DIISOCYANATES are a family of chemical building blocks used to make polyurethanes for furniture, appliances, apparel and more. Before they are mixed with other chemicals and transformed into finished goods, they are in a reactive state and have a potential to contribute to workplace asthma. Manufacturers, in partnership with downstream users, have implemented a variety of product stewardship activities that have contributed to a reduction in diisocyanate-related asthma cases, even as production rates of diisocyanates have increased.

**DIISOCYANATES PRODUCTION VOLUMES VS. DIISOCYANATE OCCUPATIONAL ASTHMA CASES, 1998-2014**

Above is a graph showing the combined production volumes for TDI, MDI, HDI, H₂MDI, IPDI, TXMDI, TMDI and PI. Data are U.S. in thousand metric tons. The CDC Work-Related Lung Disease Surveillance System (eWoRLD) and the Michigan State University Sentinel Event Notification System for Occupational Risks (SENSOR) were used for the diisocyanates occupational asthma cases.

**PRODUCT STEWARDSHIP ACTIVITIES THAT HAVE CONTRIBUTED TO LOWERED OCCUPATIONAL ASTHMA RATES**

- **EDUCATION**
  - Employee education and training programs

- **WORK PRACTICES**
  - Enhanced personal protective equipment and/or engineering controls

- **INNOVATION**
  - Technology shift from monomers to polymers

- **MEDICAL SURVEILLANCE**
  - Pre-placement and periodic evaluations

To learn more, visit our websites:  www.americanchemistry.com/dii & www.americanchemistry.com/adi