



SIMONA



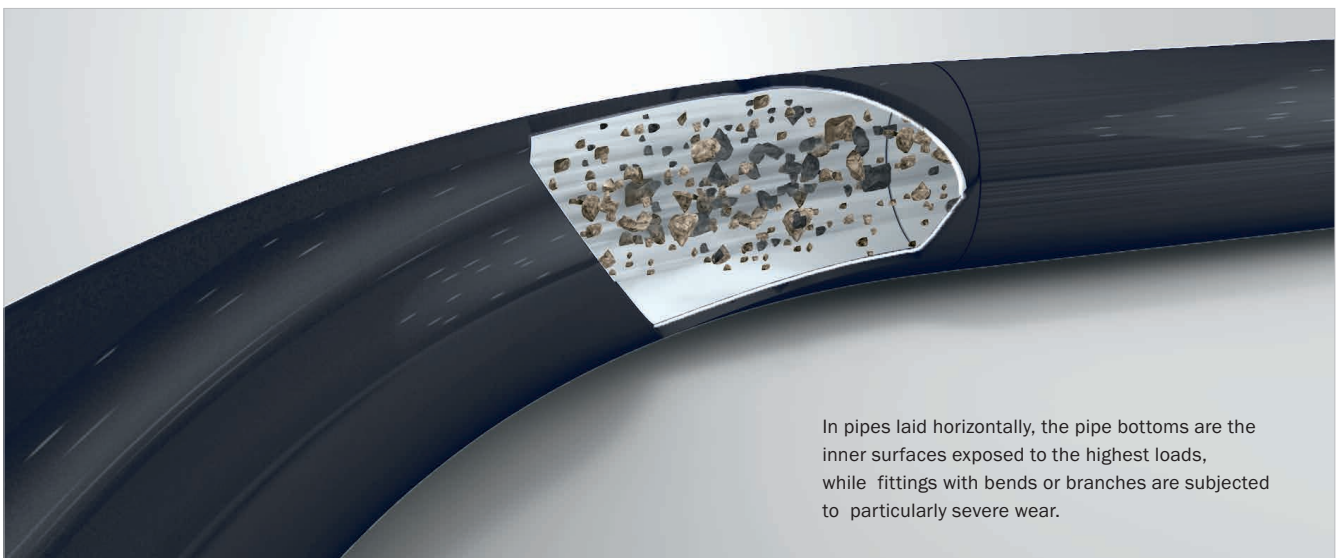
SIMONA[®] PE 100 AP-Line

Pipes and fittings for transporting solids

GLOBAL THERMOPLASTIC SOLUTIONS

When the going gets tough – SIMONA® PE 100 AP-Line Pipes and Fittings

The hydraulic transport of solids such as sand, coal slurry or ore-based commodities and the pneumatic handling of granular materials tend to exert significant mechanical stress on the interior surfaces of the piping systems used for such purposes. SIMONA® PE 100 AP-Line Pipes and Fittings were specially developed to meet these requirements and feature a particularly wear-resistant interior skin (AP = Abrasion Protect). In the past, standard SIMONA® PE 100 Pipes have proven ideal due to their excellent wear resistance compared with conventional materials like GFRP and steel. By comparison, the new SIMONA® PE 100 AP-Line Pipes offer a much longer service life in operation.



In pipes laid horizontally, the pipe bottoms are the inner surfaces exposed to the highest loads, while fittings with bends or branches are subjected to particularly severe wear.

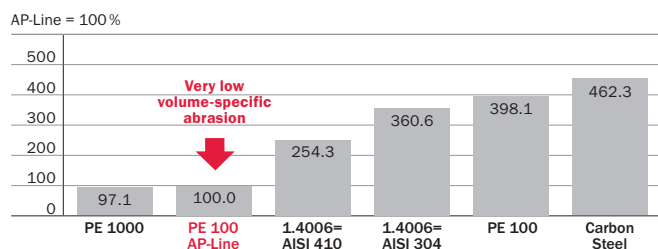
Excellent abrasion resistance

Compared to other standard materials used in the field of pipe construction, SIMONA® AP-Line boasts much lower levels of volume-specific abrasion in sand-slurry tests. Abrasion is 2.5 to 4.6 times lower than in a wide range of steels. Correspondingly, the service life of SIMONA® AP-Line pipes is much longer. AP-Line also compares very favourably with PE 1000 (or PE-UHMW). The abrasion level of PE 1000 is approx. 3% lower. However, SIMONA® AP-Line piping systems offer the benefits of efficient processing and installation, as a result of which the total cost of ownership is significantly lower when compared over the entire service life.

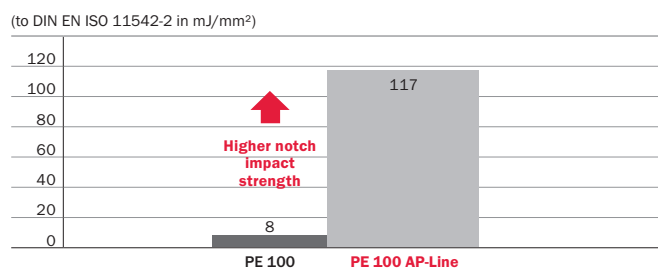
Outstanding notch impact strength

Alongside a high level of abrasion resistance, the interior surface layer offers considerable notched impact strength as well as the ability to absorb a high force of impact. This offers significant advantages with regard to the hydraulic and pneumatic transport of abrasive solids that contain high levels of sharp, large-volume particles.

