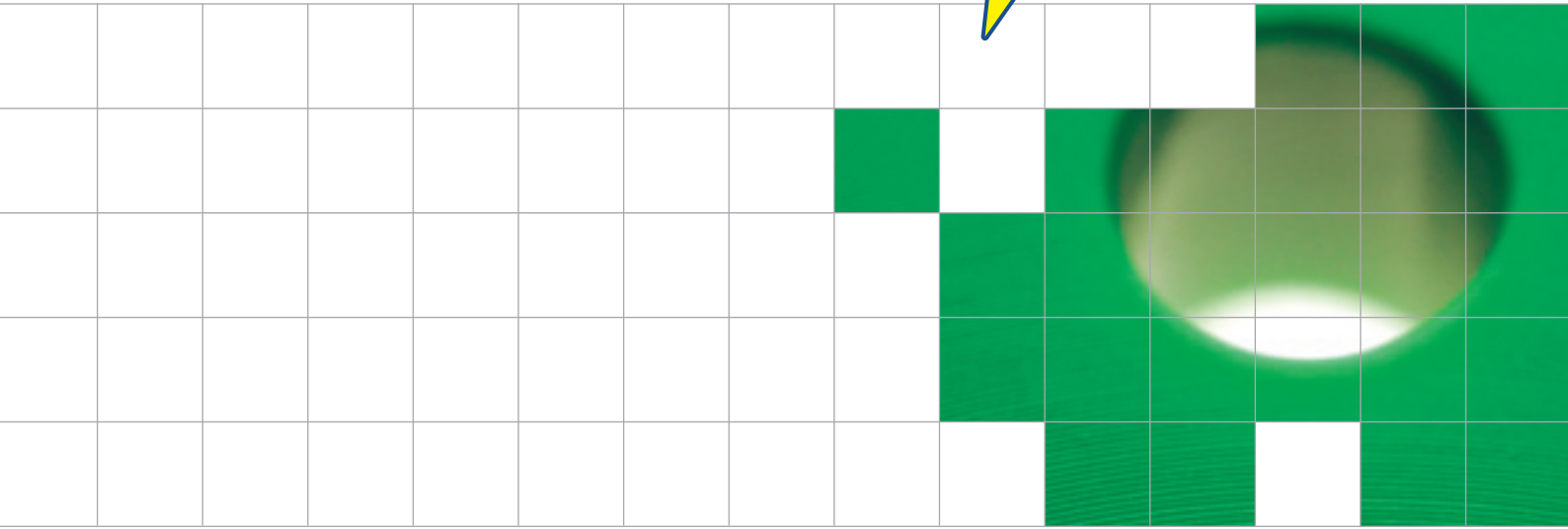



***Devol***®



**trusted to perform**

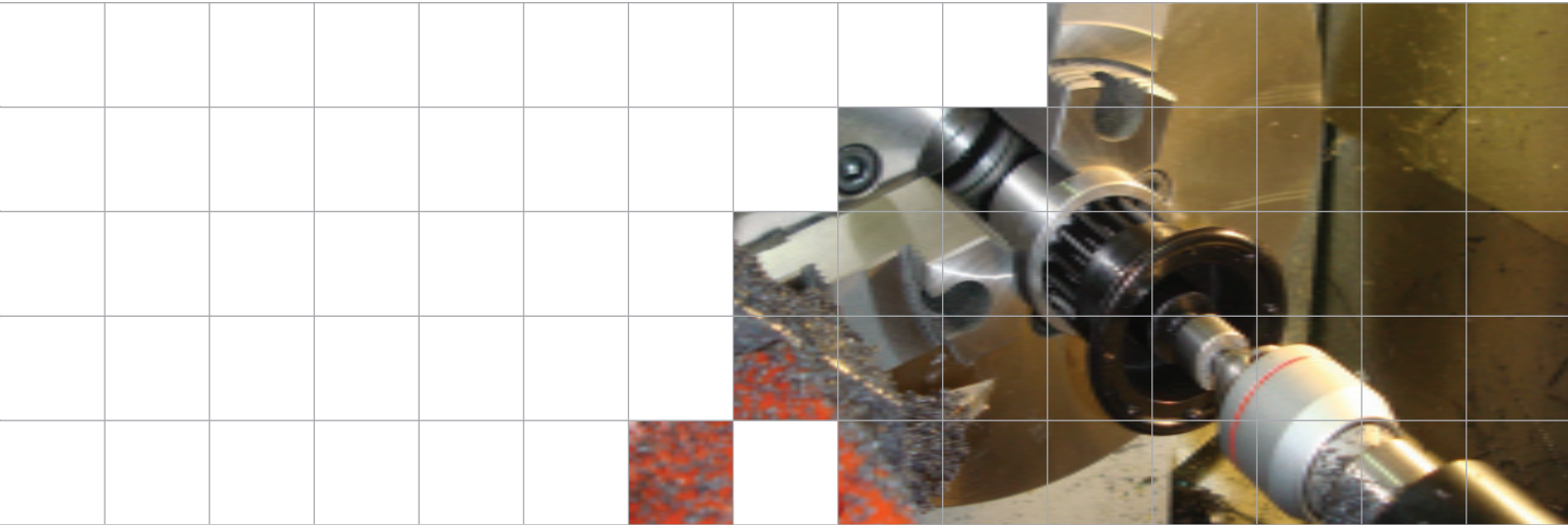
**PIONEERING**  
THERMOPLASTIC TECHNOLOGY



Devol are a forward-thinking company with down-to-earth values, reflected in our company policy:

- Adopt a pro-active approach to providing engineering solutions
- Value Engineering – optimised design for purpose and manufacture
- Strategic re-investment – quality/capacity/new technology
- Continuous process improvement through all departments
- Training and personal development
- Zero defect culture

# The Devlon range of thermoplastics has distinct advantages over other materials...



Our comprehensive range of engineering thermoplastics are amongst the toughest and hardest wearing available. Produced by monomer casting and extrusion, they provide a comprehensive range of wear resistance, impact strength and toughness with almost limitless application potential.

The advantages are clear:

**less expensive**

**1/6th the weight of bronze**

**zero corrosion**

**low friction**

**resistant to shock loading**

**significantly improved lifespan**

**exceptional resistance to wear**

**does not support marine growth**

**Devol**<sup>®</sup>

D E S I G N E D T O P E R F O R M - E N G I N E E R E D T O L A S T

# A range of materials capable of tackling the toughest applications...

## Devlon

Devlon is designed to solve the problems of wear, corrosion and lubrication, directly replacing traditional engineering components manufactured from materials such as bronze, brass, hardened steel, laminates and incorrectly specified low performance plastics.

The material can be produced by extrusion or monomer casting, providing a comprehensive range of impact strength and moisture absorption properties. These properties are linked to the molecular weight; the higher the value, the greater the toughness and wear resistance of the material.

In addition to offering substantial benefits over traditional materials, our components are manufactured precisely to customer specification and as such are directly interchangeable with existing parts.

**Devlon T100** is our proprietary cast material which covers a wide range of applications. With its inherently stress free and excellent wear properties, low friction and improved impact strength, it is a proven work horse in a range of applications and industries.

*Typical applications include bushes, crane sheaves, rollers/wheels, racks and pinions, clamps and bearing rings.*

**Devlon S-grade** has the highest molecular weight which gives superior mechanical properties, rendering it our premium of all engineering grade thermoplastics. Particularly suited for larger sized components, it yields optimum performance in rigorous and abrasive applications at ambient temperatures.

