



Styrene Information and Research Center (SIRC)

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## **Backgrounder on the U.S. Environmental Protection Agency Integrated Risk Information System and Styrene**

### The Process

The U.S. Environmental Protection Agency's (EPA's) Integrated Risk Information System (IRIS) is a database containing information on human health effects that may result from exposure to various chemicals in the environment. IRIS initially was developed for EPA staff in response to a growing demand for consistent information on chemical substances for use in risk assessments, decision-making and regulatory activities.

The information in IRIS is intended for use in protecting public health through risk assessment and risk management. Essentially, risk assessment provides information on the health risk, while risk management is the action taken based on that information. A complete risk assessment consists of (1) hazard identification, (2) dose-response assessment, (3) exposure assessment, and (4) risk characterization, with risk characterization being a transitional step to risk management.

IRIS provides hazard identification (for example, classifying the cancer-causing potential of a chemical) and dose-response assessment, but does not provide information on real-life exposures and, therefore, what the actual risk may be to people. EPA's Office of Research and Development (ORD) coordinates IRIS reviews. IRIS currently contains health effects information on more than 500 specific chemical substances.

### IRIS and Styrene

In 1998, EPA announced it would review styrene under the IRIS program, possibly adding a classification of the chemical's cancer-causing potential. Currently, the IRIS database contains no such classification for styrene. Because IRIS classifications are used widely by governmental agencies at all levels to set regulatory requirements, this process has the potential to profoundly affect styrene's future.

SIRC has worked constructively with EPA on the IRIS process since it was launched, including offering research summaries and assessments that SIRC amassed since it was established in 1988. SIRC continues to furnish EPA with new scientific data as it becomes available. It is expected that the IRIS review of styrene will be finalized in 2010.