



LAMIGAMID® 1200

PA12G

The high performance polyamide

SCHWARTZ
TECHNICAL PLASTICS



LAMIGAMID® 1200

The high performance polyamide

Plastics technology by Schwartz.
For more than 80 years the name has stood for quality and competence in machine and equipment construction. Today, we are the world's leading manufacturer of cast polyamide finished castings.

LAMIGAMID® 1200 (PA12G) is our high-quality polyamide quality. It is the result of innovative development and many years' experience. Cast without pressure for an almost tension-free, homogeneous material with excellent properties for high stress applications. Using our own compositions and production processes, we are able to reach a very high molecular weight and crystallinity. Thanks to these characteristics, Schwartz is the only company to have received USP VI authorisation for cast polyamide 12 - LAMIGAMID 1200. LAMIGAMID 1200 can be used almost without restriction in the food and medical applications.

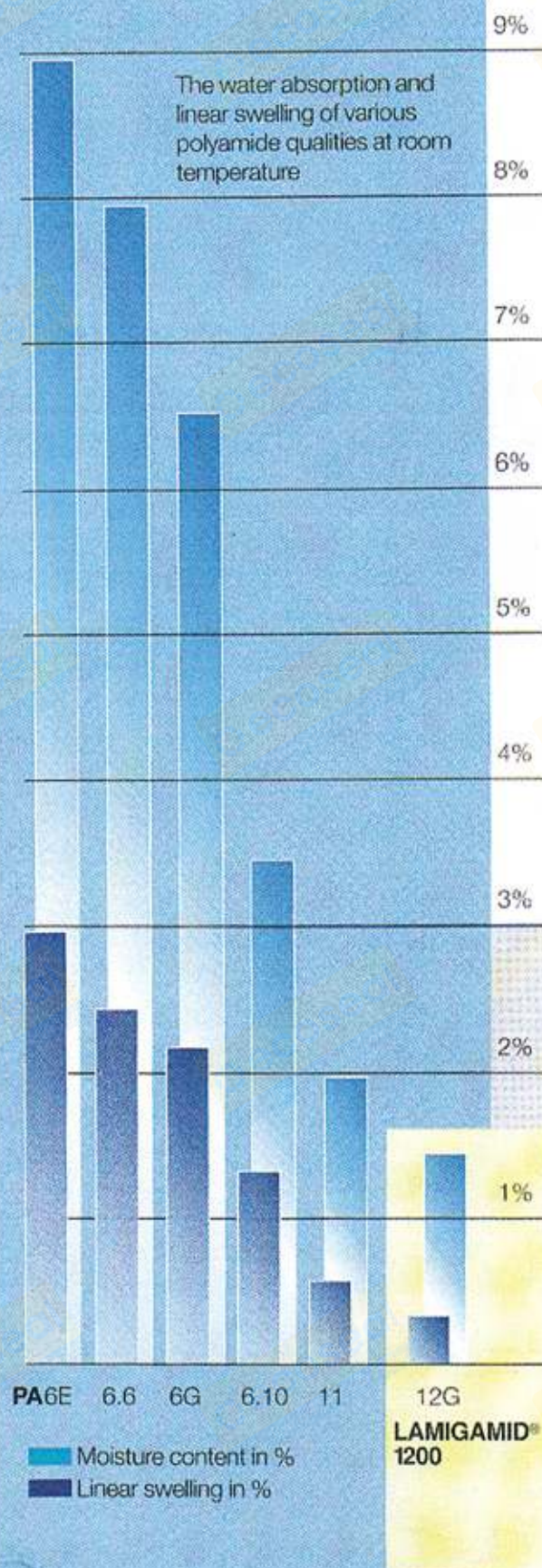
The no-pressure casting method produces a material that is virtually stress-free and continuously homogeneous.

