

US EPA Releases Draft Risk Assessments on First Five Priority Chemicals

On January 4, 2013 the United States Environmental Protection Agency (US EPA) released for public comment draft risk assessments on the first five of the “work plan” chemicals identified for priority review by the agency last year.

In March 2012 US EPA unveiled a list of 83 chemicals that the agency is targeting for risk assessments and possible risk management actions in the next few years. US EPA selected the chemicals based on (i) hazard, (ii) exposure and (iii) potential for persistence and/or bioaccumulation.

US EPA had announced that it would be conducting risk assessments on seven of the chemicals during 2012. The risk assessments just released for comment by US EPA address five of those seven chemicals.

According to US EPA, the draft risk assessments focus on human health and/or ecological hazards for specific chemical uses that are regulated under the Toxic Substances Control Act (TSCA). Importantly, the draft risk assessments for three of the chemicals – methylene chloride (or dichloromethane (DCM)), n-methylpyrrolidone (NMP), and trichloroethylene (TCE) – indicate “a potential concern for human health under specific exposure scenarios for particular uses.”

Antimony Trioxide (ATO) (CASRN 1309-64-4)

ATO is primarily used as a synergist for halogenated flame retardants and a catalyst for polyethylene terephthalate (PET) plastics. US EPA’s draft risk assessment focused on potential ecological hazards that may be associated with ATO use in flame retardants. US EPA stated that it expects the risks from ATO to be negligible.

1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8,-hexamethylcyclopenta[g]-2-benzopyran (HHCB) (CASRN 1222-05-5)

HHCB is a fragrance ingredient used in a wide range of commercial and consumer products, including perfumes, cosmetics, shampoos, lotions, and washing and cleaning agents. US EPA’s draft risk assessment focused on potential aquatic and terrestrial hazards associated with HHCB and stated that the ecological risks are expected to be negligible. The draft risk assessment also stated that human health risks of HHCB have been previously evaluated and determined to present minimal concerns

Methylene Chloride (or dichloromethane (DCM)) (CASRN 75-09-2)

Methylene chloride is a solvent used for a variety of purposes, including adhesives, paint stripping, pharmaceuticals, metal cleaning, chemical processing and aerosols. US EPA’s draft risk assessment focused on human health hazards (non-cancer and cancer) to workers and consumers, including bystanders, associated with acute and chronic inhalation exposures from paint stripping use. *US EPA concluded that there are potential risks of concern for human health.* The draft risk assessment stated that methylene chloride poses negligible ecological risks.

N-Methylpyrrolidone (NMP) (CASRN 872-50-4):

NMP is a solvent used in a variety of applications, including petrochemical processing, engineering plastics, coatings (resins, paints, finishes, inks, and enamels), paint stripping, agricultural chemicals, electronic cleaning, and industrial cleaning products. US EPA's draft risk assessment focused on the human health hazards (non-cancer) to workers and consumers, including bystanders, from acute and chronic dermal and inhalation exposures when NMP is used in paint stripping. US EPA stated that there are "significant uncertainties" in its understanding of dermal and chronic inhalation exposures of NMP. The draft risk assessment's findings are limited to women of child-bearing age, however, because the only observed toxicological endpoint is developmental toxicity. *Specifically, the draft risk assessment concluded that (i) workers may have potential risks of concern from dermal exposure when no gloves are worn; (ii) consumers may have potential risks of concern from dermal exposure assuming appropriate gloves are not worn; and (iii) consumers may have potential risks of concern from inhalation exposure if exposed for more than four hours in poorly ventilated areas.* US EPA stated that NMP poses negligible ecological risks.

Trichloroethylene (TCE) (CASRN 79-01-6)

TCE is used as an intermediate chemical for manufacturing refrigerant chemicals, a solvent for metals degreasing, and other purposes. US EPA's draft risk assessment focused on human health hazards (non-cancer and cancer) to workers and consumers, including bystanders, from inhalation exposures when TCE is used as a degreaser or a "clear protective coating spray" in the arts/crafts field. *US EPA concluded that there are potential risks of concern for human health based on these exposures.* US EPA stated that TCE poses negligible ecological risks.

US EPA has stated that if its risk assessment on a chemical indicates significant risk, it will evaluate and pursue appropriate risk reduction actions. If an assessment indicates no significant risk, EPA will conclude its current work on that chemical. How the agency determines what constitutes a significant risk, as well as determines what, if any, risk management actions may be needed, will be critical.

Comments on the draft risk assessments must be submitted within 60 days from the date of publication of the Notice of Availability for the draft risk assessments in the Federal Register. A prepublication copy of the Notice was signed on January 3, 2013 by the agency, with formal publication in the Federal Register expected within seven days of the signature date. As part of the Notice, US EPA also is asking for nominations of experts to serve on peer review panels for the draft risk assessments. The nominations must be submitted within 30 days.

US EPA stated that the draft risk assessments for the remaining two chemicals from the initial seven targeted for review – long-chain chlorinated paraffins and medium-chain chlorinated paraffins – will be released for public review and comment when they are completed later this year.

It is anticipated that several other draft risk assessments also will be released later this year. In June 2012 US EPA announced that it would conduct risk assessments on 18 other work plan chemicals during 2013 and 2014, although it did not indicate when each specific chemical would be addressed.

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