



SIMONA

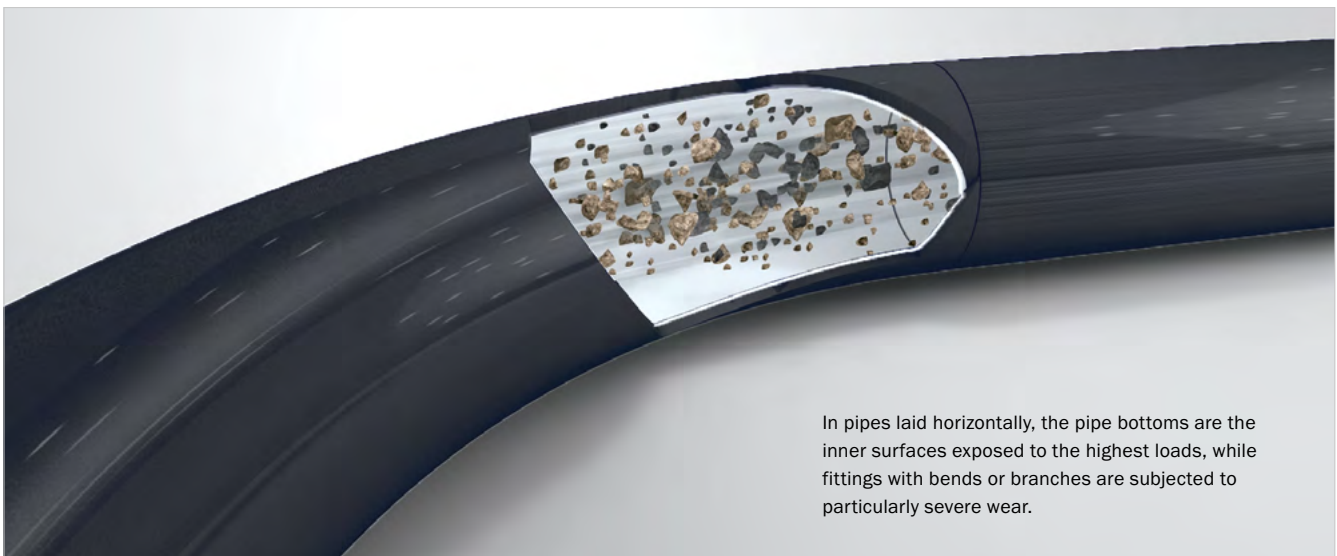


SIMONA[®] PE 100 AP-Line
Pipes and fittings for transporting solids

GLOBAL THERMOPLASTIC SOLUTIONS

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

Pipe interiors are subjected to significant mechanical loads during hydraulic transport of solids such as sand, coal sludge or ores and pneumatic conveying of granular material. 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

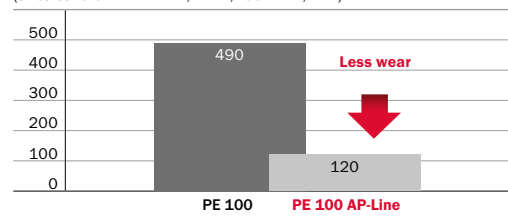
The abrasive wear of the material was tested using silica sand in a sand-slurry test series. With an abrasion resistance up to 75% better than standard PE 100, the AP-Line pipes substantially extend service life. This was also verified by a test series using the Darmstadt rocker test procedure, in which the maximum wear after 400,000 load changes was just 0.15 mm to 0.17 mm.

Outstanding notch impact strength

The additional inner skin in a modified polyolefin compound exhibits a much higher notch impact strength compared with standard PE 100. This offers an obvious benefit when used for the hydraulic and pneumatic transportation of solids.

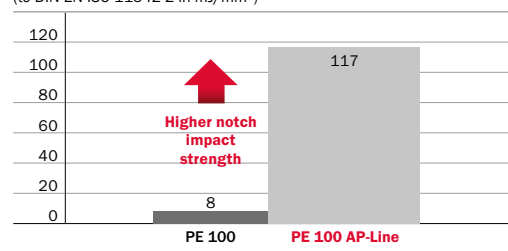
Relative volumetric wear in per cent

(silica sand 0.7 - 1.2 mm; n = 1,400 min⁻¹; 24h)



Notch impact strength with double point notch

(to DIN EN ISO 11542-2 in MJ/mm²)



