Kingfisher

POLYMER TECHNICAL DATA SHEET

PRODUCT SPECIFICATION
DATA SHEET NO. POL002

K-PLAS

UHMWPE Lining System

Key Benefits

- **Abrasion resistant**
- **Promotes material flow**
- **Fixed using mechanical methods**
- **Easily replaced**

K-PLAS has an excellent rating for flow promotion with resistance to both corrosion and abrasion. It is ideal for application's handling sticky or high moisture content materials where its flexibility and ease of application provide rapid, cost-effective protection to plant and transport vehicles.

Manufacture

Our range of K-PLAS lining systems consists of two grades, 1000 grade and 500 grades. K-PLAS is produced from raw materials such as oil and coal, that all form the main ingredient known as polymer.

Conversion of these substances produces the basic compound classed as a thermoplastic. Theromplastics can be repeatedly softened and become free flowing under heat and then when cooled, solidify. This process results in a molecular structure that by blending polymer as raw material with additives, achieves a molecular structure that gives good abrasion resistance along with excellent low friction characteristics. This clustered molecular structure is known as crystallite, which has a greater density than other plastics.

K-PLAS liners are produced by compression under heat, resulting in a pressed sheet to the required thickness and sheet size.

Application

With its main characteristics being abrasion resistance, high impact strength and with an extremely low coefficient of friction, then K-PLAS is ideally suited to counter the problems incurred when handling abrasive and sticky substances in gravity fed applications within the bulk handling industries.

Forms of supply

K-PLAS is manufactured in sheet and rod form and can be machined to exact tolerances for retrofit of components for original equipment manufacturer's wear parts.

Installation

In the fight against plant degradation K-PLAS is fitted to many substrates using a wide range of mechanical fixings, each developed and tested to ensure that the structural integrity of the installed lining system is never compromised. As the material is lightweight, it is quick and uncomplicated to install using a range of powered hand tools with special tooling. 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-Plas range of materials, 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 with you 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 even supervise your own workforce.

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Typical list of applications

- Bunkers
- Hoppers
- Silos
- Rail Wagons
- Tanks
- Transfer chutes
- Truck bodies

Physical and Mechanical Properties

PARAMETERS	UNIT	K-PLAS 1000	K-PLAS 500
Colour	-	White	White
Molecular weight	Mio./m.	4-8	>0,5
Specific gravity	g/cm^3	0.93	0.952
Hardness	Shore D	63	64
Impact strength	mj/mm^2	>100	>20
Tensile strength	N/mm^2	>20	28
Elongation at break	%	810	690
Tension set	%	7	20
Tear strength	N/mm	44	103
Resilience	%	83	70
Abrasion resistant Index (slurry)	%	100	250
Service temperature	°C	-50 to +80	-50 to +80
Coefficient of friction	/	0.1/0.2	0.1/0.2

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