



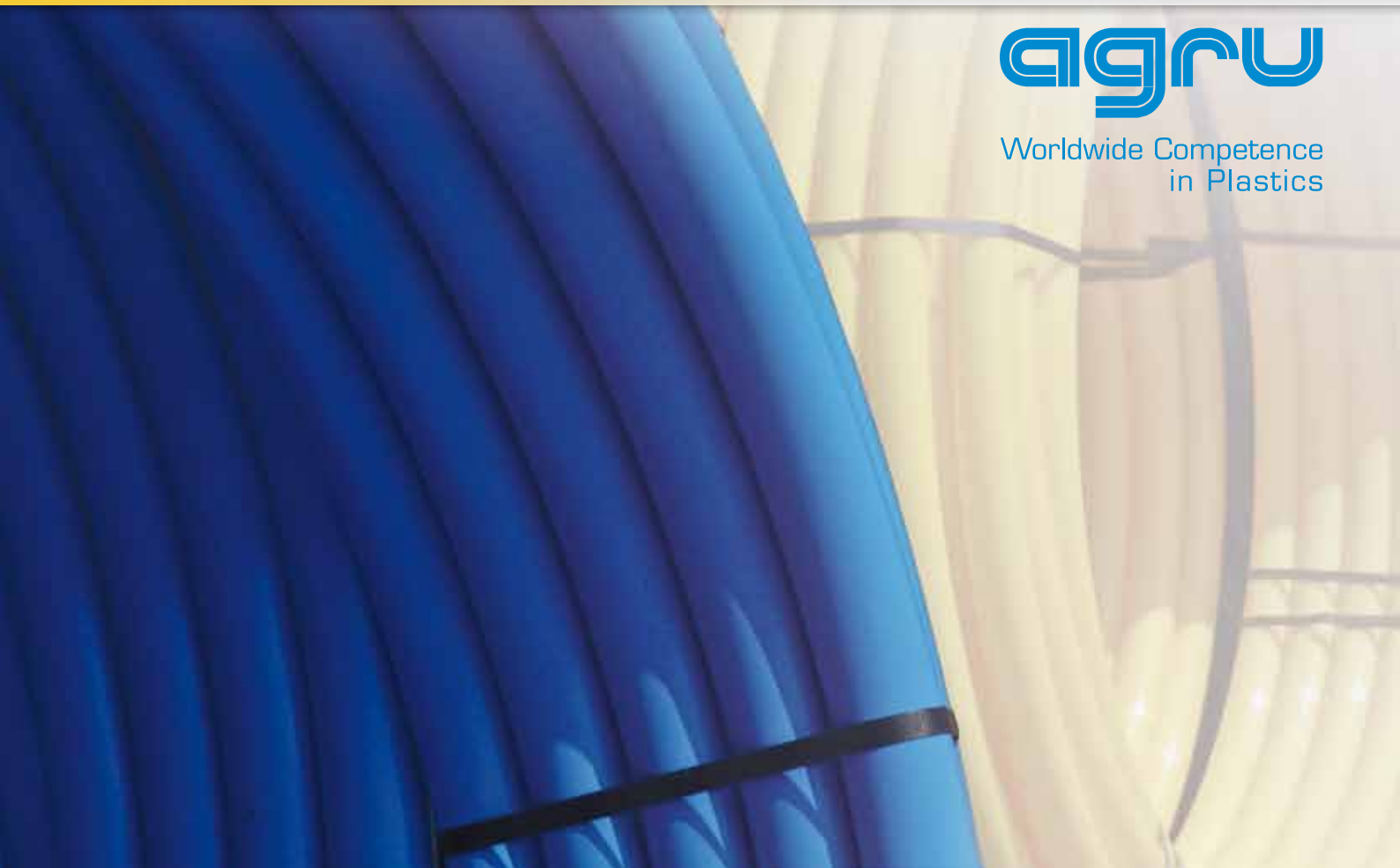
# ***SurePEX***

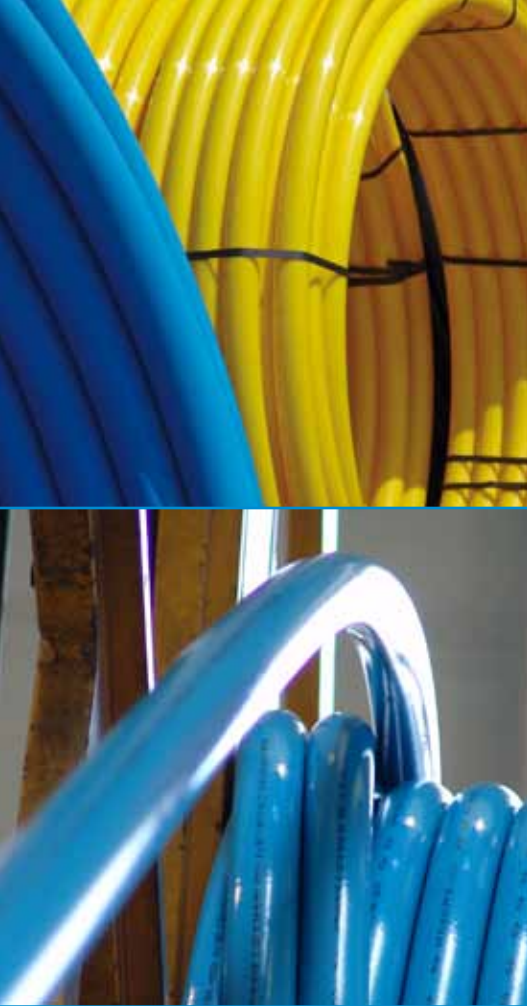
MAXIMUM SAFETY – HIGHEST FLEXIBILITY



**agru**

Worldwide Competence  
in Plastics





## Worldwide Competence in Plastics

As an innovative company AGRU is always interested in establishing new products in the market that put the customers' benefits 100% in the foreground.

SurePEX-pipes are made of peroxidic cross-linked polyethylene (PE-Xa). Due to their outstanding resistance to notches, they are a matchless solution for house service connections. Furthermore they are ideal for hot water supply lines thanks to their excellent temperature characteristics (up to 95 °C).

SurePEX-pipes can be used for the most demanding applications due to a number of advantages.

# SurePEX

- **Flexibility**
- **Universal joining techniques**
