

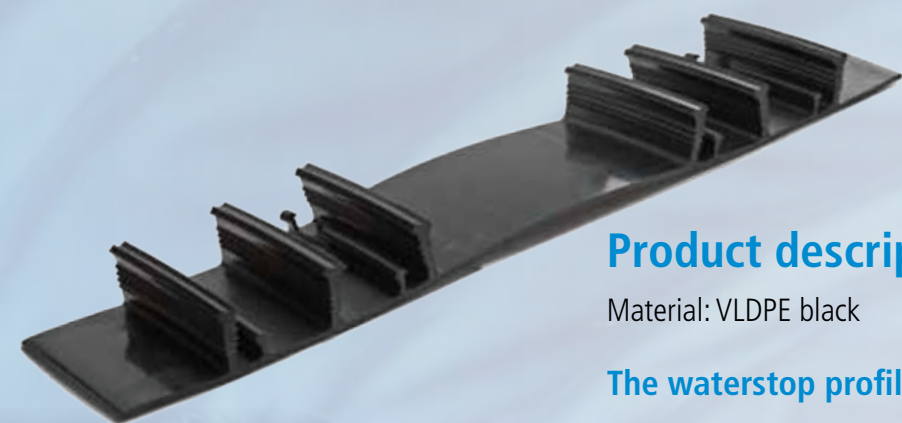
WATERSTOP PROFILE



agru

Worldwide Competence
in Plastics





Product description

Material: VLDPE black

The waterstop profiles stand for:

- Robustness in respect of stresses occurring during the installation
- High expendability to biaxial stresses
- Long lasting
- Resistant to liquid and gaseous chemicals encountered in earthworks and hydraulic structures
- Safe and efficient joining processes, e.g. hot gas extrusion or hot wedge welding
- Resistant to rodents, roots and micro-organisms
- High tear resistance
- Free of plasticisers
- Biologically neutral

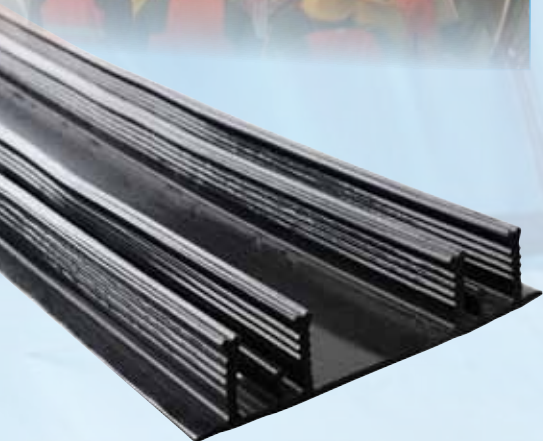


WATERSTOP PROFILE



Material properties of VLDPE

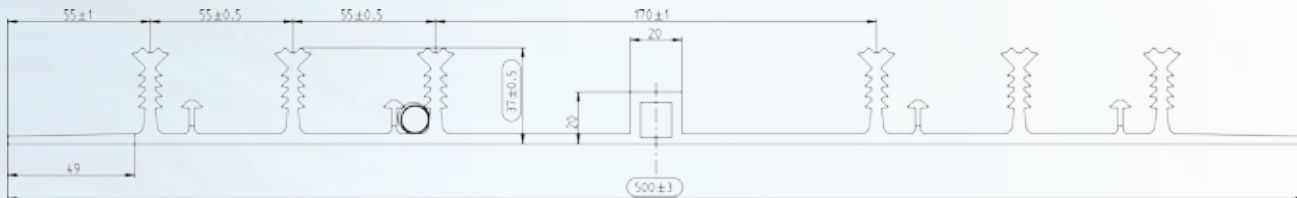
Property	Standard		Unit	Requirement
General condition	DIN 18541		–	Free of voids and cracks
Measurements	DIN 18541		–	See supply range
Density	DIN EN ISO 1183	ASTM D 792	g/cm ³	≥0.89
Melt flow rate (190 °C / 2.16 kg)	DIN EN ISO 1133	ASTM D 1238	g/10min	≥0.6 - 2.0
Shore-A hardness	DIN 53505			≤98
Tensile stress at break	DIN EN ISO 527	ASTM D 6693	MPa	≥10
Elongation at break	DIN EN ISO 527	ASTM D 6693	%	≥350
Carbon black content	DIN EN ISO 6964	ASTM D 4218	%	≥2



