
NEWS RELEASE

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Refinverse Group, Inc.

Accelerating the Development of Recycled Nylon 66 Resin from Waste Airbags **Strengthening Collaboration with Toray Industries, Inc.**



Refinverse Group, Inc. (Head Office: Chuo-ku, Tokyo; Representative Director: Chuji Kondo; hereinafter “Refinverse”) and Toray Industries, Inc. (Head Office: Chuo-ku, Tokyo; President: Mitsuo Ohya; hereinafter “Toray”) have decided to strengthen their business collaboration in the development and commercialisation of recycled nylon 66 resin made from waste airbags.

■ Background

Approximately 2.73 million vehicles are scrapped annually in Japan,* generating about 1,900 tons of waste airbags.**

Until now, most airbags installed in end-of-life vehicles have been treated as automotive shredder residue (ASR) and have been recycled rarely. However, due to upcoming regulatory proposals in the EU regarding circular vehicle design and End-of-Life Vehicle (ELV) management, initiatives to expand the supply and use of recycled materials are gaining traction in Japan. That said, composite materials such as airbags have remained difficult to recycle due to technical challenges, and new solutions are needed to realize a circular economy.

Refinverse has developed a proprietary technology to separate silicone rubber and nylon fabric and, since 2019, has been developing a recycled nylon material business called “REAMIDE®.” The company independently collects waste airbags from dismantlers across Japan and now works with over 100 companies.

REAMIDE® is already used in products such as building materials and cable ties. Now, to pursue an even higher grade of recycled nylon 66 derived from airbags, Refinverse is further strengthening its collaboration with Toray.

* Source: Ministry of Economy, Trade and Industry, FY2023 Status of the Automobile Recycling Act

** Source: Company research

■ Overview of the Initiative

Under this collaboration, Refinverse will be responsible for collecting airbag scraps and ELV airbags, separating silicone, cleaning, and re-pelletizing. Toray will handle compound formulation and mass production.

The companies are currently working to optimize the silicone removal, cleaning, and re-pelletizing processes to minimize impurities in the nylon 66 resin and have succeeded in developing a higher-quality version of REAMIDE® that surpasses previous standards.

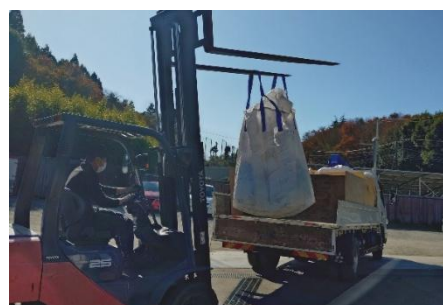
The newly developed REAMIDE® is the first* Post-Consumer Recycled (PCR) material derived from Japan-collected ELVs to meet Toray’s quality requirements.

Moving forward, the two companies aim to establish a domestic supply chain for reusing airbags from scrapped vehicles in automotive applications.

* Source: Company research

About “REAMIDE®” – A Recycled Material Made from Waste Airbags

Refinverse collects waste airbags from dismantlers nationwide. The network now spans around 30 prefectures and more than 100 companies and continues to expand. Collected airbags are reborn as REAMIDE® at the company’s factory in Ichinomiya City, Aichi Prefecture, and are used in products such as building materials and cable ties.



(Image: Waste airbags / Collection in progress)

■ **About Refinverse Group, Inc.**

"With unique perspectives and technologies, we carry wealth into the future."

For over 20 years, Reinverse has been practising circular economy principles, engaging in the regeneration and development of various materials. The company recycles large quantities of discarded tile carpets from offices and facilities at its own plant to produce "Refine Powder," a closed-loop recycled material.

It also manufactures high-quality recycled nylon pellets (REAMIDE®) from waste fishing nets and airbags. In 2023, it launched a new initiative using bird feathers to develop a novel bio-based material called "ReFEZER." Through these efforts, the company continues to expand its business and research to realise a circular economy through the power of innovation.

【Press Inquiries】

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