



Densit® Wear Protection Systems

ITW Engineered Polymers - your partner for Wear Protection Systems



Providing more than 30 years of experience with wear solutions

In processing industries unexpected or unscheduled plant shutdowns, caused by wear in processing machinery and components, are costly.

With its unique technology, ITW Engineered Polymers provides products and cost effective solutions especially designed for the wear protection of plant equipment in industrial plants.

Worldwide major system suppliers specify Densit® wear-resistant linings in key parts of their processing equipment. Densit® wear-resistant linings are also standard solutions for maintenance of plant components within a range of processing industries around the world.

Product range

Densit® Cast Basalt ...

Fused Densit® Cast Basalt has a high level of hardness and abrasion resistance. Furthermore, it is characterised by excellent resistance to almost all acids and alkalis. Fused cast basalt surfaces remain smooth and low in friction when used over time, thereby offering the benefit of low caking.



... excellent protection

Fused Densit® Cast Basalt provides excellent protection against the following abrasive media:
ore, sinter, ash, slag, sand, coal - clinker

ITW Engineered Polymers offers complete pipelines manufactured with fused cast basalt wear-resistant lining.

Densit® Aluminium ...

Aluminium Oxide Ceramic is used for plant components exposed to extreme wear and/or high temperatures up to 1000°C (1832°F) depending on the application and geometric shape.



... Oxide Ceramic

Advantages of aluminium oxide ceramic:

- Manufacture of extremely thin parts
- Extremely smooth surface
- High hardness
- High process temperature possible
- High acidity resistance
- Corrosion protection

Product range

Densit® WearFlex ...

Densit® WearFlex is a range of extremely high strength compounds providing superior protection against moderate to severe wear and is available as both low and high temperature products, catering for process temperatures up to 400°C (750°F) and 1200°C (2190°F) respectively. The Densit® WearFlex products are trowelled onto an anchoring mesh.



... trowelling system

Densit® WearFlex offers unique properties such as:

- High resistance to erosive and abrasive wear
- Seamless graduation in lining thicknesses
- Fast and easy installation including overhead applications
- Linings can be put to use after just 24 hours

Densit® WearSpray ...

Densit® WearSpray is a sprayable compound suitable for wear protection of larger surfaces and complex geometry.

The Densit® WearSpray can be sprayed both horizontally, vertically and overhead. The installation capacity is 100m² a day with a rebound loss of less than 1% of the material.



... spraying system

Spraying directly onto an anchoring mesh gives flexibility and speed in installation.

Lining can be put to use after just 24 hours.

Densit® WearCast ...

Densit® WearCast is a range of extremely high strength compounds providing superior protection against moderate to severe wear and is available as both low and high temperature products, catering for process temperatures up to 400°C (750°F) and 1200°C (2190°F) respectively. Densit® WearCast is used for lining pipes, pipe bends and as wear plates.



... casting system

Densit® WearCast offers unique properties such as:

- Excellent resistance to erosive and abrasive wear
- Joint free lining
- Castable into any shape
- Linings can be put to use after just 24 hours

Densit® pipes and customized components ...

ITW Engineered Polymers manufactures wear-resistant lined pipes, pipe bends, cyclones, valves and other plant components.

The pipes and plant components are constructed according to customer requirements for geometric shape, flanges and coupling options.



... with Densit® wear-resistant linings

The wear-resistant linings can be Densit® WearCast, Densit® Cast Basalt or Densit® Aluminum Oxide - depending on the application.

All linings provide effective protection against wear from abrasive medias such as ore, sinter, ash, slag, sand, coal and clinker.

Densit® Wear Protection Solutions - for many industries

Densit® wear-resistant linings are reliable and cost effective solutions for maintenance of plant components within a range of processing industries around the world.

Major system suppliers worldwide also specify Densit® wear-resistant linings in key parts of their processing equipment.