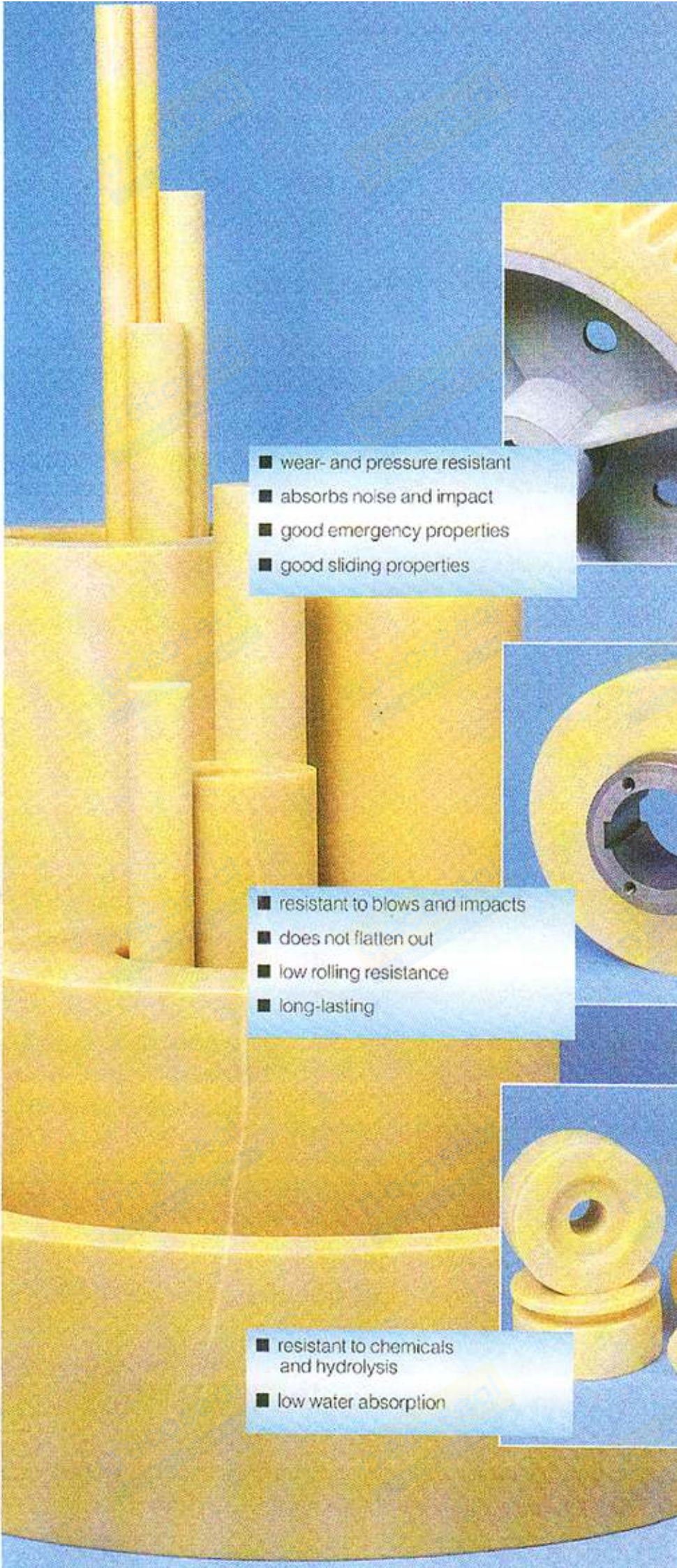

Suitable for a wide range of applications due to superior material qualities


- does not expand in moisture
- best resistance to chemicals and hydrolysis
- lightest of all polyamides
- high notch impact resistance, even at low temperatures
- excellent resistance to wear
- good sliding properties
- good resistance to creepage
- maintains its shape and dimensions
- excellent fatigue resistance
- approved for food and medical applications


flexible production technology

- mould casting to suit the particular application
- can be made to virtually any dimensions
- form-closed casting (even of large items)



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- wear- and pressure resistant
 - absorbs noise and impact
 - good emergency properties
 - good sliding properties

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- resistant to blows and impacts
 - does not flatten out
 - low rolling resistance
 - long-lasting

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- resistant to chemicals and hydrolysis
 - low water absorption



