



# EcoSheetPile™ Plus

Sustainable solutions to reduce  
the environmental impact of your projects



**XCarb®**

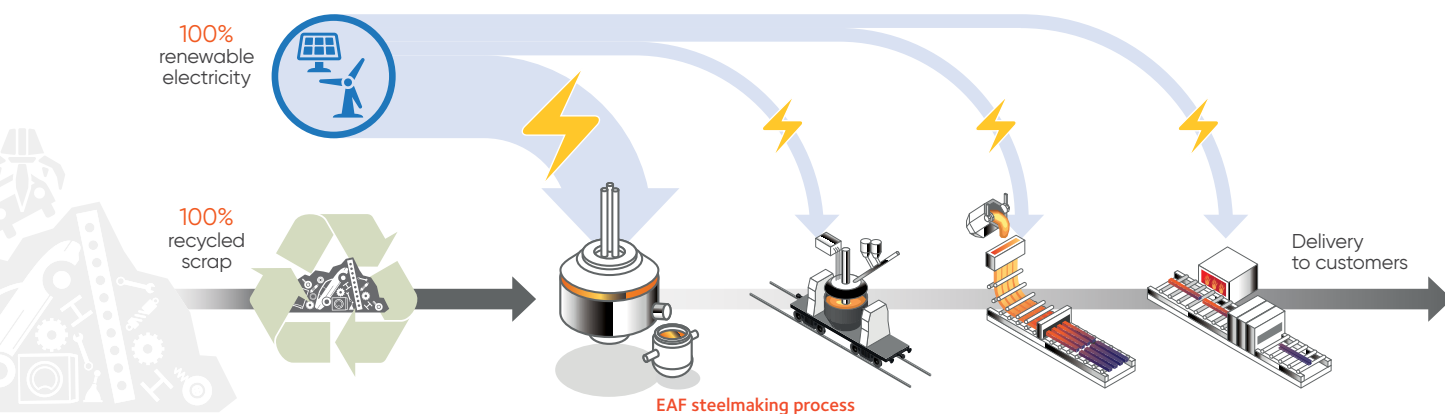
Recycled and renewably  
produced

# Reducing the carbon footprint of steel sheet piles

**Decarbonisation** is the most important aspect of ArcelorMittal's long-term strategy. We align with the Paris Agreement's goals and the European Green Deal. We committed in 2021 to reduce European CO<sub>2</sub> emissions by 35 % by 2030 and be carbon neutral by 2050. Our new brand, **XCarb®** is designed to bring together all of ArcelorMittal's reduced, low and zero-carbon products and steelmaking activities.

For long, ArcelorMittal's EcoSheetPile™ range of steel sheet piles have been manufactured through the Electric Arc Furnace (EAF) route, with CO<sub>2</sub> emissions far below the average emissions for the global steel industry which is around 2.3 tonnes of CO<sub>2</sub> per tonne of primary steel produced\*.

The new **EcoSheetPile™ Plus** brand, an essential part of the XCarb® recycled and renewably produced initiative, is based on the EAF route using 100 % recycled material and **in addition using 100 % renewable electricity** sourced from the same power grid. This allows the manufacturing of the new EcoSheetPile™ Plus with **even less emissions** than with the usual energy mix. Certified by a specific Environmental Product Declaration (EPD), the production of the EcoSheetPile™ Plus range emits as low as **409 kg CO<sub>2</sub>e per tonne of finished product**. It comes also with a 'Guarantee of Origin' certifying the renewable sources for the electricity, audited by an external third party.



\* Sources:

HSBC Sustainable finance  
Steel for the future

McKinsey  
Decarbonization challenge for steel

worldsteel association  
Steel's contribution to a low carbon future





Railway underpass, Lokeren, Belgium © Kristof Pieters



**Steel sheet piles** are widely used to form retaining walls for infrastructure projects, like ports and waterways or urban transport developments.

Sheet piles also play an important role in flood protection and coastal erosion schemes, which have ecological and social importance in contributing to the preservation of land and nature and the protection of our homes.

A further key advantage of steel sheet piles is the **perfect integration into the circular economy concept**, making steel sheet piles one of the most sustainable construction materials. Indeed, the sheet piles we produce can be reused up to ten times before they are recycled through the EAF-based steel making process.

In addition, fully engineered package solutions, relying on our high performance, tailor-made sheet pile sections, in combination with our high strength steel grades, could allow further carbon footprint reductions on project-based assessments.