Relative volumetric wear



Notch impact strength with double point notch



SIMONA® PE 100 AP-Line Pipes and Fittings – your benefits at a glance

- + Pipes and fittings with wear-resistant and impact-resistant inner skin
- + Lightweight and easy to lay and install thanks to low material weight
- + Reduced heat absorption for pipes with UV-stabilised white outer skin
- + Strong bond between inner skin and core
- + Durable, homogeneously bonded and tight joints using standard welding procedures
- + High corrosion and chemical resistance
- + Much longer service life
- + Lower installation and maintenance costs
- + Option of inner skin with antistatic properties
- + Application-specific custom parts available on request (including hydraulically adapted radius)



As well as PE 100 AP-Line Pipes, SIMONA also offers an extensive range of PE 100 AP-Line Fittings.

Pipes and fittings with functional layers to meet the toughest requirements

The high wear protection afforded by the integrated inner skin substantially extends the service life of SIMONA® PE 100 AP-Line Piping Systems. The replacement and maintenance intervals for highly stressed pipelines can be extended, resulting in savings for assembly and maintenance.

Wear-resistant inner skin

The coextruded pipes and fittings are fabricated with an integrated inner layer in a modified polyolefin compound.

UV-stable outer skin

For use outdoors, an additional outer skin taking the form of a light-coloured UV-stable coating can be applied.

Antistatic and exposable to full pressure loads

The interior surface layer can be designed with antistatic properties to prevent electrostatic charging. It also offers the benefit of being exposable to full pressure loads¹.

Extensive range of products

SIMONA produces fittings from SIMONA® PE 100 AP-Line Pressure Pipes in its own workshop. The pipes and fittings are generally available in outer diameters from 160 to 630 mm in classes SDR 17 and SDR 11.

Other components and pipes in different SDR series can be supplied on request, for example: pipes with antistatic properties; special components or complementary sheet material.



Standard welding methods in accordance with DVS (German Welding Association)

SIMONA® PE 100 AP-Line can be welded to provide a permanently tight and homogeneous bond using standard joining techniques like:

- Heated tool butt welding
- Electrofusion socket welding and
- SIMOFUSE® joining technology

SIMONA® PE 100 AP-Line, SDR 11/SDR 17¹

	Outer diameter d (mm)
Pipes	
Pressure pipes ²	160 - 630
Formteile	
Branches, welded ³	160 - 630
SIMOFUSE® stub flanges (F-piece)	160 - 630
Bends, welded, 30° to 90°	160 - 630
Bends, seamless, 11° to 90° ⁴	160 - 400

¹ Nominal pressure load as a function of the effective PE 100 wall thickness.

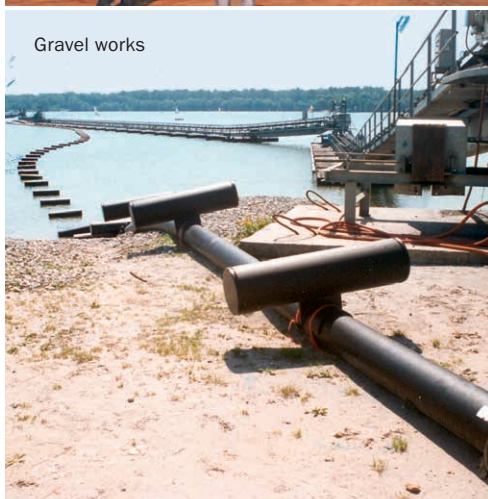
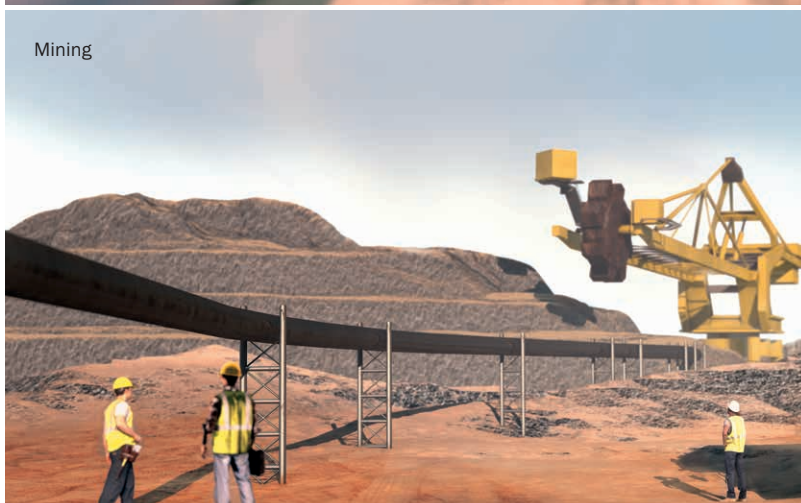
² Pipes with extra inner skin for full pressure resistance on request.

³ Full pressure resistance on request.

⁴ Bends, seamless, 11° - 90°; d 450 - 630 mm on request.

Cost-effective and durable in various applications – SIMONA® PE 100 AP-Line

SIMONA® PE 100 AP-Line Pipes and Fittings can be produced in various designs. This means that they can also optimise processes in the food, pharmaceutical, cosmetics or chemical processing industry, where they can replace steel pipes.



SIMONA – expertise and innovation worldwide

SIMONA is a leading manufacturer and development partner for thermoplastic products. We use our superlative process technology to produce sheets, finished parts, profiles, welding rods, rods, pipes and fittings to meet the toughest requirements.

Our new Technology Centre has concentrated our R&D activities at one location and is enabling us to execute more customer-specific developments with new materials and material combinations to get new products into volume production sooner. In doing so, SIMONA has primarily one thing in mind, and that is to meet your requirements for the future – today.



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