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For immediate release

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## Yokohama Rubber Develops Car A/C Hose for Use with Next-Generation Refrigerant

Tokyo – The Yokohama Rubber Co., Ltd., announced today that it has developed a new hose for use in automotive air-conditioning units. The “AC6B-11” hose is compatible for use in car air-conditioners that use the next-generation refrigerant HFO-1234yf, which is rapidly being adopted for use in cars in Europe. The HFO-1234yf is an environmentally friendly refrigerant with a Global Warming Potential (GWP) that is significantly lower than that of the mainstream refrigerants now in use. The European automobile industry is gradually phasing out automotive refrigerants with a GWP of above 150. Yokohama Rubber has already begun shipments of the new hose to makers of automotive air-conditioning systems, with the hose primarily being installed in air-conditioners in vehicles targeted at the European market.

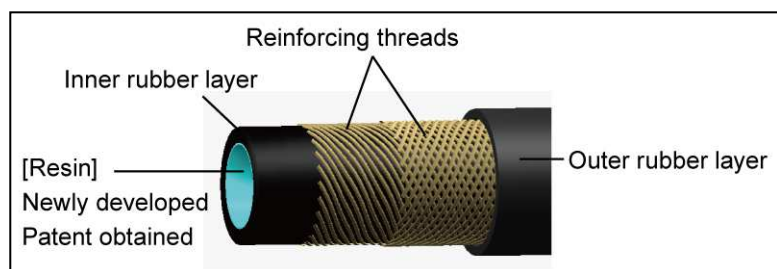
The core refrigerant in use around the world today is HFC-134a, which came into use as replacement for chlorofluorocarbons (CFCs) because HFC-134a has a smaller ozone depletion potential (ODP). However, the GWP of HFC-134a is a high 1,300, compared to just 1 for CO<sub>2</sub>. HFO-1234yf, however, has a GWP of just 4. Consequently, we are seeing a shift toward the new refrigerant from the perspective of preventing global warming.

Automotive air-conditioner hose construction consists of an outer rubber layer followed by reinforcing threads and an inner rubber layer, the inside of which is coated with a polyamide resin to prevent leakage of the refrigerant. HFO-1234yf decomposes gradually over a long period of use, releasing an acid in the process. Hoses in use to date have been corroded by the release of this acid. To solve this problem, Yokohama Rubber mixed an acid acceptor into the polyamide resin to enable it to capture and hold the acid runoff. The resin compound has proven successful in preventing leakage of the refrigerant and the resulting corrosion of the polyamide resin. The company has already received a patent for this technology.

With HFO1234yf expected to also be widely adopted by the US automobile industry, Yokohama Rubber plans to step up marketing of its HFO-1234yf-compatible hose to automobile makers and makers of automotive air-conditioning systems in the US.



AC6B 11



AC6B 11 composition