

FOR IMMEDIATE RELEASE

AGC to Supply Honeywell with HFO-1234yf—New-generation Automobile Refrigerant Contributing to the dissemination of a new refrigerant with significantly lower environmental impact

Tokyo, January 23, 2014—AGC (Asahi Glass Co., Ltd.; Head Office: Tokyo; President & CEO: Kazuhiko Ishimura) announces that it will supply a new environmentally friendly refrigerant for automobiles to Honeywell (Head Office: New Jersey State, USA). The Company plans to build a new high-efficiency manufacturing plant using proprietary fluorochemical technology at its Chiba Plant, and start supplying the new refrigerant from around the middle of 2015.

The new HFO-1234yf refrigerant for automobiles is a new environmentally friendly product with a very low global-warming potential ^{*1} (GWP) of less than 1^{*2}, which is 1/1,300 or less than that of conventional HFC-134a refrigerant, as well as having a considerably shorter atmospheric lifetime of 1/500 or less. HFO-1234yf refrigerant is being increasingly adopted by automakers in Europe and the U.S., due to the need to comply with the Mobile Air Conditioning (MAC) Directive ^{*3} in Europe and Corporate Average Fuel Economy (CAFE) Regulations ^{*4} in the U.S. Demand for HFO-1234yf is expected to grow rapidly in Japan too, in response to regulations on high-GWP refrigerants slated to take effect in 2015. Under such circumstances, its global demand is forecasted to expand in the future.

AGC has been focusing research and development on environmentally friendly low-GWP refrigerants, and has established production technologies for HFO-1234yf ahead of its competitors.

By leveraging its long-established technology development capabilities in fluorochemicals and volume-production capacity for high-quality refrigerants, AGC will actively roll out measures that contribute to preventing global warming, such as starting supplies of HFO-1234yf for automobiles and accelerating development of its proprietary next-generation refrigerants for building air-conditioning systems and other applications.

The AGC Group will draw on its fluorochemical technology-one of its core technologies-and provide products that contribute to reducing environmental impact and providing comfortable living environment.

- *1 Coefficient indicating the impact per unit weight a substance released into the atmosphere will have on global warming by setting the global warming potential of CO2 at 1.
- *2 Data based on a draft of the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)
- *3 The length of time a substance remains in the atmosphere in a stable condition.
- *4 EU regulations that took effect in January 2013, and cover the use of refrigerants with GWP more than 150 in new general automobiles and commercial light vehicles.
- *5 The US Environment Protection Agency (EPA) allows automakers to receive greenhouse gas emission reduction credits in exchange for adopting HFO-1234yf.



Media Contact

Junichi Kobayashi, General Manager, Corporate Communications & Investor Relations **AGC** Asahi Glass Co., Ltd. (Contact: Yasuo Sugiyama; Tel: +81-3-3218-5603; E-mail: <u>info-pr@agc.com</u>)

< Reference >

Comparison of environmental impacts

HFO-1234yf refrigerant delivers outstanding environmental performance, while offering equivalent refrigerant performance to conventional HFC-134a refrigerant.

| Refrigerant | 1234yf (HFO-1234yf) | 134a (HFC-134a) | Carbon dioxide (CO2) |
|---|------------------------|--------------------|-------------------------|
| Atmospheric lifetime | 10.5 days | 13.4 years | 5-200 years |
| Global warming potential | Less than 1 | 1,300 | 1 |
| Refrigerant performance (comparison with HFC-134a) | Equivalent | | Worse |