

# Pre-insulated pipes with casing of recycled external HDPE



# LOGSTOR Vision with Recycled Materials in New Pipes

We have taken the first but important step toward a more sustainable future with the development of casing for district heating pipes, produced entirely from recycled materials. This pioneering initiative will change the industry and bring recyclable plastic into an unparalleled focus in our business.

We also know that this is only the first step on a long journey, a LOGSTOR vision, aiming at 100% recycling and a circular economy. As pioneers in our business we are obliged to face the challenges and contribute to making a difference for the environment and future generations.

Our vision also entails that the materials we use in our products must be recyclable, when they have served their time and the pipes must be replaced by new ones.

## Advantages

- Recycling plastic waste saves resources of the Earth compared to the production of new HDPE
- 1.6 kg CO<sub>2</sub> is saved per kg recycled HDPE. For a 12 m pipe with a ø315 mm casing 79 kg CO<sub>2</sub> is saved
- The properties of the casing is the same as a casing, produced from new HDPE
- Same service life of the system
- Strengthen the environmental profile of the energy company in relation to the consumers, the authorities, and other means of heating
- Strengthen the competitiveness of District Heating

## Quality Control of Recyclable Plastic from External Suppliers

Every new supply of recyclable plastic is tested in our laboratory, and only first released, when it has been documented, that all requirements in EN253 are met and documented in a 3.1. certificate.



Elongation at break test



Crack resistance test

## Quality documentation

According to the requirements in the European standard EN253, the casings of each production line shall be subject to a type test – this also applies to recycled plastic from external suppliers.

In the type test the casing is tested for the following parameters:

- Carbon black content and dispersion
- Melt flow rate
- Thermal stability (OIT)
- Casing dimensions (nominal outside and wall thickness)
- Appearance and surface finish
- Heat reversion
- Stress crack resistance
- Impact resistance
- Elongation at break

## Refereces

### Aalborg Forsyning

- Distribution network in Storvorde and Sejlflod, gas conversion
- 30 km TwinPipe, series 3, dimension ø33 – 168 mm
- Casing, made from 100% recycled HDPE
- Axial conti pipes with diffusion barrier
- Traditionally produced pipes
- BandJoint
- AluFlex as branches
- CO<sub>2</sub> savings of 160 tons



### Lemvig Varmeværk

- Transmission pipeline from Lemvig to Rome and distribution network in Rome
- 2 km TwinPipe, series 3, ø26 – 139 mm
- Casing, made from 100% recycled plastic
- Axial conti pipes with diffusion barrier
- Traditionally produced pipes
- BandJoint
- AluFlextra as branches
- CO<sub>2</sub> savings of 17.5 tons



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