

# AGRU Sureline IV barrier pipe

DIFFUSION-TIGHT  
PLASTIC COMPOSITE PIPE





## The Plastics Experts.

AGRU has developed a diffusion-tight multilayer pipe for special requirements. Its main application is transporting drinking water or ultrapure water through contaminated soils, but its strengths also include transporting contaminated sewage or chemicals through ecologically sensitive areas. The AGRU Sureline IV barrier pipe is a three-layer „protective pipe“. The media pipe is made of PE 100-RC and is characterised by an extremely high resilience to point loads. The Sureline IV barrier pipe is also available with a PP media pipe for transporting ultrapure water or chemicals. Both variants have a scratchproof PP protective layer which is required in particular for extreme applications such as alternative installation methods (e.g. horizontal directional drilling, pipe bursting, etc.). In between there is the diffusion-tight polymer barrier layer, which prevents permeation by chemical substances.

The AGRU success story has been unfolding now for around seven decades. Founded back in 1948 by Alois Gruber senior, nowadays the company is one of the world’s most important single-source suppliers for piping systems, semi-finished products, concrete protection liners and lining systems made of engineering plastics. Our ability to supply everything from a single source sets us apart. We use only top-grade thermoplastic polymers as our raw materials. When it comes to application-technical consulting, we are your best partner in the field.



### Quality

At AGRU, customer satisfaction comes first. Technical consultations, training courses, welding instruction and expert supervision on site are essential parts. The AGRU quality assurance system is compliant with ISO 9001:2015 and its environmental management system fulfils ISO 14001:2015. This in turn ensures that the products comply with international norms, as monitored and evaluated on an ongoing basis by independent testing agencies standards.

The start-to-finish attention to quality ensures that the products meet and beat the strictest technical specifications, providing safe operation within gas, water and wastewater infrastructures.



# AGRULINE Sureline IV barrier pipe

## Effective drinking water and groundwater protection

Millions of people consume tap water every day. However, some of these pipe networks are routed through contaminated soils or soils at risk of contamination. Traditional PE piping systems do not offer sufficient protection against permeation by chemical substances through the pipe wall. This also applies to sewage and chemical piping routed through ecologically sensitive areas. Here too, diffusion can allow contaminants to find their way into bodies of water and the surrounding soil. For this reason AGRU has developed the permeation-tight AGRU Sureline IV barrier pipe piping system. It protects both the transported medium and the environment against diffusion.

### Revolutionary three-layer structure

#### Completely made of high-quality, robust plastics

The AGRU Sureline IV barrier pipe is the perfect „packaging“ for important media

- stable interior media pipe made of point-load-resistant PE 100-RC or PP
- embedded diffusion-tight barrier layer made of high-performance plastic
- external protective layer made of scratchproof PP for alternative installation methods

### High economic efficiency

#### Thanks to easy installation and a maintenance-free service life

You can benefit from AGRU Sureline IV barrier pipe because of

- cost-saving installation without an expensive sandbed
- alternative installation methods (e.g. horizontal directional drilling, pipe bursting)
- maintenance-free service life thanks to impact-resistant plastic free from softeners

### Contamination protection from the inside out

#### Safe transport of media hazardous to water and the environment

The diffusion-tight AGRU Sureline IV barrier pipe protects the environment against

- hazardous media in the pipe (e.g., sewage containing oil, chemical substances, gases)
- the diffusion of these media through the pipe wall
- contamination through prevention of pipe breakages resulting from earthquakes

### Contamination protection from the outside in

#### For water pipes in contaminated soils and soils at risk of contamination

The diffusion-tight AGRU Sureline IV barrier pipe protects pure media

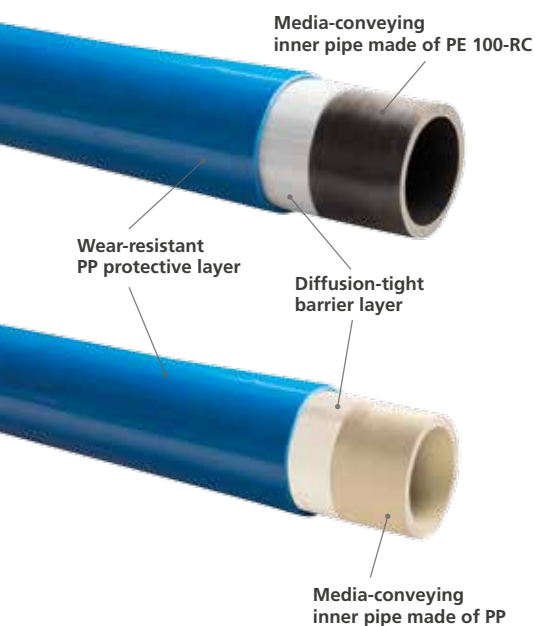
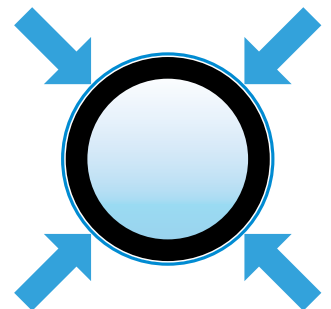
- against contaminant diffusion by toxic media/gases from the contaminated environment
- against oxygen contact (e.g. coolant pipes)
- against odour and taste contamination