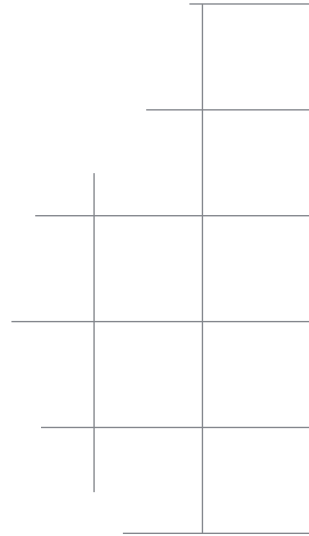
*Typical applications include bearings, rollers, pulleys, thrust plates, seal rings and gears.*

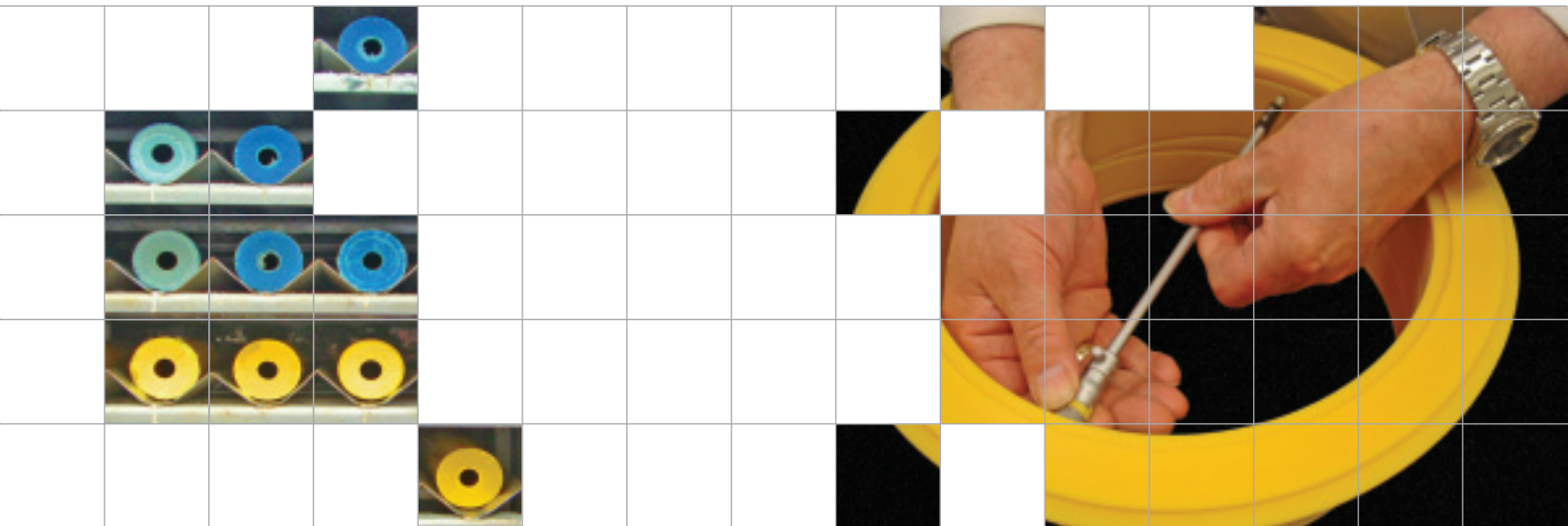
**Devlon V-API** gives similar performance levels to S-grade, but has been specifically tailored for high temperature/high pressure applications. Dimensional stability is a particular feature of this material due to its especially low moisture absorption, making it ideal for offshore applications where weight-saving, non-corrosive and impact wear properties are imperative.

*Typical applications include valve seat inserts, bundle spacers, tubing hanger centralisers, cable protectors and hot stabs.*

**Devlube** is a self-lubricating material ideally suited for dry-running applications requiring low friction and where lubrication is not possible. Reduced wear through lower friction means excellent retention of physical properties and very little maintenance is required for this material.

