



Dec. 8, 2020

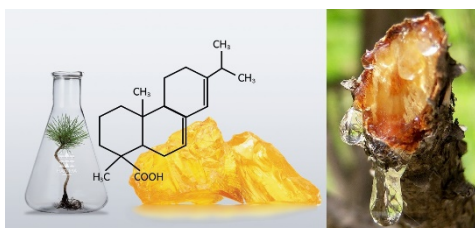
## Harima Announces Joint Research on Dampers Using Shock Absorbing Rubber

**HARIMA CHEMICALS GROUP, INC.**

Harima has reached an agreement with Japan-based Sumitomo Rubber Industries, Ltd. and KYOTO UNIVERSITY on joint research of dampers using a new type of rubber developed in collaboration with Sumitomo Rubber Industries. The rubber will be used for shock dampers in buildings.

Sumitomo Rubber Industries has utilized Harima's tall oil rosin in the development process to improve the performance of high damping rubber; rosin components help convert vibration into heat energy, assisting shock absorbers in slowing down and reducing the magnitude of vibratory motions. Sumitomo Rubber Industries successfully combined silica with rosin components to develop a type of rubber approx. 42% more efficient in shock absorption than conventional varieties. (Patent pending)

KYOTO UNIVERSITY has long collaborated with Sumitomo Rubber Industries on various projects. The university will now assist Sumitomo Rubber Industries in assessing the efficiency of the newly developed type of rubber in reducing vibrations caused by strong winds or earthquakes and stabilizing buildings.

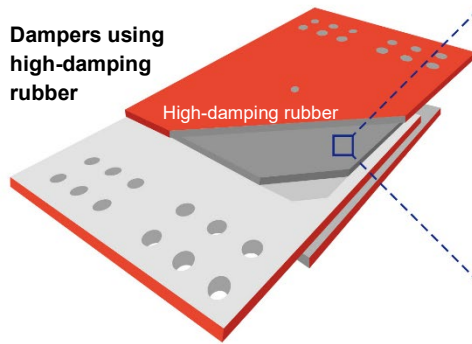


Rosin is a form of resin obtained from pines and other conifers, which chiefly consists of resin acids such as abietic, neoabietic and palustric acids.

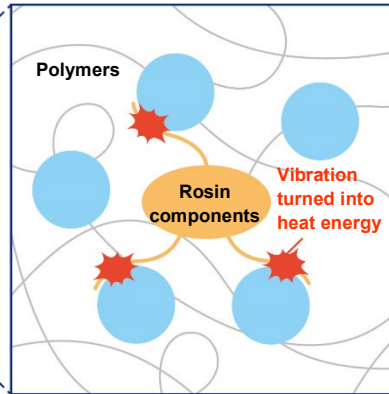
**Damping mechanism of the newly developed rubber (image)**

(Source : Sumitomo Rubber Industries)

**Dampers using high-damping rubber**



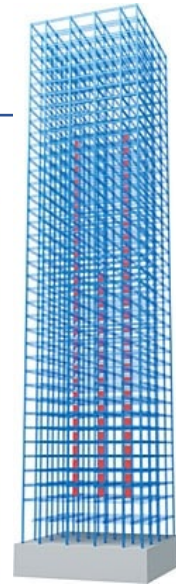
High-damping rubber



Polymers

Rosin components

Vibration turned into heat energy



Dampers installed in buildings  
(read areas) (image)

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URL: <https://www.harima.co.jp/en/inquiry.php>