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

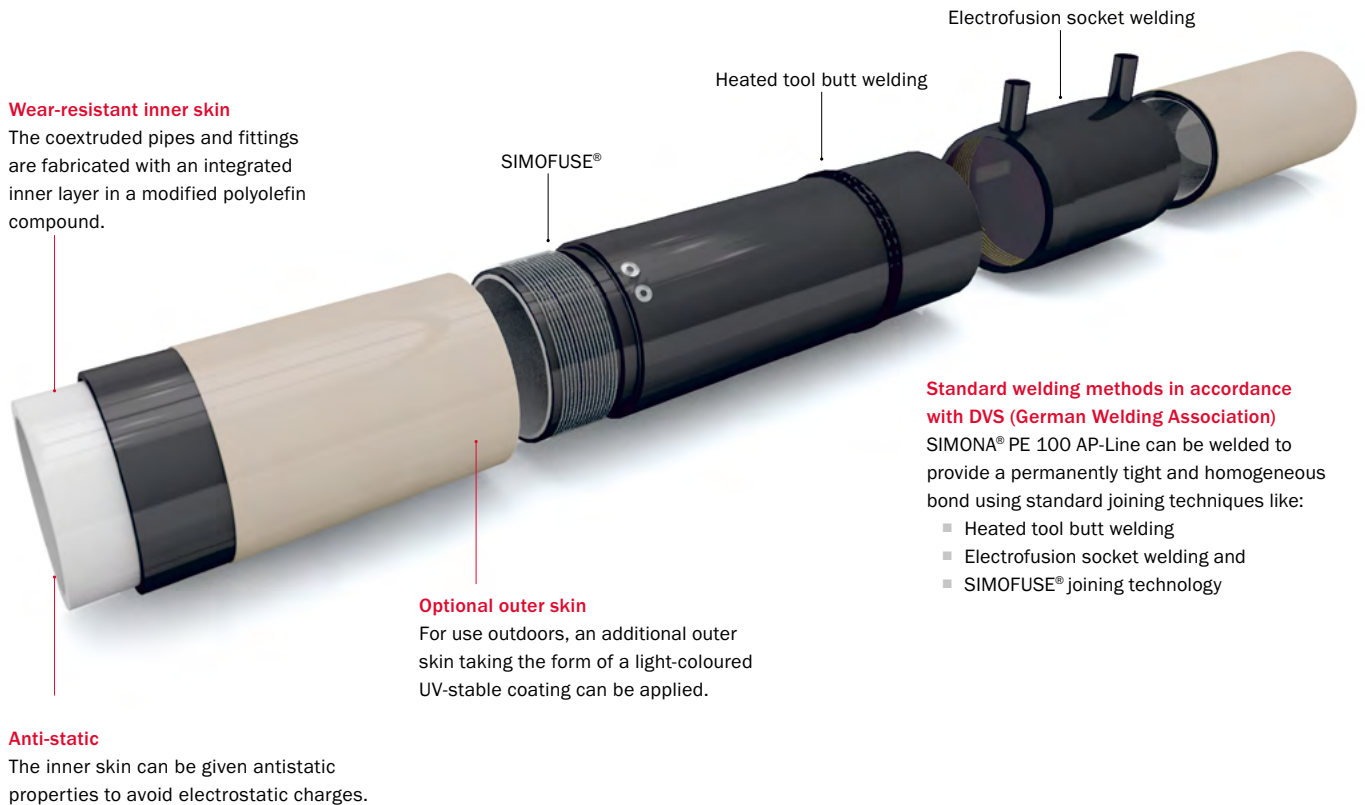
- Pipes and fittings with wear-resistant and impact-resistant inner skin
- High corrosion and chemical resistance
- Lightweight and easy to lay and install thanks to low material weight
- Much longer service life
- Reduced heat absorption for pipes with UV-stabilised white outer skin
- Lower installation and maintenance costs
- Strong bond between inner skin and core
- Option of inner skin with antistatic properties
- Durable, homogeneously bonded and tight joints using standard welding procedures
- 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.



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 a white, UV-stable outer skin or antistatic properties; special components; complementary sheet material.

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

	Outer diameter d (mm)
Pipes	
Pressure pipes ²	160 - 630
Fittings	
Branches, welded ³	160 - 630
SIMOFUSE® stub flanges	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.

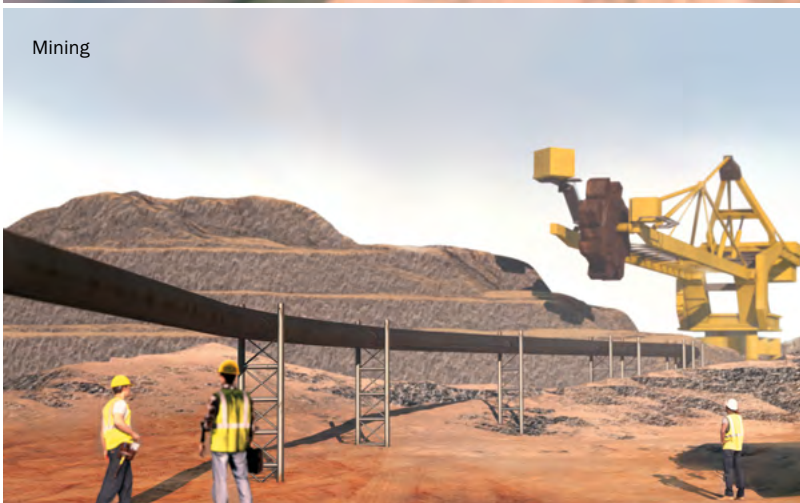
Cost-effective and durable in various applications – SIMONA® PE 100 AP-Line

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.

Marine land reclamation



Mining



Pharmaceutical/cosmetics industry



Gravel works



Foodstuffs industry
(fish transportation)



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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