

# Material Data Sheet A112-WC

## Polyamide A112-natural white (FDA)

### General

A112-WC is a casted, creamy coloured Polyamide commonly referred to as Nylon, POM or PA. The material has very good physical and chemical properties and is used in a wide range of applications. Because of high moisture absorption which leads to swelling and the loss of physical properties we do not recommend the use in water.

Polyamide A112-natural white is approved for the use of applications in contact with foodstuff.

### Physical properties

Density:	DIN 53479	g/cm <sup>3</sup>	1,15
Moisture absorption:	23°C / 50% rel. M.	%	2,2
Moisture absorption:	water 23°C	%	6,6
Tensile strength:	DIN 53455	N/mm <sup>2</sup>	80 - 85
Elongation at break:	DIN 53455	%	25
Modulus of elasticity:	DIN 53457	N/mm <sup>2</sup>	3300
Ball Hardness H358/3:	DIN 53456	N/mm <sup>2</sup>	165
Coefficient of sliding:		μ	< 0,4
Melting temperature:		°C	220
Min. service temperature:		°C	-30
Max. service temperature:		°C	100

### Chemical resistance

Water up to 70°	S	Ozone	U
Water up to 90°	U	Esters, Ketones	R
HFA, HFB, HFC fluids	R	Alcohols	R
HFD	U	Chlorinated hydrocarbons	S
Mineral oils	R	Air up to 100°	R
Vegetable oils	R	Air up to 150°	S
Fuels	R	Air up to 200°	U

**Key to chemical resistance:** R = resistant S = suitable U = unsuitable

### Main application

Guide rings, bushings, back-up rings, scrapers, housings.

### Analysis and Evaluation

The properties relate to fundamental values of Polyamide. Products values mentioned above are corresponding to ASTM or DIN standard and have been tested on standardized plates in the laboratory.