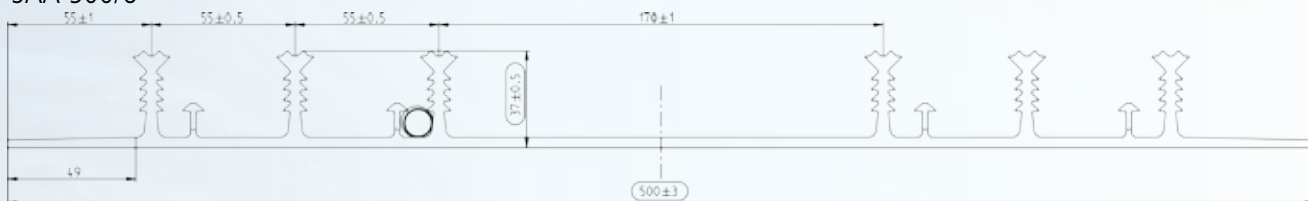
SAA 600/6



SDA 500/6

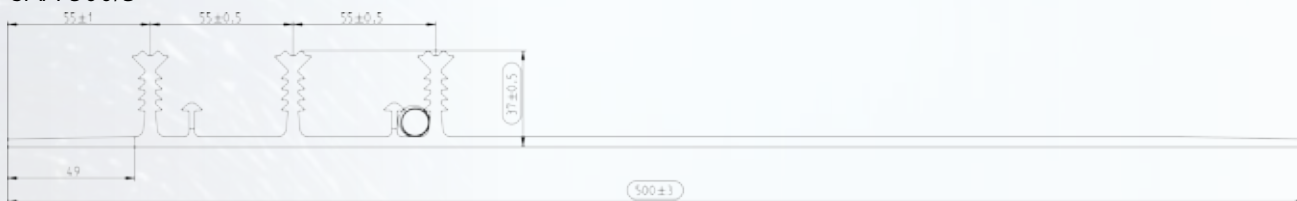


SAA 500/6

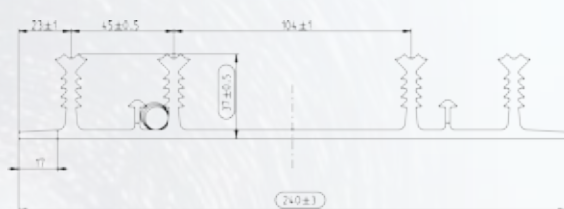


SUPPLY RANGE

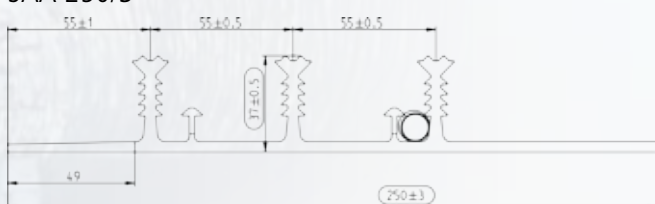
SAA 500/3



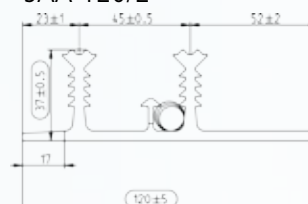
SAA 240/4



SAA 250/3



SAA 120/2





Advantages of AGRU waterstop profiles

- Designed to meet latest requirements of DIN V 18197:2005 and DIN E 18541: 03/2005
- Polyolefin-based VLDPE resin
- Free of plasticisers and halogens
- Integrated injection hose clamping system with defined opening distance
- Suitable for different injection hose diameters ranging from 9 mm to 13 mm
- Optimised combination possibilities of the system with polyolefin-based liners
- Waterstop profiles are the perfect transition between PE liners and concrete protective liners, when lining concrete structures. The excellent welding performance is guaranteed due to the material compatibility

WATERSTOP PROFILE

Polyolefin resin

The use of the very flexible VLDPE ensures a perfect alignment to the tunnel's shape. Easy installation with perfect welding quality is provided. VLDPE is resistant to aggressive groundwater and mountain water.