- **Suitable for trenchless installations**
- **High thermal stability**

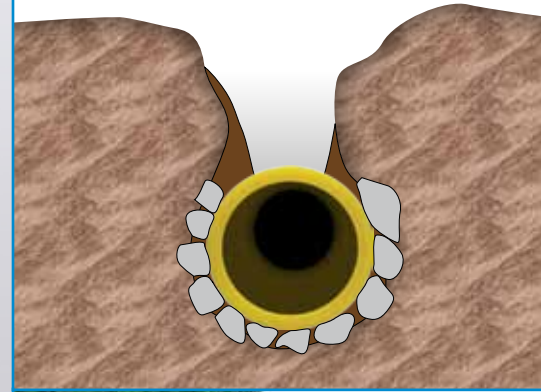


## Withstands the toughest applications

Due to their extremely high resistance to crack growth, SurePEX is suitable for the following pipe laying techniques:

- Ploughing
- Milling
- Burst lining
- Horizontal directional drilling
- Relining of existing piping systems
- Without sand embedding
- Laying via soil displacement hammer

Sandbed-free, milling and ploughing



## THE SAFE SOLUTION FOR HOUSE CONNECTIONS

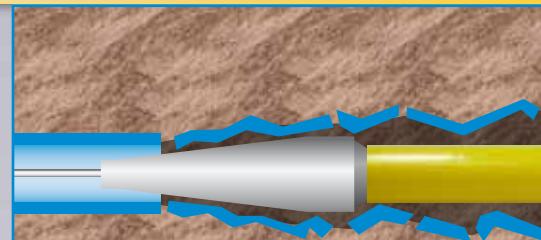


### Operating pressure

The permissible operating pressures at 20 °C for potable water and gas supply lines according to DVGW GW335-2 and GW335-A3 [bar]:

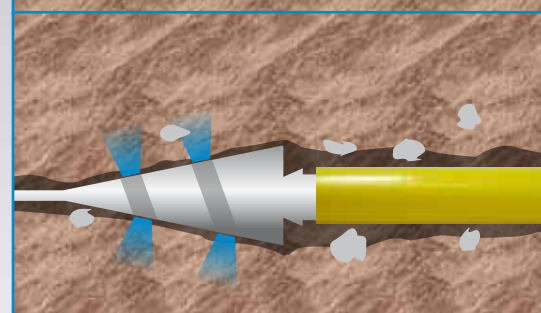
Potable Water			
SDR	PE 80	PE 100	SurePEX
7.4	12.5	-	20
11	12.5	16	12.5
17	-	10	-