Steel industry

Densit® Wear Protection extends the lifetime and security of equipment in steel plants:

- Blast furnace hoppers
- Chutes
- Crash decks
- Dedusting cyclones and ducts
- EP ducts
- Fan casing feed chutes
- Granulation systems
- Injection and manifold pipes
- Material and Mill hoppers
- Roll feeders
- Sinter hoppers
- Slurry pipes
- Wind main



Power industry

Densit® Wear Protection gives safe and cost saving solutions in the following equipment:

- Bunkers
- Channels
- Chutes
- Cyclones
- Deviation hoods
- Dust collecting ducts
- Hoppers
- Conveying - hydraulic/pneumatic/mechanical
- Pipes and pipe bends
- Separators
- Silos



Minerals

Densit® Wear Protection gives safe and cost saving solutions in the following equipment:

- Mills
- Slurry pipelines
- Conveying - hydraulic/pneumatic/mechanical
- Dedusting Systems
- Cyclones
- Separators
- Chutes



Cement industry

Many years of proven reliable wear protection solutions for:

- Cement grinding separator
- Cooler outlet chute
- Dust collecting cyclones
- Pipes for dust collecting and cooling
- Pneumatic transport of coal dust, fly ash, clinker and cement
- Preheater cyclones
- Separator for raw meal and coal



Chemical Industry

Densit® Wear Protection extends the lifetime and security of equipment in chemical plants:

- Conveying - hydraulic/pneumatic/mechanical
- Mills
- Separators
- Mixer
- Cyclones
- Tanks
- Cracker



ITW Engineered Polymers services

ITW Engineered Polymers is always ready to help a customer with the design of a long-life and cost effective wear protection solution.

Wear protection projects are handled worldwide. Our project team deals with all aspects of design services, manufacturing, quality control, logistics and shipping.



Advising and Design

ITW Engineered Polymers designs customised and cost saving wear protection solutions for both new and existing plant equipment and components.

The best design for long life and cost effective wear protection depends on a proper selection of the wear-resistant lining material as well as knowledge of the expected costs. ITW Engineered Polymers provides this service to all our customers.



Manufacturing / Project Handling

ITW Engineered Polymers manufactures customised pre-lined plant equipment e.g. cyclones, valves, chutes, branches, venturiers, cones and panels, often in corporation with sub-suppliers in both Europe, Asia and China.

ITW Engineered Polymers is widely experienced in handling projects worldwide. Our project team deals with all aspects of design services, manufacturing, quality control, logistics and shipping.



Installation

A prerequisite for effective wear protection is proper installation. The Densit® Wear Protection compounds are applied by casting, trowelling or spraying. These products are easy to install and can be applied by your own staff.

The installation time is short both with regard to the installation process itself and to the time until the wear-resistant lining is ready to use - just 24 hours.

Installation can also be supervised by ITW Engineered Polymers or one of our skilled and experienced partners.

Strong relationships worldwide



ITW Engineered Polymers - a strong partner for wear protection solutions globally



ITW Engineered Polymers has more than 30 years of experience in providing reliable wear protection solutions based on Densit® ceramic materials.

Besides wear protection, the Densit® high strength ceramic materials are also applied in other demanding activities such as oil & gas platforms, foundations for renewable energy solutions, industrial flooring and security barriers.

GLOBAL PRESENCE

ITW Engineered Polymers in Denmark, has a network of sales offices, dealers and installers worldwide, who are specialised in the use and installation of the Densit® products. The network of partners is continually being expanded to ensure our customers the best possible service throughout the world.

QUALITY ASSURANCE

ITW Engineered Polymers provides high performance solutions to customers in accordance with its ISO 9001, ISO 14001 and OHSAS 18001 quality system, certified by Lloyd's Register Quality Assurance.

AN ITW COMPANY

ITW Engineered Polymers is a company within the Illinois Tool Works (ITW) group. The company has operations in 57 countries that employ approximately 49,000 women and men who adhere to the highest ethical standards

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