Plastics

POLYPROPYLENE

PP, PPs

Colour: PP  Light grey RAL 7032
Colour: PPs  grey RAL 7037 (flame retardant)

PP and PPs are light, universal thermoplastics which have the perfect properties for a range of conditions. In particular, their extensive, chemical resistance to salts, acids and alkalis ensure that they can be used in a wide range of applications.

Continuous temperature: Fault-free up to 80°C, although shock resistance is reduced at lower temperatures.

PP is physiologically inoffensive and is therefore suitable for use in contact with foodstuffs.

PP and PPs are not stabilised with UV absorbers and are therefore not suitable for outdoor use.

Typical areas of use:

- Air conditioning systems
- Ventilators
- Apparatus and system construction
- Tank construction
- Exhaust air scrubbers
- Pipeline construction

POLYETHYLENE

PE

Colour: PE black

PE comes from the same family as PP and as a result, the chemical properties are also similar.

PE black is UV stabilised and is therefore an ideal material for outdoor use. Even at very low temperatures, PE does not become brittle, but rather remains impact resistant. At temperatures above 60°C, PE can no longer be used for statically or dynamically stressed components. The excellent gliding properties are also typical of this environmentally-friendly material.

Typical areas of use:

- Systems in outdoor areas
- Exhaust air scrubbers
- Tank construction
- Pipeline construction

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POLYVINYLCHLORIDE

PVC

Colour: PVC dark grey RAL 7011

Based on its excellent chemical and mechanical properties, PVC is a popular and long-lasting material. It is highly inflammable and shows good resistance levels against many acids and base solutions. PVC performs better than PP in outdoor uses, although when used below freezing point, PVC becomes very brittle and sensitive to impact. Unlike other thermoplastics, PVC can be bonded.

Typical areas of use:
- Apparatus design
- Laboratory equipment
- Tank construction
- Pipeline construction

Resistant to chemicals
Flame retardant
Easy to bond
Temperature range

POLYVINYLIDENE FLOURIDE

PVDF

Colour: milky

PVDF exceeds all chemical, mechanical and thermal properties of PP, PE and PVC. This fluoride plastic is practically completely resistant to chemical solutions and has a high temperature limit of 140°C. It also shows good resistance to atmospheric conditions, and is physiologically inoffensive and highly inflammable. As a result of its high price, PVDF is only used for extreme requirements. In combination with polyester laminates, PVDF can also be used as a liner material to absorb extreme forces at high temperatures.

Typical areas of use:
- Tanks for highly aggressive materials
- Clean room technology
- Ventilators
- Composite structures with thermoset materials
- Pipeline construction

Resistant to chemicals
Flame retardant
Light and weather resistant
Temperature range
Physiologically inoffensive