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News Release

For Immediate Release

July 7, 2010

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PLASTICS INDUSTRY ADDS NEW POLYURETHANES DATA TO LIFE CYCLE DATABASE

New Report Reflects Harmonization of Global Life Cycle Methodology

ARLINGTON, VA (July 7, 2010) – Today, the American Chemistry Council released a new **report** containing an in-depth look at the environmental profiles for the production of nine common plastic resins and four polyurethane precursors. Known as a life cycle inventory, or simply LCI, the study offers a cradle-to-resin (or “cradle-to-gate”) picture of plastics production.

Prepared by life cycle firm Franklin Associates, a division of Eastern Research Group, Inc., the study provides current data that quantify the total energy requirements, energy sources, atmospheric pollutants, and solid waste resulting from the production of plastic materials in North America.

“As more companies seek to improve the efficiency and sustainability of their products and operations, life cycle inventory studies have become increasingly critical to their decision making,” said Keith Christman, managing director of plastics markets for the American Chemistry Council. “From resin manufacturers and product makers to major retailers like Wal-Mart, companies rely on life cycle data to help reduce their environmental footprint and improve performance.”

This report updates a previous study completed in 2007 that looked at nine resins and two polyurethane precursors, and adds two new polyurethanes precursors – methylene diphenylene diisocyanate (MDI), and toluene diisocyanate (TDI).

The new data reflect a harmonization of LCA methodologies in the United States and Europe consistent with ISO standards 14040 and 14044 for life cycle inventories. Although data reported for certain categories may have changed since the 2007 report was issued, these changes reflect differences in methodology rather than actual performance.

The new study, “**Final Report: Cradle-to-Gate Life Cycle Inventory of Nine Plastic Resins and Four Polyurethane Precursors**,” is available on ACC’s website and data from the report are being made publically available through the **U.S. LCI Database**, a project of the U.S. Department of Energy and its National Renewable Energy Laboratory. Data are presented in both English and metric units for the convenience of both U.S. and international users.

The plastic resins included in the inventory are: high-density polyethylene (HDPE), low-density polyethylene (LDPE), linear low-density polyethylene (LLDPE), polypropylene

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(PP), polyethylene terephthalate (PET), general-purpose polystyrene (GPPS), high-impact polystyrene (HIPS), polyvinyl chloride (PVC), and acrylonitrile-butadiene-styrene (ABS). The four polyurethane precursors studied include flexible foam polyurethane (PU) polyether polyols, rigid foam PU polyether polyols, methylene diphenylene diisocyanate (MDI), and toluene diisocyanate (TDI).

Although the life cycle data in this report are a critical part of a full plastics product life cycle inventory, a full life cycle evaluation must also include data on fabrication, transportation, use and end-of life scenarios, such as disposal, recycling or energy recovery. Only a complete cradle-to-grave life cycle assessment can provide a reliable basis from which to compare the full quantification of energy use, emissions and waste of one complete product system versus another.

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