Gas			
SDR	PE 80	PE 100	SurePEX
11	4	10	8
17	-	4	-
17.6	1	1	-



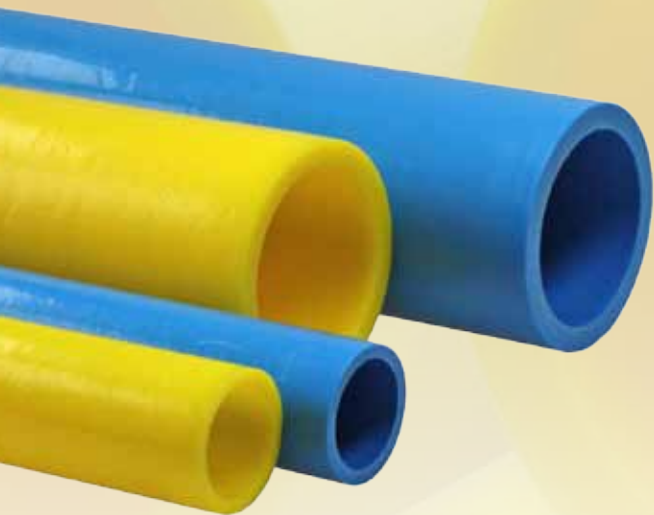
#### Burst Lining

Renewal via cutting and bursting of an existing pipe and simultaneously drawing in a new one.



#### Horizontal Directional Drilling

Soil displacement through a drill head and drawing in a new pipe.



## Dependability

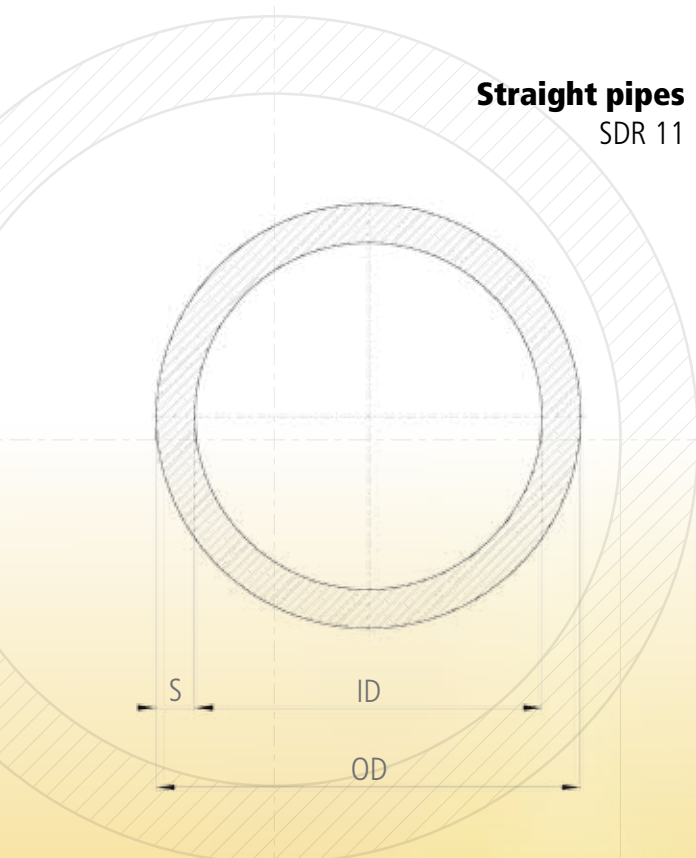
The purchase of pipes for house service connections are a fraction of the overall costs of the project (~1%). Yet the quality of the pipe is the key for a long lasting and reliable operation. High-quality SurePEX-pipes from AGRU offer a maximum durability due to an excellent resistance to crack growth and guarantees an optimum overall-economic efficiency.

As a result of the cross-linking, the long-term temperature stability of SurePEX-pipes is significantly better than regular PE. Due to this fact they are perfect for a fail-safe hot-water-supply system for sanitary, solar heating and industrial applications.

# SurePEX

## Delivery program

**Straight pipes**  
SDR 11



OD [mm]	l [m]	s [mm]	ID [mm]	weight [kg/m]
25	6 / 12	2.3	20.4	0.167
32	6 / 12	2.9	26.2	0.269
40	6 / 12	3.7	32.6	0.425
50	6 / 12	4.6	40.8	0.658
63	6 / 12	5.8	51.4	1.040

SDR 7.4 and customized lengths on request.

