

JRG Sanipex Bio PE-X

Quality can also  
be sustainable



# Working together for sustainability

The new bio-attributed PE-X pipes and PE protective pipes made from recycled material have been proven to reduce the CO<sub>2</sub> footprint – while keeping the product quality high. In this way, GF Piping Systems contributes to sustainability in the construction industry.

## The JRG Sanipex range gets a sustainable addition

Alongside the existing products made from fossil-based plastics, there is now an option for a PE-X pipe made of 10% renewable raw materials. Because these materials are by-products from industries such as paper, pulp or edible oil production, they differ from renewable feedstocks for food and livestock feed. The raw materials can be traced back to the original collection point.

GF Piping Systems uses 100% recyclable material for the PE protective pipes, which encase the PE-X pipe carrying the media. This material is recovered from industrial waste and meets the same strict performance criteria that apply to conventional products.

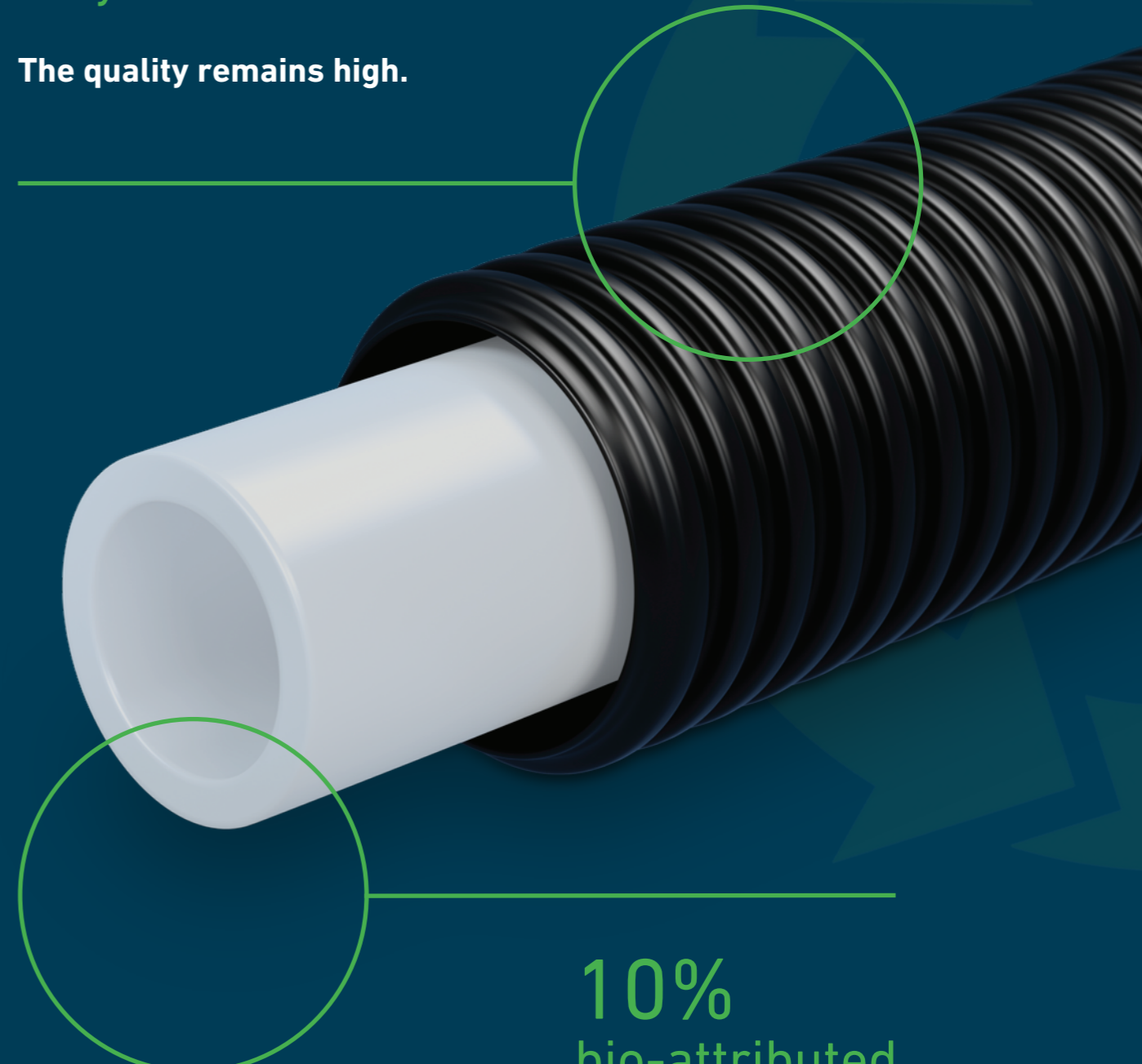
## Consistently high quality

The bio-attributed PE-X and PE from recycled material have the same chemical and mechanical properties as conventional plastics. The combination of the two pipes cuts CO<sub>2</sub> emissions by a total of 30%. The quality is on a par with fossil-based products, which will continue to be available.

