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**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**Centers for Disease Control and Prevention**

[CDC-2013-0011; NIOSH-262]

**Request for Information on Toluene Diisocyanates**

**Agency:** National Institute for Occupational Safety and Health (NIOSH) of the Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS).

**ACTION:** Request for Information.

**SUMMARY:** The National Institute for Occupational Safety and Health (NIOSH) of the Centers for Disease Control and Prevention (CDC) intends to evaluate the scientific data on toluene diisocyanate (TDI) and other TDI-based isocyanate products to develop a Criteria Document to establish an updated Recommended Exposure Limit (REL) for toluene diisocyanate. The current NIOSH REL for 2,4-TDI is the lowest feasible concentration with no ceiling due to the potential carcinogenicity of 2,4-TDI.

NIOSH is requesting information on the following: (1) published and unpublished reports and findings from *in vitro* and *in vivo* toxicity studies with toluene diisocyanate; (2) information on possible health effects observed in workers exposed to toluene

diisocyanate, including exposure data and the method(s) used for sampling and analyzing exposures; (3) description of work tasks and scenarios with a potential for exposure to toluene diisocyanate; (4) information on control measures (e.g. engineering controls, work practices, personal protective equipment, exposure data before and after implementation of control measures) that are being used in workplaces with potential exposure to toluene diisocyanate; and (5) surveillance findings including protocol, methods, and results.

**PUBLIC COMMENT PERIOD:** Comments must be received [insert date **45 days from publication of FR**].

**ADDRESSES:** You may submit comments, identified by CDC-2013-0011 and Docket Number NIOSH-262, by either of the two following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>.

Follow the instructions for submitting comments.

- *Mail:* NIOSH Docket Office, Robert A. Taft Laboratories, MS-C34, 4676 Columbia Parkway, Cincinnati, OH 45226.

**Instructions:** All information received in response to this notice must include the agency name and docket number (CDC-2013-

0011; NIOSH-262). All relevant comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided. All electronic comments should be formatted as Microsoft Word. Please make reference to CDC-2013-0011 and Docket Number NIOSH-262.

**FOR FURTHER INFORMATION CONTACT:** Naomi Hudson, Dr.P.H., NIOSH, Robert A Taft Laboratories, MS-C32, 4676 Columbia Parkway, Cincinnati, OH 45226, telephone (513) 533-8388.

**SUPPLEMENTARY INFORMATION:** Toluene diisocyanates are colorless to pale yellow liquids or solids with a sharp, pungent odor. TDI is one of the most commonly used diisocyanates. The most common formulation of TDI is a mixture of two isomers: 80% 2,4-TDI and 20% 2,6-TDI. Approximately 541 million pounds of TDI were used in 2008, and 527 million pounds of TDI were used in 2010.

Occupational exposure occurs during production and use of diisocyanates, such as the mixing and foaming processes in the polyurethane foam industry, and during spray adhesive application in the automobile and furniture industries. TDI is an irritant to the eyes, skin, and the gastrointestinal and respiratory tracts. Workers exposed to TDI may also be sensitized, such that they might be subject to asthma attacks.

In 1996 NIOSH published a NIOSH Alert, Preventing Asthma and Death from Diisocyanate Exposure [DHHS (NIOSH) Publication No. 96-111]. In 1989, NIOSH published a Current Intelligence Bulletin on toluene diisocyanate (TDI) and toluenediamine (TDA) [DHHS (NIOSH) Publication No. 90-101] which classified TDI and TDA (used in the manufacturing of TDI) as potential occupational carcinogens.

The current NIOSH REL for 2,4-TDI is the lowest feasible concentration with no ceiling due to the potential carcinogenicity of TDI. The OSHA permissible exposure limit (PEL) for TDI is 0.005 ppm, with a ceiling of 0.02 ppm. The American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) for TDI is 0.005 ppm with a ceiling of 0.02 ppm to minimize effects on the respiratory tract and to minimize the potential for sensitization.

NIOSH seeks to obtain materials, including published and unpublished reports and research findings, to evaluate the possible health risks of occupational exposure to diisocyanates. Examples of requested information include, but are not limited to, the following:

- (1) Identification of industries or occupations in which exposures to TDI may occur.

- (2) Trends in the production and use of TDI.
- (3) Description of work tasks and scenarios with a potential for exposure to TDI.
- (4) Workplace exposure measurement data of TDI in various types of industries and jobs.
- (5) Case reports or other health information demonstrating potential health effects in workers exposed to TDI.
- (6) Research findings from *in vitro* and *in vivo* studies.
- (7) Information on control measures (e.g., engineering controls, work practices, PPE) being taken to minimize worker exposure to TDI.
- (8) Educational materials for worker safety and training on the safe handling of diisocyanates.
- (9) Data pertaining to the feasibility of establishing a more protective REL for diisocyanates.
- (10) Names of substitute chemicals or processes being used in place of TDI and type of work tasks.

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**John Howard,**

**Dated: June 17, 2013**

Director, National Institute for Occupational Safety and Health,  
Centers for Disease Control and Prevention

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