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DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[CDC-2013-0005; NIOSH-263]

Request for Information About Diethanolamine (CAS No. 111-42-2)

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 diethanolamine, and develop appropriate communication documents, such as a Criteria Document, which will convey the potential health risks, recommended measures for safe handling, and establish an updated Recommended Exposure Limit (REL). The current NIOSH REL for diethanolamine is 3 parts per million (ppm) as a time-weighted average (TWA) concentration for up to a 10-hr work shift during a 40-hr workweek.

NIOSH is requesting information on the following: (1) published and unpublished reports and findings from *in vitro* and *in vivo* toxicity studies with diethanolamine; (2) information on possible health effects observed in workers exposed to diethanolamine, 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 diethanolamine; (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 diethanolamine; and (5) surveillance findings including protocol, methods, and results.

PUBLIC COMMENT PERIOD: Comments must be received by [insert date that is 60 days after publication date of this FR notice].

ADDRESSES: You may submit comments, identified by CDC-2013-0005 and Docket Number NIOSH-263, 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-2013-0005; NIOSH-263). 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-2013-0005 and Docket Number NIOSH-263.

FOR FURTHER INFORMATION CONTACT: Jennifer Reynolds, MPH, NIOSH, Robert A Taft Laboratories, MS-C32, 4676 Columbia Parkway, Cincinnati, OH 45226, telephone (513) 533-8531.

SUPPLEMENTARY INFORMATION: Diethanolamine is a highly reactive compound. It decomposes on burning producing toxic fumes. Diethanolamine reacts violently with oxidants and strong acids. Diethanolamine is used to produce surface active agents widely used in soaps, cosmetics and personal care items. It also has other uses including as an absorbent in gas purification, as a dispersing agent in agricultural chemicals, a corrosion inhibitor and wetting agent in metalworking fluids.

The annual production of diethanolamine in the United States was estimated in 1995 to be 106,000 tons (Technology Planning and Management Corp, 2002). NIOSH estimates from the National Occupational Exposure Survey (NIOSH 1989) that the number of workers potentially exposed to diethanolamine is approximately 830,000 / year.

Significant occupational exposures to diethanolamine are through the skin (dermal) and via inhalation (lung) during the use of lubricating liquids in various processes in machine building. Chronic exposure to diethanolamine can cause skin sensitization. Diethanolamine is also corrosive to the eyes. The current REL for diethanolamine is 3 ppm as a TWA concentration for up to a 10-hr work shift during a 40-hr workweek. The NIOSH REL was established as a result of testimony submitted to the Occupational Safety and Health Administration (OSHA) on their proposed rulemaking of Air Contaminants in 1988. Currently, concentrations below the REL can be detected and quantified. As part of an effort to identify RELs that may not be adequate to protect workers from adverse health effects due to exposure, NIOSH is reexamining the REL for diethanolamine. There is no OSHA permissible exposure limit (PEL) for diethanolamine. The American Conference of Governmental Hygienists (ACGIH®) threshold limit value (TLV®)-TWA for diethanolamine is 1 mg/m³

(inhalable fraction and vapor), with a Skin notation (indicating danger of cutaneous absorption), and an A3 carcinogenicity classification (confirmed animal carcinogen with unknown relevance to humans).

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

- (1) Identification of industries or occupations in which exposures to diethanolamine may occur.
- (2) Trends in the production and use of diethanolamine.
- (3) Description of work tasks and scenarios with a potential for exposure to diethanolamine.
- (4) Workplace exposure measurement data of diethanolamine in various types of industries and jobs.
- (5) Case reports or other health information demonstrating potential health effects in workers exposed to diethanolamine.
- (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 diethanolamine.

(8) Educational materials for worker safety and training on the safe handling of diethanolamine.

(9) Data pertaining to the feasibility of establishing a more protective REL for diethanolamine.

(10) Names of substitute chemicals or processes being used in place of diethanolamine and type of work tasks.

REFERENCES :

NIOSH [1989]. National occupational exposure survey analysis of management interview responses. Vol. III. Pedersen DH, Sieber WK, eds. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 89-103.

Technology Planning and Management Corporation [2002]. *Report on carcinogens background document for diethanolamine*. Prepared for the U.S. Department of Health and Human Services, National Toxicology Program: Research Triangle Park, NC.

April 18, 2013

John Howard

Date

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

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