FOR IMMEDIATE RELEASE

AGC Develops AMOLEA<sup>TM</sup>yd, New Refrigerant Grade with Low Global Warming Potential

Tokyo, February 16, 2016—AGC Asahi Glass (AGC), a world-leading manufacturer of glass, chemicals

and high-tech materials announced today that it has successfully developed AMOLEATMyd, a new

refrigerant grade for AGC's AMOLEA<sup>TM</sup> brand lineups. This newly developed product is a refrigerant with

low global warming potential (GWP), designed for use in centrifugal chillers, binary cycle generators, and

waste heat recovery heat pumps. It has superior energy-saving performance as observed compared to

existing products in the market. AMOLEATM is a next-generation solvent and refrigerant brand developed

by AGC under the concept of "dramatically reducing GWP with superior performance." AGC aims for

the commercial production of AMOLEA<sup>TM</sup>yd by the end of 2017 and will continue to develop refrigerants

that tackle global warming.

AMOLEA<sup>TM</sup>yd is a non-flammable refrigerant that consists of HCFO-1224yd (Z). With a particular focus

on this HCFO\*1-based chemical substance, AGC had worked on physical-property assessment and

production technology development as a part of New Energy and Industrial Technology Development

Organization (NEDO)'s subsidized project, and successfully developed a "new" refrigerant that will replace

conventional refrigerants in the market.

Performance Comparison with Conventional Product (HFC-245fa)

• Refrigeration performance and stability: Equal or superior

• Global warming potential (GWP): 1/100 or less

• Boiling point and other physical properties: Extremely similar

In addition to its excellent performance, AMOLEA<sup>TM</sup>yd can be retrofit into existing facilities without large

investments. Furthermore, it has been observed that AMOLEATMyd has superior energy-saving

performance as compared to existing products in the market. Going forward, AGC will present the progress

and developments of AMOLEATMyd at international conferences. (The details of the above-mentioned

performance comparison will be presented at the HVAC& R Japan 2016, starting February 23 in Japan.)

Under the management policy AGC plus, the AGC Group strives to contribute to the early realization of

environmentally-friendly freezers, refrigerators and air-conditioners by closely cooperating with equipment

manufacturers who have been proactively working on environmental issues.

\*1: HCFO is a double-bonded fluorine compound with a significantly low global warming potential compared to that

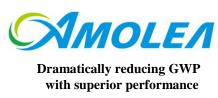
of chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs).

Media Contact

Junichi Kobayashi, General Manager, Corporate Communications & Investor Relations



Hydrofluorocarbon (HFC), used as air-conditioner and automotive refrigerant, has a high GWP, causing a significant environmental burden on the natural environment. Some developed countries such as Japan, the United States, and European countries, have already started their own initiatives to control the use of the HFC-based chemical substances, and international discussions have been underway in an attempt to set up global regulations that include emerging countries. Following the production technology development of low-GWP refrigerants for automotive use (HFO-1234yf) and the development for air-conditioners (AMOLEA<sup>TM</sup>HFO-1123), AGC will continue the development of low-GWP refrigerants.



■HVAC&R Japan 2016—Heating, Ventilating, Air Conditioning an Refrigerating Expo—

Dates: Tuesday, February 23 to Friday, February 26, 2016

Venue: Tokyo Big Sight, Japan URL: <a href="http://www.hvacr.jp/en/">http://www.hvacr.jp/en/</a>

AGC's presentation:

Date: 10:00 - 10:30 Thursday, February 25

Theme: Next Generation Low-GWP Refrigerants "AMOLEATM"

- AGC's press releases on refrigerant products
- AGC to Supply Honeywell with HFO-1234yf—New-generation Automobile Refrigerant (January 2014) http://www.agc.com/english/news/2014/0123e.pdf
- · AGC Develops AMOLEA<sup>TM</sup>, a New Refrigerant for Air-conditioning Systems with a Low Environmental Impact of About One-sixth that of Conventional Products (March 2014) http://www.agc.com/english/news/2014/0319e.pdf