Tolsa Proprietary Technology



ADINS is a proprietary and patented technology based on natural silicates, that is surface modified, providing new functionality to materials, and reinforcing specific properties in organic and inorganic systems.

ADINS technology is a cost-effective solution for various products, including polymers, coatings, mortars, and ceramics, among others.

ADINS can be easily added to different formulations for performance improvement, cost reduction, and safer handling.



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Photocatalytic Additives Self Cleaning & Decontamintation

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A photocatalytic additive specially designed for paints & coatings and cementitious systems.

ADINS Clean is based on TiO₂ active particles supported on natural silicates, whose size and distribution acts as a strong catalyst, facilitating the degradation of organic molecules or volatile organic compounds (VOC) attached to surfaces. This additive is primarily designed for outdoor applications where sunlight exposure and atmosphere humidity are enough to initiate the chemical process.

TiO₂ particles are physically attached to the sepiolite carrier, preventing any potential release of particles and ensure the homogeneous distribution of the photocatalytic additive in the system. Consequently, ADINS Clean will remain active for the life of the system.





Benefit

The main benefit of this technology

is the dispersion of active particles

throughout the silicate structure,

doses of the active agent, making

it less harmful for handling, and

maintaining, if not enhancing the

mechanical properties of materials.

which permits the use of lower

TiO₂ Nanoparticles agglomerated



Fields of Application

Tolsa Group collaborates with leading industrial partners and international research centers in different fields to ensure the compliance with end users and market needs. ADINS clean can be easily added to coatings, mortars, paints or any cementitious systems such as:

Self Cleaning

Decontamination

Tolsa lab services are ready to perform tests under UNI 11259:2008 - Determinazione dell'attività fotocatalitica di leganti idraulici, Metodo della rodammina -, which can confirm the photocatalytic activity and self-cleaning properties.

Construction materials that have the ability to reduce contamination around them are key in large polluted urban centers where the need to decrease environmental contamination from air pollution levels is a priority.

ADINS Clean is a photocatalytic additive used in building facades, asphalts, and paints for removing contaminants present in the atmosphere (NOx and VOCs). These decontamination products are easily removed by water rain or simple washing down. Existing standard protocols can be applied to evaluate the decontaminating effect as CEN TC 386, ISO-TC 206/WG 37 or IS022197-1.



Pavements

- Prefabricated paving stones for squares and parking spaces.
- Prefabricated floor tiles for square and pedestrian streets.
- Street furniture for squares, streets, parks, etc.

• Porous asphalt slabs with decontaminating grout.

- Rigid concrete pavements.
- Concrete flooring, industrial floors, etc.
- Flat concrete roofs.

Facades

- Single coat mortar and general covering.
- Exposed concrete.
- Prefabricated panels

Paints & Coatings

ADINS Clean is a range of specially designed photocatalytic products used to increase the speed of organic material degradation. The use of these additives results in self-cleaning surfaces, preventing the presence of dust, mold, physical contaminants and chemicals where they accumulate.

ADINS Clean avoids the agglomeration of the catalyst particles (TiO₂) and increases effectiveness by supporting the TiO² particles on an inorganic substrate.

Samples	Elimination of NOx mg NO/(m ² h)	% Elimination of Toluene 2.5 h	% Elimination of Toluene 21 h
Conventional Mortar	1.21	16.3	20.5
Leading Photocatalytic Mortar	1.74	43.7	78.8
Mortar with added Adins Clean	18.01	46.8	79.6







ADINS Clean has been used in Self-Cleaning precast façade panels of the lecture building (surface area of 2700 m²) of Carlos III University (Getafe, Spain) and Decontaminating paving block (surface area of 250 m²) installed in the parking of Acciona R+D+i Technology Centre (Madrid, Spain)



About Tolsa

Tolsa Group, based in Madrid (Spain), has one of the broadest ranges of special clays worldwide, offering additives and industrial products that provide high added value and impro-European manufacturer of pet hygiene products, marketed under its own priority in order to renew reserves as

The Tolsa Group focuses on intelligent production that is modern, efficient, flexible, safe, and respectful of the environment. Each process is subjected to stringent quality controls, and the company is certified under ISO 9000 and ISO 14000. Tolsa Group has a production capacity of more than 1 million tonnes, and its factories are located near mining operations, or in port areas near our markets.

For more information about Tolsa Group, visit www.tolsa.com

ve the performance and efficiency of materials. Also, Tolsa is the largest brands as well as private label. The company has more than 20 mining operations to produce the highest quality sepiolite, bentonite, attapulgite, phosphates, peat, and marble, which generate more than 100 million tonnes of raw materials. The acquisition of new deposits is a key well as to offer each customer new raw materials to meet their needs.

