What is Polyamide (PA)?

It is used in a variety of applications for use as reinforcement, rope or yarn in rubber materials such as nylon clothing, car tires, and a series of injection molded parts for tools and mechanical equipment. Extremely strong, resistant to abrasion and moisture absorption, long lasting, resistant to chemicals, elastic and easy to wash. Nylon is often used to replace low strength metals. It is the preferred plastic for components in the engine compartment of vehicles due to its strength, temperature flexibility and chemical compatibility. Nylon can also be combined with a wide variety of additives to produce different variants with significantly different material properties.

Nylon generally uses the chemical name (PA renk (eg PA 6 or PA 6/66) and is mostly black, white and natural (white or beige). Probably the most common variable for engineering applications is Nylon 6/6. Nylon 6/6 can be extruded (melted and forced through a nozzle) and is therefore a good plastic for both injection molding and 3D printing. It has a high melting temperature, making it a great alternative to metals in high temperature environments (eg under a hood in a vehicle). The downside of the material is that it has a relatively low impact resistance (see the table below, even when compared to other plastics). As a note, the impact strength of Nylon can actually be improved by a process called “conditioning Not. It is therefore important to check the properties of the material, as well as the ease with which it can be combined with other materials to increase the durability of the Nylon.

Nylon is frequently used in gears, bushings and plastic bearings due to its low friction properties. Nylon is not the most slippery plastic possible (usually low friction is the only effect of acetyl), but other mechanical / chemical / thermal properties, high performance, a good choice for parts that can be seen too much wear.
The nylon is also an incredibly useful plastic for applications requiring a high melting temperature, as well as a plastic material. It is also incredibly diverse.


Nylon1


Nylon2


Nylon3


Nylon4