# Protection for media and the environment No absorption of pollutants from contaminated soils

## Protection from the outside in

Drinking water pipes that are routed through contaminated soils or soils at risk of contamination, such as those in industrial estates, landfills, agricultural areas and military exercise grounds, gradually absorb contaminants from the soil due to permeation and pollute the drinking water with them. The AGRU Sureline IV barrier pipe encloses the conveying drinking water with a special protective layer and protects it against contamination, even in soil contaminated with crude oil.



## Maximum media protection

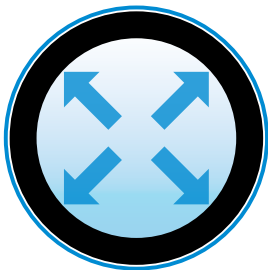
The main task of any piping system is to transport and protect the quality of the conveyed medium. The AGRU barrier pipe keeps its media hygienically and safely protected against oxygen, chemicals, odours and gases. The inner media pipe is either made of PE 100-RC (for drinking water) or PP (for ultrapure water and chemicals). It complies with the EN 12201/1555 or ISO 4427/4437 standards. The sturdy outer layer made of PP masters alternative laying methods with ease. The key layer is located between the two. It is a barrier which provides the pipe's contents with effective protection from all environmental influences.

## PE 100-RC or PP for the media pipe

Variant 1, which has an inner pipe made of PE 100-RC, offers enormous resistance to point loads and slow growth of cracks induced by them. The pipe can be installed without a sandbed and can be used in a temperature between - 40 °C and + 60 °C. Variant 2, which has an inner pipe made of PP, is characterised by even greater temperature and chemical resistance. The operating range covers temperatures from - 5 °C to + 95 °C.

## Protection from the inside out

The diffusion-tight AGRU Sure-line IV barrier pipe protects the environment against dangerous media transported in the pipe that must not diffuse under any circumstances. This can be sewage containing oil and petrol, chemical materials, fluorinated hydrocarbons or other gases.



