



Industry fights proposed EU reprotoxicity classification for pinederived rosin substances

Rodent effects come from undernourishment, manufacturers say

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Industry is fighting a proposal to classify natural rosin substances extracted from pine wood as reprotoxic, arguing that the effects seen in lab studies result from rodents being undernourished after rejecting rosin-laced feed.

Some of the substances face category 1B classifications, which would trigger automatic EU bans in consumer applications.

Rosin is a complex natural substance tapped from live pine trees or collected as a byproduct of the pulp and paper industry. It is used in a wide range of industrial and consumer applications, including adhesives and sealants, cosmetics, food contact materials (FCMs), inks, lubricants, paper sizing and rubber. Niche applications include Greek Retsina wine production and treatment for violin bows.

Manufacturers react rosin with other chemicals such as maleic acid or fumaric acid to tune properties such as hardness, melting point and viscosity.

In August 2023, ECHA published an Assessment of

Regulatory Needs (ARN) report covering rosin substances divided into six groups. Based on this, Norway prepared three harmonised classification and labelling (CLH) dossiers in 2025 for eight different types of rosin substances, including hydrogenated, fumarated and maleated rosin.

The dossiers propose classifying rosin, rosin oligomers and maleated rosin as category 1B reproductive toxicants, with the others as category 2, based mainly on rodent studies showing effects on ovulation and pup growth.

Industry agrees that test results raise some reproductive toxicity concerns for maleated rosin but strongly disputes the other proposed classifications.

Category 1B classifications would also impact associated industries such as the paper industry, said Jan Maarten Teuben from Penman Consulting during the Chemical Watch Events & Training Regulatory Summit Europe 2026 in Brussels in April.

Downstream users could be driven to use petroleum-derived

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alternatives, especially for sensitive applications such as FCMs or cosmetics, he said.

The classification would “obstruct the development of a sustainable chemical industry based on plant-derived resources in Europe”, he added.

The Pine Chemicals Association (PCA), rosin manufacturers consortium H4R, and the Hydrocarbon Resins, Rosin Resins and Pine Chemicals Producers Association (HARRPA) are still investigating why maleated rosin behaves differently from the other rosin substances. They say the toxicity is likely to come from the maleate group rather than the rosin.

The PCA and H4R commissioned new rodent studies to demonstrate that undernourishment because of rosin’s “unpalatability” may have caused observed effects on fertility and development. The industry groups have published the results in the journal *Reproductive Toxicity* and sent them to ECHA’s Committee for Risk Assessment (RAC), which is set to agree rosin opinions later this year.

The first industry study was on three groups of rats:

- one control;
- one with rosin exposure; and

- one with four weeks to recover after rosin exposure.

The results showed that the effects on ovulation were reversible after a recovery period.

A separate feed restriction study measured how much rodents ate in the standard fertility and development study with rosin. Scientists then repeated the study without rosin, using the same amount of feed.

The results were inconclusive on fertility effects. However, effects on pup size were the same in exposed and non-exposed undernourished rodents.

Dr Emma Davies

Science reporter

Chemical Watch News & Insight

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[Journal article \(open access\) →](#)

[CLH proposal for maleated rosin →](#)

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