

K-THANE

Polyurethane Lining Systems



Key Benefits

- Good abrasion resistance
- Excellent corrosion resistance
- Versatile installation
- Noise abatement properties

Our K-THANE range of materials offer choice of application methods alongside good abrasion and corrosion resistance of components manufactured in both simple and complex geometries.

Manufacture

The methods of manufacturing polyurethane finished goods range from small, hand pour piece-part operations to large, high-volume production lines. Regardless of the end-product, the manufacturing principle is the same: to meter the liquid isocyanate and resin blend at a specified stoichiometric ratio, mix them together until a homogeneous blend is obtained, dispense the reacting liquid into a mould or on to a surface, wait until it cures, then de-mould the finished part.

Polyurethane can be made in a variety of densities and hardness's by varying the type of monomer used and adding other substances to modify their characteristics, notably density, or enhance their performance. Other additives can be used to improve the performance, stability in difficult chemical environments and other properties of the polyurethane products.

Application

Polyurethanes have many uses in a wide range of industries and applications, however we utilise the material in order to protect plant and equipment from both abrasion and corrosion. Whether it is impact, sliding or friction induced abrasion K-THANE polyurethane can add significant benefit to the value of the fixed asset. With its flexibility in installation processes, K-THANE lends itself to protect both internal and external surfaces from wear and corrosion in many applications that suffer from degradation within the bulk solids handling industries.

Forms of supply

K-THANE is quite unique as a lining material as it can be supplied in many forms. The versatility in terms of its supplied state take the form of either a pre decanted liquid, a cast component or a solid sheet and all play their part in being able to extend the service life of plant and equipment.

Installation

The flexibility of the manufacturing process lends itself to a whole host of possibilities such as being cast into moulds or directly into the equipment it intends to protect, it can also be applied by trowel or airless spray equipment and finally, pre formed sheets can either be fixed using mechanical fasteners or bonded directly onto a substrate by using a range of adhesives. These methods make the application, a process that can be undertaken to suit most environments as in the workshop or out on site where time is sometimes critical in returning the plant back to service.

As with most wear resistant materials the success of the system often depends on the quality and accuracy of the installation.

Before committing to the use of our K-THANE, we recommend consultation takes place with one of our qualified engineers in order to assess its suitability for particular applications.

Should you have a requirement for the product to be installed or form part of a system, then we would welcome the opportunity in discussing your requirements for the design, manufacture, installation and erection of the system using our fully trained staff and workforce, alternatively we will be happy to consult with or supervise your own workforce.

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Typical list of applications

- Ball mills
- Conveyor equipment
- Hoppers
- Launderers
- Rolls
- Screens
- Pumps
- Tanks
- Vibratory feeders

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Physical and Mechanical Properties

PARAMETERS	UNIT	Value
Hardness Shore A	-	60°
100% modulus	kg/cm ²	18
300% modulus	kg/cm ²	32
500% modulus	kg/cm ²	65
Tensile	kg/cm ²	250
Elongation at break	%	800
Tear resistance	kg/cm	16
Elasticity	%	77
Compression set	%	53
Abrasion DIN53516	mm ³	48
Density	kg	1.25
Coefficient of friction	-	0.25
Max. Service temp.	°C	+80
Min. Service temp.	°C	-40
Melt point	°C	200

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