Popular applications



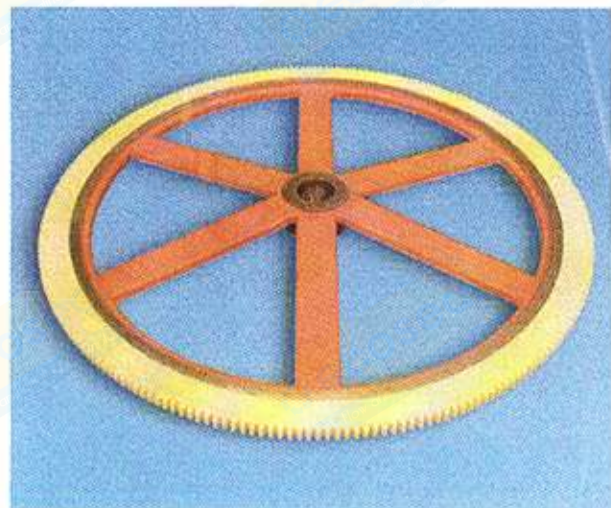
Geared teeth

Due to its high-tensile, viscous nature, LAMIGAMID® 1200 is almost pre-destined to be used for geared teeth.

Its low weight, good emergency properties and excellent insulating properties have solved many a problem in machine construction.

It is highly compatible with all commercial lubricants. Its leading position is emphasised by its low moisture absorption and good fatigue strength. Power is introduced optimally via form-closed metal cores. Virtually any dimensions are possible, so it is ideal for a wide range of applications and designs.

Our calculations are performed on computer to ensure the maximum safety in designs and applications.

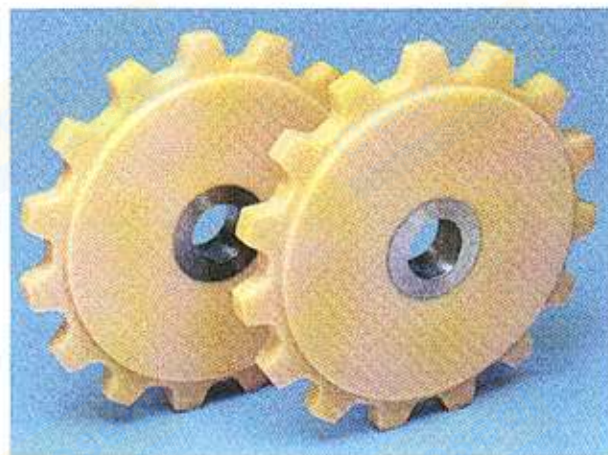


Worm gears

This is an application where the noise- and vibration-absorbing properties of LAMIGAMID® 1200 really come into their own.

The material is particularly suitable for worm gear pairs operated under average loads and which are subjected to severe vibrations, blows and oscillation. LAMIGAMID® 1200 gears often provide better service times, and especially much better overall efficiency, than bronze gears do. Steel shafts can quickly and easily be incorporated for easy and inexpensive overall solutions.

We specialise in tailor-made, technically sound constructions for the highest requirements.



Chain wheels

The high elasticity of LAMIGAMID® 1200 chain wheels means it is particularly gentle on chains and drives. Noise, blows and traverse effects are reduced efficiently, which helps to increase the total service time of the chain drive.

LAMIGAMID® 1200 chain wheels usually achieve longer service times than standard steel chain wheels do.

This quality is used successfully in numerous applications - even under more demanding conditions, such as at low temperatures, in water, chemicals and dirt. It can also frequently be used as a substitute for more costly special steels.



Rollers

As far as load-bearing ability is concerned, LAMIGAMID® 1200 rollers are in a class of their own. The material's good resistance to fatigue and wear ensures that long service times are achieved.



Thanks to its excellent viscosity, items made in LAMIGAMID® 1200 can also be used in extreme conditions.

They are as easily resistant to low temperatures as they are to blows and impacts. Because of this, the rollers continue to run true even if they have been stationary under load for a period of time. This helps them to run smoothly and quietly, and high starting loads are avoided.

The low rolling resistance reduces the power that is required to start. The material's resistance to creepage ensures that items are supported firmly by the roller bearing throughout the operation. The torque is introduced and transmitted advantageously via integral form-closed metal hubs.

