

Photocatalytic treatment for roads and asphaltic pavements

Highways, roads, streets and lanes activated with **PHOTOSOUND®** use light energy to destroy air pollutants. Thus:

- **DECREASE** the pollution content in the urban air
- **REDUCE** the dirt runoffs, so the water pollution
- **DECREASE ASPHALT SURFACE TEMPERATURE**
- **ELIMINATE** odours
- **DECREASE** the growth of fungi and bacteria

PHOTOSOUND® is resistant to freezing and thawing cycles, and has excellent adhesion to asphalt substrates, improving the asphalt layer durability, while maintaining the flexibility of the asphalt, in streets roads and highways.

- Maintains and improves the sound absorbing capacity of the substrates
- Maintains self-draining properties of the roadways.
- Its colour can be adapted to customer requirements, as a tool to reduce the asphalt temperature and emissions, so the area contribution to global heating.

Its photocatalytic properties allow the reduction of major pollutants produced by vehicles. Strongly advised on:

- **Roads and streets in urban areas**
- **Urban squares**
- **Car parks**
- **Tunnels**
- **sidewalks and walking lanes**
- **Cycling lanes**

-PHOTOCATALYSIS

Photocatalysis is a technology that works under the same principles than Photovoltaic Panels (Solar cells). It uses light energy, in the range between visible and UVA, to destroy the pollutants produced by car exhausts pipes, industries, kitchens and heating, that affect human health and dirt

- **It is MAINTENANCE FREE, and its effect is PERMANENT.**
- **It is a CLEAN TECHNOLOGY**
- **It is not only a SURFACE CLEANER, it is an AIR DEPOLLUTER**
- **SAVES MONEY, as surfaces remain clean during years**
- **DESTROYS the DIRT and reduces the growth of MOULDS AND BACTERIA**

Is a **NATURAL** effect, and reproduces the activity of the sun and plants as depollutant

-THE RESULTS

Tests based on ISO standard 22197, carried on in



highlight a pollution destruction capacity $12 \text{ mg NOx/m}^2 \cdot \text{h}$ showing that a single square metre has a capacity to clean up to 300 m^3 per hour of urban air, it means a 300 metre high column, each hour, under the test conditions

**Ends
pollution
in the Cities**

-APPLICATION

PHOTOSOUND® is applied on compacted asphalt conglomerate, having enough thickness to withstand the traffic. The agglomerate must have sufficient interstitial voids to allow **PHOTOSOUND®** to penetrate in them.

PHOTOSOUND® is presented as a powder admixture. It is mixed with 35-50% of water to obtain very fluid homogeneous slurry, having the viscosity to allow correct application and to easily penetrate into the agglomerate voids. The slurry is applied by spray or brush, assuring it penetrates and leaves only a layer of 1 or 1.5 mm on the surface of the agglomerate, covering the inner surface of the voids.

Despite **PHOTOSOUND®** has a good adherence, and it works by penetration in the asphalt voids, in some cases a primer is required to assure a perfect contact between surfaces. In that case **3C PRIMER** is recommended

NOTE to keep the self draining or sound-absorbing properties of some asphalt surfaces, the application must carefully avoid clogging the voids.

Drying time will vary depending on atmospheric conditions. It is advised to apply **PHOTOSOUND®** on clean and wet agglomerates, at night or when the asphalt is cold.

PHOTOSOUND® can also be applied by spreading it onto the clean and wet agglomerates, filling the surface voids, leaving a smoother surface.

The top and superficial material will be removed by the traffic, leaving a photocatalytic surface that will cover up to 80 % of the total.

Avoid application on hot asphalt or under sunny conditions, as it will accelerate water evaporation and jeopardize the product setting. Provide humidity enough in the first 48 hours to assure a correct product setting

All data given in our technical information and recommendations are based on our experience, technical knowledge and practice, under established job and test conditions. Customer must check consumptions and suitability under his particular job conditions, by previously testing it. Activa can provide Technical assessment if required.

We guarantee the quality in case of production defects of our products, excluding further claims. Our responsibility is limited to the value of the goods supplied.

That TDS is valid until next edition is issued



-TECHNICAL DATA

Photocatalytic treatment for asphalt pavements and roads

- Cement, aggregates and additives admixture in powder form
- Particle size below 0.2 mm (200 microns)
- Mixing ratio with water 100 / 35-50 depending on application
- Lifetime of the admixture at 20 °C 50-60 min
- Adhesion on concrete at 28 days 2.5 Mpa
- Yield: 1,5-2 Kg /m²(spray) 3-3,5 Kg /m²(spread), depending on substrate
- Application temperature: between 5 ° C and 20 ° C
- Store in dry and sheltered places
- Packed in 25 Kg bags

PhotoSound : Photocatalytic treatment for asphalt pavements, with enhanced superficial activity in the UVA-visible range, based on EPS Technology, specially designed for high performance asphalts.