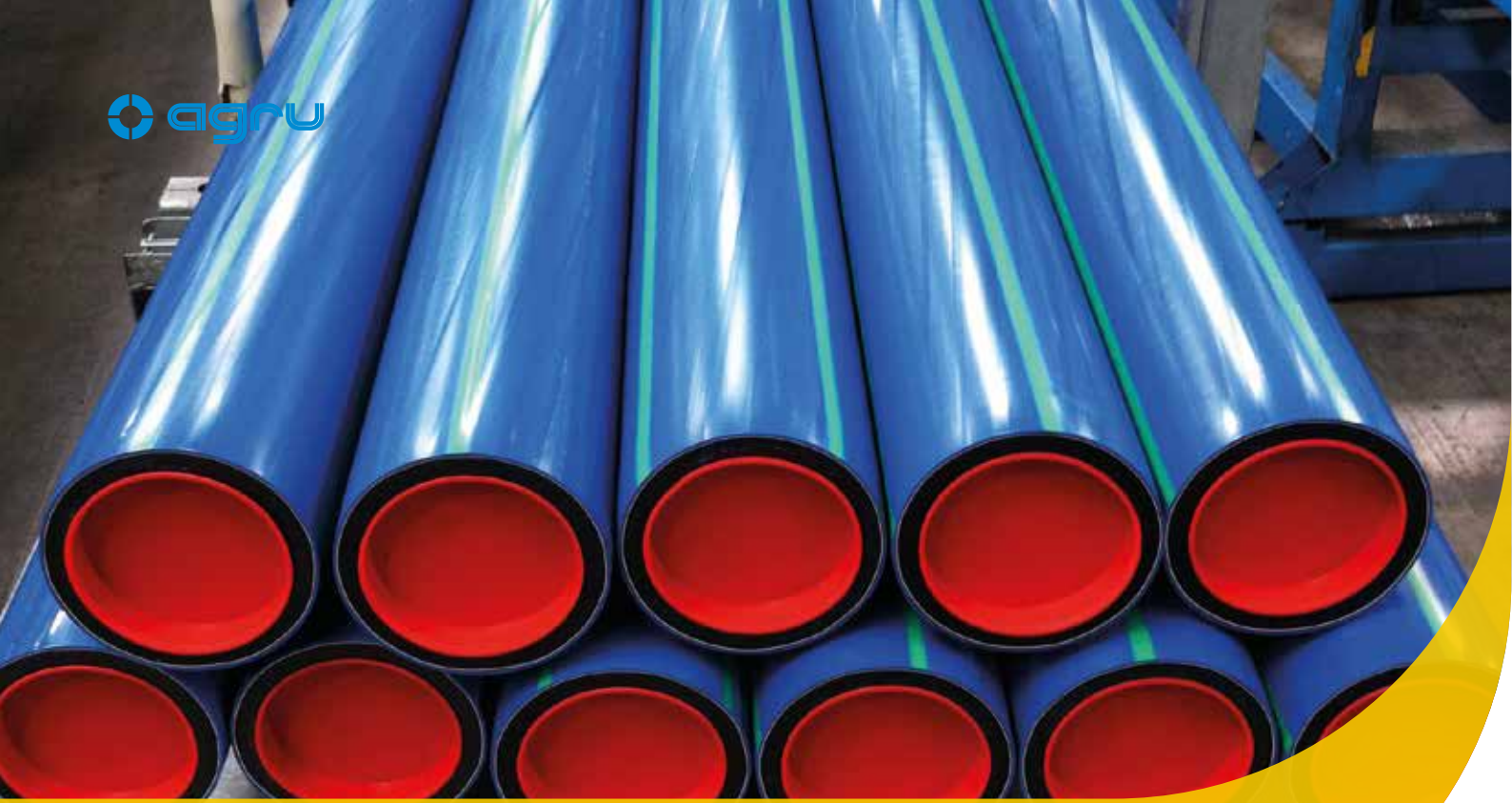
## Optimum drinking water protection

Fresh water lakes are our largest drinking water reservoirs. For this reason, sewage pipes routed through lakes must offer 100% diffusion protection for media hazardous to water. Thanks to the diffusion-resistant barrier layer, sewage can be safely routed through this crystal clear lake.



## Earthquake-proof thanks to flexibility

PE's known impact resistance and flexibility enables the pipes to withstand seismic events. In case of a disaster, substances hazardous to the environment and water are safely retained in the pipe. This means that additional environmental damage can be prevented effectively in the majority of cases.



## AGRU Sureline IV barrier pipe

The best protection against contamination by pollutants

### PP protective layer - the right colour for every application

The AGRU Sureline IV barrier pipe's scratchproof protective layer is available in a choice of colours to match your application (yellow for gas, brown for sewage or blue for drinking water). The PP protective layer protects the pipe against deeper scratches when it is being drawn in, especially when trenchless installation is being used.



### Convenient installation

Due to the incredible stress crack resistance of PE 100-RC and the additional scratchproof protective layer, the Sureline IV barrier pipe can be installed in any terrain without expensive sandbedding. The AGRU Sureline IV barrier pipe is the best choice, especially when alternative, trenchless installation methods are being used.



Berstlining



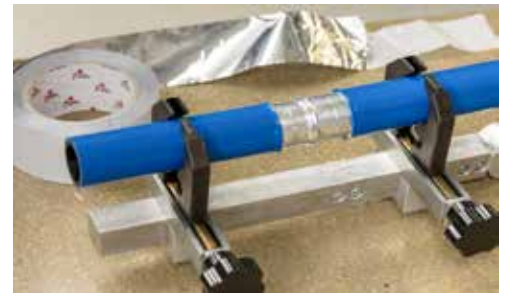
Horizontal Directional Drilling

## Diffusion-tight joints

Homogeneous and longitudinally friction-locked joints can be created using heated element butt welding or electro-socket welding. To ensure diffusion-tightness here too, the weld area is wrapped with special tapes. See the relevant installation guide for full details of this.



1. Cleaning of welded area



2. Wrapping with aluminium tape



3. Wrapping with sealing tape



4. Diffusion-tight joint

## One stop shopping

AGRU offers a full range of diffusion-tight pipes and fittings between OD 32 mm (SDR 11) and OD 630 mm (SDR 11/17). You will always be one step ahead with the diffusion-tight AGRU Sureline IV barrier pipe piping system.





The Plastics Experts.

Your distributor

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