

## **Sumitomo Chemical and Hitachi Metals To Explore Business Cooperation in Innovative Exhaust-Gas Cleaning Filters**

*Expanding business into exhaust-gas post-processing, a market of accelerating growth*

Sumitomo Chemical Co., Ltd. (Sumitomo Chemical) and Hitachi Metals, Ltd. (Hitachi Metals) today announced that they have reached a basic agreement to begin studying opportunities for their business cooperation on a particulate filter, a new type of exhaust-gas filter jointly developed by the two companies.

### **1. Independent initiatives by each company on particulate filters**

In 2009, Sumitomo Chemical, capitalizing on its technological expertise accumulated through its business of inorganic materials including alumina products, successfully developed an aluminum titanate particulate filter that shows excellent properties, such as thermal shock resistance (\*1) and soot mass limit (\*2) from internal-combustion engines in automobiles and other machinery. Having established a mother plant for the filter production at its Ehime Works, Japan in 2011 and with plans to begin large-scale production in Poland during the second half of 2013, Sumitomo Chemical is working to launch this line of business commercially.

Hitachi Metals developed a high-porosity large-scale integrated particulate filter made of cordierite (\*3) and commenced large-scale production in 2003, and has since been promoting a stable supply of the product to the Japanese auto industry. Further, drawing on the strength of its proprietary micropore-control technology, Hitachi Metals is undertaking development of materials for higher performance and higher functionality.

### **2. Background to a joint study on the business cooperation**

In many parts of the world, particularly Japan, the United States, and Europe, increasingly strict regulations are being enforced on particulate matters (\*4) in exhaust gases from internal-combustion engines, not only in automobiles but also in such areas as construction machinery and farm machine. Against this backdrop, the market for the particulate filters capable of cleaning these exhaust gases is expected to further grow in the future, and there is an ever growing need for higher performance and lower costs of the filters, accordingly.

While Sumitomo Chemical and Hitachi Metals had been independently engaged in the business development of their own particulate-filters, the two companies began working together in the summer of 2012 to develop new products that would meet such a surging global demand. As a result, the two companies have succeeded in developing a highly innovative particulate filter by combining the technologies of both companies. With practical opportunities of the filter's commercial applications in sight, the two companies have agreed to begin studying jointly possibilities of closer cooperation from a business perspective. The newly developed particulate filter is expected to contribute to improving fuel efficiency, owing to its distinctive advantages

such as yielding higher efficiency of collecting particulate matters while at the same time bringing about reduced pressure loss.

### **3. Schedule**

Going forward, the two companies will continue to work on further improving the performance of the new particulate filter, while initiating a study about its large-scale production by jointly installing a trial production line. According to the current plan, Sumitomo Chemical and Hitachi Metals intend to reach a final agreement on the business cooperation towards the end of fiscal 2013.

#### *Notes*

##### **1. Thermal shock resistance**

The particulate filter's ability to withstand sudden changes in temperature when it undergoes regeneration through incineration of the trapped particulate matter.

##### **2. Soot Mass limit**

The amount that can be continuously filtered.

##### **3. Cordierite particulate filter**

The particulate filter made of cordierite ceramics. In August 2003, Hitachi Metals began mass-producing a large-scale integrated cordierite particulate filter, which is 266.7 millimeters in diameter and 304.8 millimeters long.

##### **4. Particulate matter**

Particles of solids or liquids. Under the Air Pollution Control Act of Japan, these are designated as motor-vehicle exhaust gases, and there are limits on the emissions permitted in the exhaust gases from diesel vehicles.

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#### *Company information*

##### **Sumitomo Chemical Co., Ltd.**

Incorporated: June 1, 1925

Capital: 89,699 million yen (as of March 31, 2012)

Business sectors: Basic Chemicals Sector, Petrochemicals & Plastics Sector, IT-related Chemicals Sector, Health & Crop Sciences Sector, Pharmaceuticals Sector

##### **Hitachi Metals, Ltd.**

Founded: April 10, 1956

Capital: 26,284 million yen (as of March 31, 2012)

Main lines of business: manufacture and marketing of high-grade metal products and materials, electronics and IT devices, high-grade functional components and equipment