30%  
fewer CO<sub>2</sub>  
emissions

100%  
recyclable material

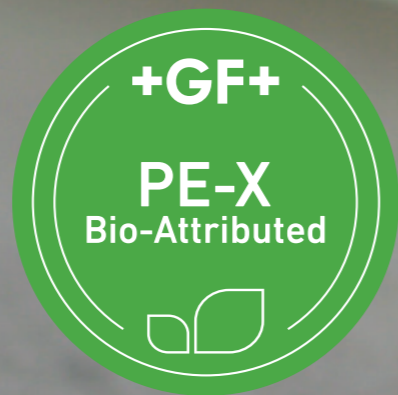
The quality remains high.



10%  
bio-attributed

Renewable raw materials  
reduce the CO<sub>2</sub> footprint.





## Bio PE-X pipe made from renewable raw materials

The PE-X pipes for JRG Sanipex include 10% renewable raw materials using the Borneables™ brand of bio-based polyethylenes produced by Borealis, one of the world's leading suppliers of sustainable polyolefin solutions.

### Vegetable oil waste as a basis

Unlike renewable feedstocks produced with agricultural crops grown for food and livestock feed, the Borneables are made of renewably-sourced feedstocks derived solely from waste and residue streams: from vegetable oil production as well as oil waste and residues such as used cooking oil from the the food industry. The raw materials used are traceable. For the PE-X pipes from GF Piping Systems, they come from Stegnunsund in Sweden.

### Mass balance as an approach in production

Borealis does not physically separate fossil and bio-based materials in the production process. This would be immensely complex. Instead, the mass balance approach is employed. This ensures that identical quantities of fossil raw materials are replaced by renewable raw materials. The accuracy and traceability of this process is checked by ISCC, a renowned certification body for mass balancing.

## PE protective pipe made from recycled material

The PE protective pipes are made from material that is 100% recyclable. No new materials are used. The recycled PE comes from industrial waste products. These products are collected, cleaned and refurbished. This extends the service life of the material and promotes the circular economy.



We take a holistic view of the sustainability of our products – from the raw materials to the packaging. To minimize environmental impact, our cardboard packaging remains unbleached and is printed in a one color only.



CO<sub>2</sub> savings

-211 kg\*



Apartment building with 20 dwellings



distance traveled in a passenger car\*

-2220 km

\*The CO<sub>2</sub> saving of 211 kg is based on the use of JRG Sanipex Bio PE-X pipes in an apartment building with 20 dwellings, compared to the use of conventional PE-X pipes. The calculation takes into account the installation of 15 meters of d12, 40 meters of d16, and 20 meters of d20 PE-Xa pipes per dwelling.

A CO<sub>2</sub> emission of 95 gCO<sub>2</sub>/km was used for the comparison with the kilometers covered by a car. This value is based on the CO<sub>2</sub> fleet limits for passenger cars in EU Regulation 2019/631.

Calculate your own savings potential



The new Bio PE-X is an addition to our Sanipex product line and can be used in combination with both systems.

## JRG Sanipex

### The pipe-in-pipe system for drinking water installations

JRG Sanipex is the world's first plastic pipe-in-pipe drinking water installation system. The unique cone grip union connection guarantees a secure and pocket-free connection with full flow. It can be removed at any time and requires no additional sealing materials. The pipe-in-pipe technology allows the pipes to be laid directly in the concrete and the PE-X pipes within the conduit can be replaced if needed. More information at [www.gfps.com/sanipex](http://www.gfps.com/sanipex)



## JRG Sanipex MT

### Hygienically perfect pipe connections

What makes JRG Sanipex MT unique? No other system offers the combination of stable multi-layer composite pipes, flexible PE-X pipes and fittings manufactured using the two-layer injection molding process with the ingenious cone grip union technology. The system ensures that the connection does not provide a breeding ground for legionella or bacteria. The full pipe cross-section without water pockets has further benefits. Only minimal flow noise is generated, and there are practically no pressure losses. Rely on proven safety.

[www.gfps.com/sanipex-mt](http://www.gfps.com/sanipex-mt)



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