Applications

General use

- Construction joints:
Waterstop profiles without an elongation loop are used for sealings, which do not allow special movement.
- Expansion joints:
Waterstop profiles with a central elongation loop (e.g. SDA 500/6) are used for the sealings, where a movement in different directions is necessary.

Tunnel engineering

- Cut-and-cover sealing
- New Austrian Tunnelling Method (NATM)



Artificial pond for snow production - Austria.



Foundation sealing - Croatia.

WATER-TIGHT CONNECTION

Civil constructions

- Airfields
- Oil tanks
- Petrol stations
- Sealing of roads and racks
- Foundation sealings

Environmental protection

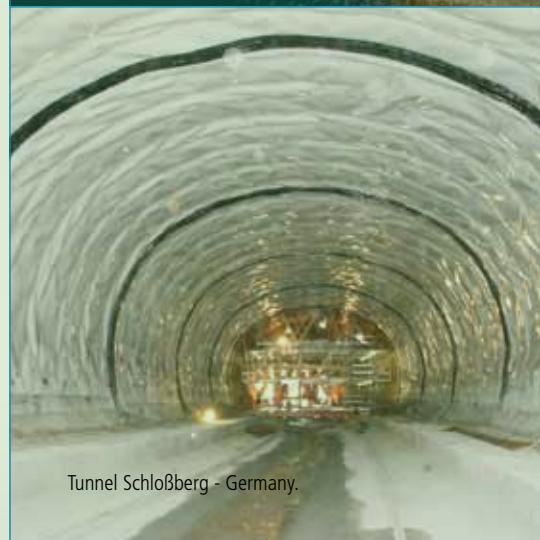
- Leachate collecting ponds
- Retention ponds for harmful media

Hydraulic engineering

- Water reservoirs
- Artificial ponds
- Fire water pond



The Palm - Dubai.



Tunnel Schloßberg - Germany.



Processing instructions

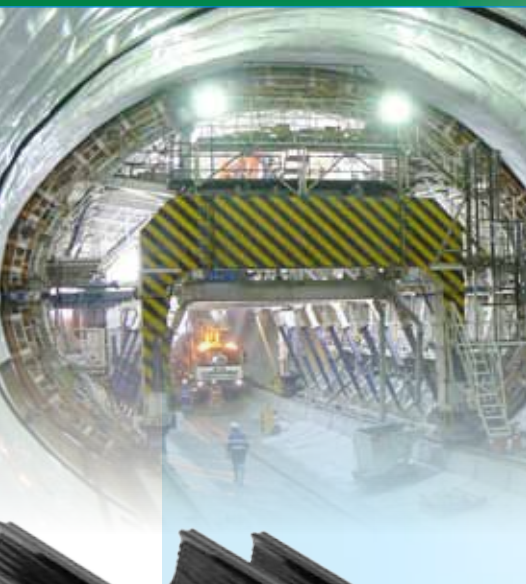
General

On-site only rectangular butt joints in accordance with the AGRU processing instructions are permissible. Corners, T-joints and X-joints have to be pre-manufactured. Waterstop profiles are exclusively linked with thermal welding technologies. All waterstop profiles have to be aligned end-to-end within the connection areas or fire-retarding sealing areas and they have to be welded water-tight and expertly.

Storage and transportation

On-site waterstop profiles have to be stored in a way that excludes any damages and pollution caused by site traffic. Too high stacking may cause deformations of the waterstop profiles! The contact with sharp objects (nails, reinforced steel, etc.) has to be avoided. Usually the waterstop profiles are supplied on pallets; 25 m or customised lengths (on request) wound up into coils.

