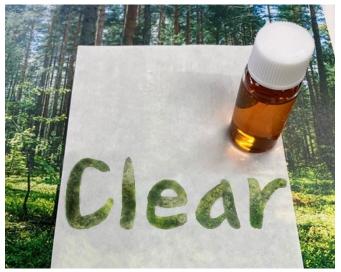


Aug 19, 2025

## Harima Releases Biomass-based Transparentizing Agents for Paper HARIMA CHEMICALS GROUP, INC.

Harima is glad to announce the release of its first transparentizing agents for paper. The newly developed items have a high content of pine-derived rosin and other biomass materials, and render paper transparent when applied on the desired areas.



A sample of our newly developed transparentizing agents (top right) clarifying the areas where it was applied

With growing global interest for more ecological products and technologies, plastic materials are gradually being substituted with paper alternatives. The packaging sector is also seeing an increase in biomass-based materials, from among which trees present the additional advantage of having absorbed carbon dioxide during their lifecycle and are also renewable, which makes them truly sustainable.

With conventional packaging paper the content cannot be seen, which typically requires replacing a portion of the paper with transparent materials such as plastic films. However, this results in additional steps and costs relating to the production process and hinders recycling. Most transparentizing agents available in the market improve visibility, with the disadvantage of being petroleum-based.

In collaboration with a leading paper manufacturer in Japan, Harima has developed transparentizing agents that are environmentally conscious and provide enhanced visibility to paper packaging materials by clarifying the areas where they are applied. With performance parameters on par with their petroleum equivalents, such as transparency and strength, they facilitate recycling, thus contributing to the manufacture of paper packaging materials of superior quality and functionality.

The Japanese market of paper materials used in lieu of plastic films is progressively expanding and is estimated to reach approx. 3.5 billion Japanese yen by 2027, an increase of 75% compared to 2023. Harima's newly developed transparentizing agents can also be paired with food packaging materials, which is expected to create new opportunities in the industry. Our next steps involve evaluation with prospective business partners towards full-scale introduction into the market.

## Contact

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