



AMOLEA™ 1224yd, New Refrigerant with Lower Environmental Impact, Acquires International Certification

Tokyo, October 23, 2017 – AGC Asahi Glass (AGC), a world-leading manufacturer of glass, chemicals and high-tech materials, announces that it has obtained certification for AMOLEA™ 1224yd, a new refrigerant with a lower environmental impact. The certification was granted in October 2017 by the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE*¹), marking the first time for a Japanese company to obtain approval for a new chemical substance. AGC intends to begin commercial production of AMOLEA™ 1224yd in early 2018, and will continue to increase capacity in line with demand growth.

AMOLEA™ 1224yd is a non-flammable, environmentally-friendly new refrigerant designed mainly for use in centrifugal chillers, binary cycle generators, and waste heat recovery heat pumps. AMOLEA™ 1224yd serves as an alternative to one of conventional refrigerants, HFC-245fa, but with the added benefits of a GWP*² (Global Warming Potential) value of under 1 (1/1000th of conventional refrigerants) while maintaining equal or better refrigerant performance and stability. In addition to newer equipment fitted for AMOLEA™ 1224yd, existing equipment with certain specifications can also use the product without major modifications, allowing the users to implement preventive measures against global warming without making large investments.

ASHRAE is an international organization involved in heating, refrigerating, and air conditioning, and its certification of a product's safety (i.e. flammability, toxicity) is regarded as one of the prerequisites to commercialization. Prior to earning ASHRAE certification, the performance of AMOLEA™ 1224yd has already received high evaluation among various cooling equipment manufacturers both in and outside Japan, and Ebara Refrigeration Equipment & Systems Co., Ltd. has decided to adopt it for its next generation of centrifugal chillers. The recent ASHRAE certification for AMOLEA™ 1224yd is expected to accelerate the product's adoption in a wide range of equipment around the world.

Under its management policy **AGC plus**, the AGC Group is committed to accelerate both the development of refrigerants that reduce global warming, and 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: An American scientific society involved in heating, refrigerating, and air-conditioning that establishes standards for the performance and safety of related equipment and refrigerants and is also responsible for their certification. (Website: <https://www.ashrae.org/home>)

*2: A coefficient representing the effect on global warming. This figure expresses the global warming potential of greenhouse gases in relation to the baseline value of carbon dioxide, a type of natural refrigerant.

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REFERENCE

■ The AMOLEA™ Series

Hydrofluorocarbon (HFC), used as air-conditioner and automotive refrigerant, has a high GWP, causing a significant environmental burden on the natural environment. In November 2016, an international agreement was reached to gradually reduce the production and use of HFCs. AMOLEA™ is a next-generation solvent and refrigerant brand developed by AGC under the concept of "dramatically reducing GWP with superior performance."



**Dramatically reducing GWP
with superior performance**

AMOLEA™ website:

<https://www.agc-chemicals.com/jp/en/products/detail/index.html?pCode=JP-EN-G016>

■ Comparison of refrigerant properties

	Conventional refrigerant HFC-245fa	AGC's new refrigerant AMOLEA™1224yd
Ozone Depleting Potential (ODP)	Zero	Zero*
Global Warming Potential (GWP)	1030	Less than 1*

Note (*): Measured by National Institute of Advanced Industrial Science and Technology (AIST)

■ About the AMOLEA™ series product group

Generic name	Product name	Applications
New environmentally-friendly refrigerant	AMOLEA™1224yd	Refrigerant for Centrifugal Chiller, Binary Cycle Generator, and Waste Heat Recovery Heat Pumps
New environmentally-friendly refrigerant	AMOLEA™1234yf	Refrigerant for Mobile Air Conditioners
New environmentally-friendly refrigerant	AMOLEA™ X and Y Series	Refrigerant for Room Air Conditioners, etc.
Environmentally-friendly fluorinated solvent	AMOLEA™ AT Series	Various cleaning agents and solvents

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