Finished castings

Components for housings, cyclone traps, propellers and other moulded items weighing up to 600 kg can be made in a special casting process. Even items with widely differing wall thicknesses do not pose any problems. An added attraction: the costs for moulds used in no-pressure casting are relatively low. LAMIGAMID® 1200 is therefore an eminently suitable alternative to mechanically processed semi-finished goods.



Sliding, sealing and wear rings

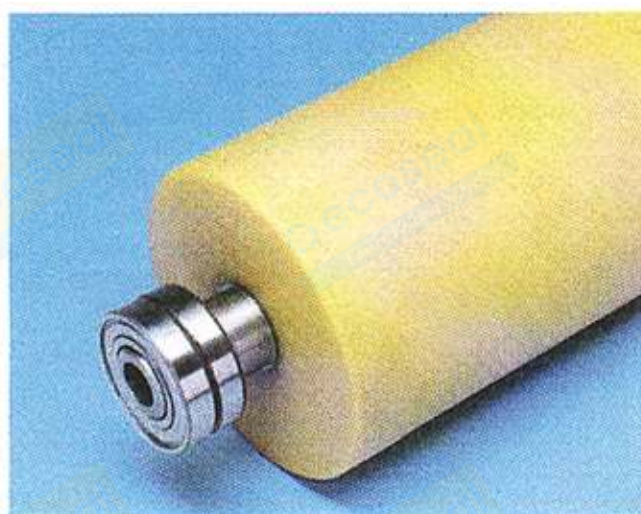
LAMIGAMID® 1200 components have proved to be particularly successful in material processing installations.

Its high wear resistance under abrasive and cavitative loads and good resistance to chemicals and hydrolysis make LAMIGAMID® 1200 ideal for use in pumps, turbines and sealers.

Good sliding properties and high wear and pressure resistance ensure safe operation and consistency even after long periods of use in valves and ball valves.

Depending on the specific application, this material can safely be used in permanent temperatures between -80°C and +120°C.





Rollers

The advantages offered by LAMIGAMID® 1200 rollers also apply to roller covers made from the same material.

The following material properties are also particularly important for rollers:

- very good resistance to chemicals and hydrolysis
- high precision thanks to reliable dimensional stability and low moisture absorption
- comparatively thin bandages can also be cast (permanently) onto the roller body
- single items can weigh up to 600 kg
- high-quality roller bodies can be re-covered as often as desired



Eccentric discs

Because it is dimensionally stable, this material is ideal for use in the highly demanding manufacture of eccentric discs.

Lowest inner tension, negligible moisture absorption and high wear resistance all combine to ensure that these items retain their dimensions.

Its insulating, viscous-hard property helps to reduce noise, vibration and blows. However, it also helps to achieve long-term fatigue strength whilst preventing material fatigue. Eccentric discs are driven by form-closed metal cores which are cast into the disc.



LAMIGAMID® 1200 is available as

- rods and discs
- rods with cast metal cores of various dimensions
- thick-walled tubes and rings
- sheets
- finished castings



Try us - we have a lot to offer:

- More than 80 years' experience in plastics technology
- Optimum cast polyamide qualities
- Mouldings in any size
- Components from other technical thermo- and duroplastic qualities
- Highly trained staff
- Items designed by computer to suit our various materials
- Consistently high material quality thanks to process controlled manufacturing equipment and continuous quality control
- Flexible machine and manufacturing technology to suit cutting procedures for plastics



Tailor-made high quality products

To us, your highest requirements are a challenge. Schwartz plastics are particularly suited to individual and demanding applications.

Our qualified and experienced team will work with you to find the ideal technical and economical solution to your needs.

Our prompt and efficient service will provide you with your requirements; quality need not suffer for the sake of speed and flexibility (DIN EN ISO 9001 certified).

One-stop solutions

More and more of our customers are opting for complete component groups.

We specialise in the development, construction and manufacture of system solutions that are tailor-made to our customers' requirements.

A wide variety of accessories, either the customer's own or bought-in, can be incorporated in our manufacturing processes.

The system is tested as a complete unit and delivered on schedule to the customer.

