equipment. Gives more time to intervene to salt spreaders and snow clearing equipments.



Anti-freeze, surface treatments

where

Urban roads | Special roads



images





Human resources (know-how) operative abilities (know-that) -the specialized technical structure

### human resource (know-how) operative ability (know-that)

A specialized and operative "team" from planning to realization of works. Thanks to the experience in this field, Iterchimica has obtained prestigious positions in international working teams.



### technical assistance | analysis laboratory

A qualified technical structure able to conduct expertise activities, in order to meet the requests of the specifications, through preliminary laboratory studies and assistance for setting up on site.



#### research and development

Promoting study, research, experimentation of additives for improved, sustainable, safe, modern road pavings. Developing diversified chemical products, less and less dangerous for men and environment, using the most inflexible international standards.

The specialization in the market of modifiers for road pavings allowed to realize products suitable to customers' requirements.











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