Independent third-party infrastructure impact studies show that our EcoSheetPile™ designs can have the lowest environmental impact compared to other construction solutions. A full scope LCA study (cradle-to-grave) for underground car park applications shows an impressive gap of 88 % in greenhouse gas emissions between the EcoSheetPile™ solution and the closest alternative (Cutter Soil Mixing)\*\*. The new EcoSheetPile™ Plus range brings even much better results.

As it becomes essential for project owners to integrate green credentials assessment rules in their tendering processes, bids with a reduced carbon footprint have a tangible advantage over less environmentally friendly solutions.

Using their extensive knowledge of products, steel grades and design concepts, our Design Department teams support designers to achieve the most efficient and competitive piling solution for their project. Optimization through Life Cycle Assessment method (LCA) helps reducing the carbon footprint of all projects. Please contact us for further information and project support.

\*\* Underground car parks-Part 2-LCA report, available online <https://sheetpiling.arcelormittal.com/>



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## Construction of a fishing terminal Port of Egersund | Norway

- > EcoSheetPile™ Plus
- > 2,200 t AS®500 straight web sheet piles

### About the project

- > Located in one of Norway's largest and most important fishing harbours, Pelagia Egersund Seafood is extending their fishing terminal.
- > The new terminal is based on **circular cells** assembled with 2,200 t of AS 500 straight web sheet piles. The cells will be filled with the sands dredged locally to increase the draught of the port.
- > To reduce the total carbon footprint of the project, the structure is assembled with ArcelorMittal's new EcoSheetPile™ Plus range, made from **100 % recycled steel and with 100 % renewable electricity.**

# Sustainable construction pit Munich | Germany

- > EcoSheetPile™ Plus sheet piles
- > 798 t PU 28<sup>-1</sup>

## About the project

- > In order to build the new headquarter of a Bavarian public authority (Bayerische Versorgungskammer), a temporary construction pit is built. In total 188,300 m<sup>3</sup> needed to be evacuated.
- > A part of the construction pit was built with sheet piles. The area of the sheet piling shoring system equals to 4,850 m<sup>2</sup>.
- > The whole project aims for a high level of sustainability and circularity, hence it is already certified with the DGNB certification for sustainable jobsites.
- > The EcoSheetPile™ Plus range is an important pillar of the sustainability concept of the jobsite.
- > The sheet piles are only rented and are therefore returned to ArcelorMittal's rental stock after use. Temporarily used sheet piles are generally used between 5-10 times before they are completely recycled at the end of their life cycle.





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## Seine-Nord Europe canal project Ribécourt | France

- > EcoSheetPile™ Plus
- > 910 t HZ 880M A-12 / AZ 13-770

### About the project

- > Located in the north of France, the Seine-Nord Europe canal will link the French waterways with the Northern Europe network. A 200 m long quay wall is being built in Ribécourt, using our HZ®/AZ® combined wall system.
- > This project is part of the development of water transport in France as an ecological alternative to road transport. Some barges can carry as much cargo as 220 trucks.
- > Once completed, the Ribécourt quay will allow the supply of the building materials by barge for the construction of the canal.
- > The quay wall is built with our HZ/AZ combined wall system. In total 910 t of HZ 880M A-12 king piles and AZ 13-770 intermediary sheet piles are used.
- > To reduce the total carbon footprint of the project, the structure is being assembled using ArcelorMittal's new EcoSheetPile™ Plus range of sheet piling, made from 100 % recycled steel and with 100 % renewable electricity.

# New train station Varberg | Sweden

- > EcoSheetPile™ Plus
- > 580 t AZ 44-700N
- > 603 t PU 22<sup>-1</sup>

## About the project

- > The major Varberg-Hamra train line in Sweden is expanded to double-track and converted to a 3 km tunnel under the city.
- > The project is part of the expansion of Sweden's West Coast line between Gotheburg and Lund. The expansion of the line will improve capacity and reliability of this essential link for Sweden.
- > The platforms of the new train station in Varberg are lowered in an open trough 10 m below ground level.
- > A total of 1,183 t of ArcelorMittal's steel sheet piles are used to build retaining walls.
- > Trafikverket Swedish national rail company and the project stakeholders selected **ArcelorMittal's EcoSheetPile™ Plus to reduce the total carbon footprint of the project.**



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