



Environmental impacts of expanded polypropylene

ARPRO, ARPRO Recycled (25%), ARPRO Recycled (30%), ARPRO 35 Ocean and ARPRO REvolution

Manufacturer: JSP International

JSP International is a global supplier of engineered plastic foams, sheet, and plank products. One of the products marketed by JSP International is ARPRO, an expanded polypropylene (EPP) foam bead used in automotive systems, HVAC, packaging applications and various consumer products.

The environmental impacts of expanded polypropylene ARPRO, ARPRO Recycled (25%), ARPRO Recycled (30%), ARPRO 35 Ocean and ARPRO REvolution are based on the life cycle assessment. All the grades are produced by JSP International.

The assessment was performed using the LCA method conducted in accordance with ISO 14040. Environmental impacts were characterised using CML2001 - Aug. 2016, EN 15804+A2.

As a functional unit, the production of 1 kg of expanded polypropylene was chosen.

Based on the LCA study conducted, the following environmental impacts are declared:

- 1) The carbon footprint of ARPRO products is expressed as follows:

	ARPRO LCA report
Product type	CML2001 - Aug. 2016, Global Warming Potential (GWP 100 years) [kg CO ₂ eq.]
ARPRO	2.06
ARPRO 35 Ocean	1.91
ARPRO Recycled (25%)	1.79
ARPRO Recycled (30%)	1.74
ARPRO REvolution	0.92

- 2) The following processes account for the most significant part of the carbon footprint and the overall environmental impact of ARPRO and ARPRO Recycled Production: **production of PP granulate**, **CO₂ used for the expansion process**, and **thermal energy** generated from natural gas. Other individual processes are significantly less important. Packaging, transport, and waste management play a marginal role in most impact categories' results.

The evaluation of ARPRO expanded polypropylene was based on LCA methodology using the recommended values from the database of the European Platform for Life Cycle Assessment of the European Commission.

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The environmental declaration was developed in accordance to
ISO 14021, EN ISO 14040, EN ISO 14044 and P CEN ISO/TS 14067