*Typical applications include wear pads, cam followers, worm screws, bearing blocks and conveyor components.*





**Devlon A153** is a specially formulated high viscosity Nylon 66, giving superior wear characteristics, improved impact strength and rigidity, providing greater design reliability when strength, weight and size are critical.

A153 has a significantly lower linear co-efficient of thermal expansion than standard grade Nylon 66 and therefore maintains dimensional tolerances and clearances more accurately in applications involving thermal cycling. A153 has a maximum operating temperature of between 90°C and 120°C, compared to 85°C for standard grade Nylon 66.

*Typical applications include journal bearings, thrust washers, bearing cages, rollers/wheels, piston seats and wear pads.*

In addition to our Devlon range of specifically formulated materials and where applications dictate, Devol can supply over 50 different materials including:

**Polypropylene** – low density (buoyant in water), excellent chemical resistance, good electrical insulator, low tensile strength and elastic modulus.

**UHMWPE** – exceptional toughness, low friction, high impact strength, good abrasion resistance.

**Acetal** – reasonable load capacity, easily machined, dimensional stability, high strength and stiffness.

**PTFE** – chemically inert, high temperature range, low friction, limited load capacity, high thermal co-efficient of expansion.

**PEEK** – good radiation resistance, high operating temperature, good electrical properties, chemical resistance, good load bearing, but can be expensive.

**Devol**<sup>®</sup>

D E S I G N E D T O P E R F O R M - E N G I N E E R E D T O L A S T

# Outstanding products backed by years of experience...

Established in 1966, Devol are fully equipped to be able to conduct business and export on a worldwide basis. Our global customer base has grown steadily and we supply into a great diversity of industries.

Devol's materials and components are specified and used extensively by a broad range of OEMs engaged in the design, manufacture and repair of equipment and machinery.

Some of our more common applications can be found in the following industries:

**oil and gas**  
**heavy automotive and lifting**  
**earth moving and mining/quarrying**  
**agricultural machinery**  
**hydraulic equipment**  
**defence industries**

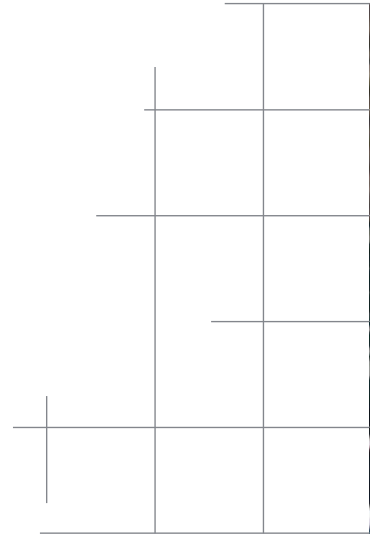
Throughout these industries our materials encounter a range of extremely demanding operating environments. It is therefore imperative that our design and specification process is exacting.

Providing complete turnkey packages in-house, we give a total solution to our customer's requirements.

Prototype designs are visualised, manipulated and modified using the latest 3D solid modelling techniques, therefore reducing the necessity to produce early prototypes.

The ability to carry out finite element analysis, solid modelling and kinematic simulation allows us to validate that components within customers assemblies fit together without fouling at the design stage – before any investment in tooling. Application of these techniques not only allows us to maximise new designs, but enables us to troubleshoot and improve existing componentry.

When the design has been optimised the relevant manufacturing data is output to the machine shop.





Devol use the most modern CNC lathes and milling machines during manufacture to provide expedient and cost effective component production.

Dimensional stability within close tolerances for complex components is achieved by interstage annealing. This treatment guarantees safe and reliable components with maximum life expectancy.

Recognising that Quality is of the highest importance, Devol is certified to and operates within the scope of BS EN ISO 9001:2000 (registered firm reference number FM09064). Devol operates a process-based management system and actively supports a culture of continuous improvement.



**Devol**<sup>®</sup>

D E S I G N E D   T O   P E R F O R M - E N G I N E E R E D   T O   L A S T



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