WATERSTOP PROFILE



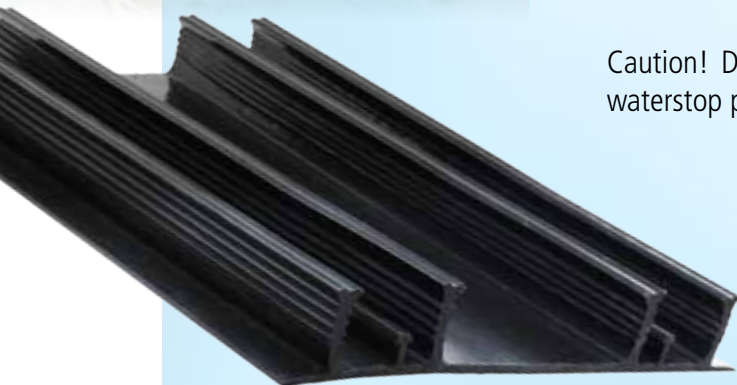
Welding waterstop profiles on-site

The waterstop profiles are welded using adequate welding equipment and a welding sword (butt joints). The welding equipment consists of a welding bench and 4 clamping bars, two of them flexibly held by guide pins.

Mounting waterstop profiles

Before placing the reinforcement the external waterstop profiles have to be laid onto subsoil, fixed onto the formwork or welded onto the sealing membrane.

Caution! Despite careful storing, it has to be ensured that the waterstop profiles are free from any dirt before mounting.



Concreting

Before concreting the cleanliness of the waterstop profiles has to be re-checked, i.e.:

- Absence of any dirt (e.g.: residues of concrete, sawdust, crown caps, etc.)
- Reliable fastening
- Position well adjusted to the joint and distance between the reinforcement bar

In order to ensure the embedding of the waterstop profiles in the base and wall areas it is recommended to pour the concrete in the area of the waterstop profile. It is not allowed to let the compacting tool get in contact with the waterstop profiles.



INSTALLATION

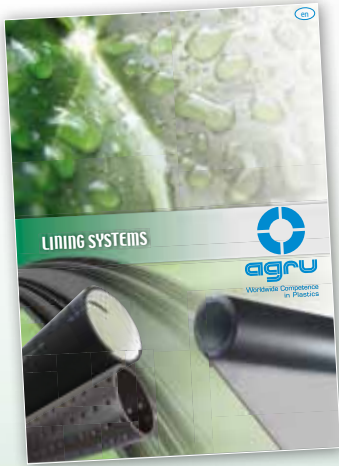
Dismantling of the formwork

When dismantling the formwork attention must be paid not to damage, loosen or even tear the waterstop profiles out of the concrete. If damages to the waterstop profiles are observed during inspection, such areas have to be marked and repaired immediately in a professional manner.

Protection

If the waterstop profiles are stored outdoors they have to be protected from UV radiation or other environmental influences using a cover or shelter.

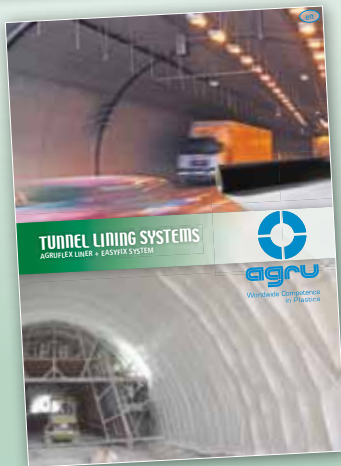




LINING SYSTEMS

the right sealing solution for your application

- Individual technical support
- Large product range
- System supplier



TUNNEL LINING SYSTEMS

a complete solution from AGRU for tunnel constructions

- High-grade resins
- Sustainable and environmentally friendly
- No toxic fumes in case of fire
- Long lifetime



● LINING SYSTEMS

Y23508020612 0,5 GUT

Subject to errors of typesetting, misprints and modifications.
Illustrations are generic and for reference only.

Your distributor:



Worldwide Competence
in Plastics

AGRU Kunststofftechnik GmbH

Ing.-Pesendorfer-Straße 31

A - 4540 Bad Hall

T +43 (0) 7258 790 - 0

F +43 (0) 7258 3863

office@agru.at

www.agru.at