## SurePEX properties and advantages

### ● Temperature

- Significantly better creep rupture strength at elevated temperatures (compared to PE 80 and PE 100)
- Operating temperature up to 95 °C

### ● Flexibility

- High flexibility means the tightest bending radii are possible (minimum bending radius at 20 °C: 10 × outer diameter)
- Mechanical joining techniques are available
- Ideal for squeezing off

### ● Mechanical properties

- Highest resistance to crack growth
- Long durability with or without sand embedding
- Excellent chemical resistance
- Non corrosive
- Extremely high abrasion resistance
- Low tendency to creep

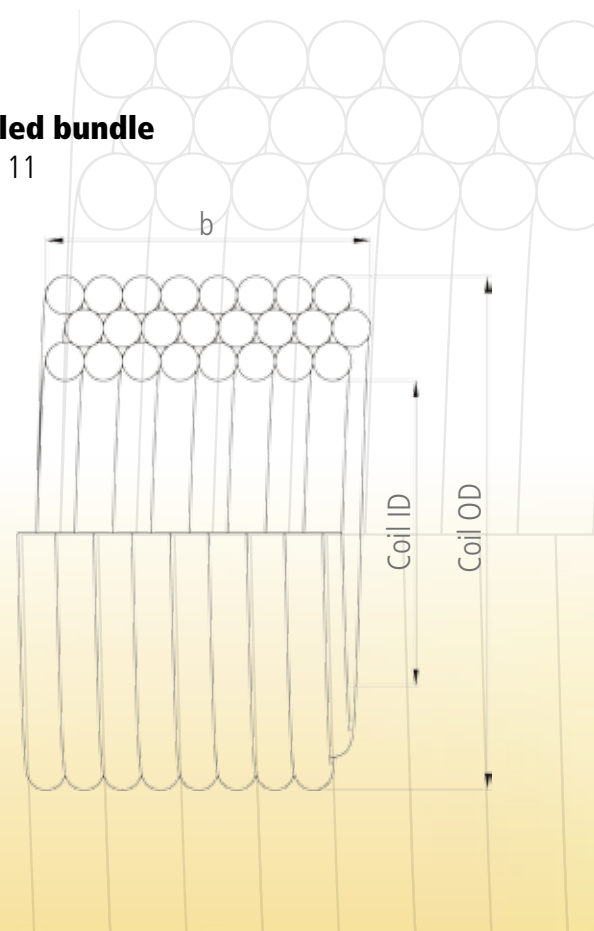
... AN EXCELLENT CHOICE



OD [mm]	Coil OD (50m) [mm]	Coil OD (100m) [mm]	Coil ID [mm]	b [mm]
25	850	970	650	190
32	1050	1220	870	230
40	1120	1260	900	310
50	1280	1550	1000	300
63	1600	1810	1250	320

### Coiled bundle

SDR 11





## Joining technologies

SurePEX-pipes can be joined using the same AGRU electrofusion fittings and welding procedures as for PE 80 or PE 100-pipes. In addition to the pipes AGRU also provides the matching electrofusion fittings, as well as the required welding equipment.

AGRU recommends following the DVS code 2207-1 Supplement 1 "Heated tool welding of pipes made of PE-Xa with pipeline components made of HDPE".

Alternative joining methods, such as conventional crimp, clamped and bolted connections are applicable for SurePEX-pipes, too. The installation guidelines of the respective fitting manufacturer have to be taken into account, if using these types of joining methods.

# SurePEX

## Production of PE-Xa-Pipes

### Step 1:

Initially the base material is mixed with all necessary additives (e.g. stabilizers, processing aids, colour) and formed into pellets by means of a special extruder.

### Step 2:

Afterwards, the raw material is heated and soaked with peroxide in a complex merging process.

### Step 3:

After the controlled cooling of the mixture the resin is processed into cross-linked pipes at more than 2000 bar by ram extruders using the Engel method.

SurePEX-pipes made by AGRU have a homogeneously colored pipe wall. Due to the optimized production process, the pipes' internal residue stress is significantly reduced and accurate pipe dimensions are ensured.



## QUALITY AND RELIABILITY



### Quality management

SurePEX-pipes are manufactured according to international standards (e.g.: EN ISO 15875, DIN 16892, DVGW GW 335-A3, ASTM F876). Within the scope of the internal quality control the following properties of finished pipes are tested:

- Dimensional accuracy
- Hydrostatic long-term strength
- Degree of cross-linking
- Resistance to ageing
- Internal stress

During additional periodic external quality controls, tensile tests, welding investigations and hygiene assays, as well as other tests are performed. Existing approvals document the high quality of SurePEX-pipes from AGRU (e.g. according to DVGW GW335-A3 for gas and potable water).





## AGRULINE

PIPING SYSTEMS FOR NATURAL GAS, WATER & SEWAGE

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Worldwide Competence  
in Plastics

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