ZEON and AIST receives

September 9, 2008

ZEON Corporation and National Institute of Advanced Industrial Science and Technology **(AIST)** were honored at the 11th Ozone Layer Protection and Global Warming Prevention Awards sponsored by The Nikkan Kogyo Shimbun Ltd. The two recipients were recognized for the joint research, development and practical application of two kinds of original fluorine compounds with 5-membered ring structures that contribute to protecting the ozone layer and preventing global warming.

The first compound, ZEORORA®-H, has been used as a cleaning agent for electric parts and as a polymer coating agent. It not only serves as a suitable substitute for HCFC and PFC, but is also expected to replace chlorinated solvents to reduce VOC emissions and to replace aqueous cleaning agents that consume massive amounts of energy, as the need increases to reduce carbon dioxide emissions. ZEORORA®-H is an environment-friendly compound with a ZERO OZONE depletion potential and an atmospheric lifetime of 3.4 years. Its unique molecular structure maintains non-flammability while containing the maximum number of hydrogen atoms to achieve this short atmospheric lifetime. Despite being chlorine-free, ZEORORA®-H is highly solvent based on its ring structure and has a moderately high boiling point. This relatively higher boiling point compared to other fluorine solvents reduces volatile loss, and therefore less VOCs are released into the environment.

The second compound, ZEORORA® ZFL-58, has been used by major manufacturers as a dry etching gas for semiconductor production. The cyclic compound also features a ZERO OZONE depletion potential with a 0.98-year atmospheric lifetime. This unique compound is the first to adopt a molecular structure connected by double bonds to reduce its atmospheric lifetime to a minimum. It exhibits high selectivity and a high etch rate, realizing an exceptionally low global warming potential compared to other PFCs.

As the demand rises for smaller, thinner and faster personal computers, semiconductors used primarily in personal computers must likewise become even smaller with greater efficiency, while being available at lower prices. ZEORORA® ZFL-58 contributes to this trend from the perspectives of higher efficiency and lower environmental impact.

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