

Initial Risk-Based Prioritization of High Production Volume Chemicals

2,3-Dihydro-2,2-dimethyl-7-benzofuranol (CASRN 1563-38-8) (9th CI and CA Index Name: 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-)

This document is based on screening-level characterizations done by EPA on the environmental fate, hazard, and exposure of the listed chemical. The information used by EPA includes data submitted under the HPV Challenge Program¹ and the 2006 Inventory Update Reporting (IUR)², and data publicly available through other selected sources³. This screening-level prioritization presents EPA's initial thinking regarding the potential risks presented by this chemical and future possible actions that may be needed. These initial characterization and prioritization documents do not constitute a final Agency determination as to risk, nor do they determine whether sufficient data are available to characterize risk. Rather, they are interim evaluations. Recommended actions may be considered by EPA in the future based on a relative judgment regarding this chemical in comparison with others evaluated under this program, and in light of the uncertainties presented by gaps in the available data that may be determined to exist. These evaluations contribute to meeting U.S. commitments under the chemicals cooperation work being done in North America⁴ through the EPA Chemical Assessment and Management Program (ChAMP)⁵.

Hazard and Fate Summary:

- **Human Health:** The acute oral and inhalation toxicity of this chemical to rats is low. The acute dermal toxicity to rabbits is low. In an oral combined repeated-dose/reproductive/development toxicity study of this chemical in rats, there was low systemic toxicity in the parental animals, and low developmental and reproductive toxicity. In an oral prenatal developmental toxicity study in rats, there was low maternal and developmental toxicity. This chemical was mutagenic when tested *in vitro* in bacteria and mammalian cells. However, it did not induce chromosomal aberrations in an *in vivo* mouse micronucleus assay.
- **Environment:** Available data indicate that the potential acute hazard of this chemical is low to fish, aquatic invertebrates, and aquatic plants.
- **Persistence and Bioaccumulation:**
 - Available data indicate that this chemical has moderate persistence.
 - Available data indicate that this chemical has low bioaccumulation potential.

Exposure Summary:

- Both Confidential Business Information (CBI) and non-confidential information from IUR and other sources were used in developing this initial prioritization.
- **Production Volume:** This chemical is an HPV with an aggregated production and/or import volume in the United States of 10 to 50 million pounds.

¹ US EPA, HPV Challenge Program information: <http://epa.gov/hpv/>.

² US EPA, IUR information: <http://www.epa.gov/oppt/iur/index.htm>

³ US EPA, Information on additional public databases used: <http://www.epa.gov/hpvis/pubdtsum.htm>

⁴ US EPA, U.S. Commitments to North American Chemicals Cooperation:
<http://www.epa.gov/hpv/pubs/general/sppframework.htm>

⁵ US EPA, ChAMP information: <http://www.epa.gov/champ/>.

- Uses: According to the IUR submissions, the industrial use was claimed as CBI. There are no reported commercial/consumer uses of this chemical. Publicly available data sources searched for this report did not have any information on use.
- General Population and Environment: Based on uncertainty concerning this chemical's industrial releases, combined with its moderate persistence in the environment, EPA identifies a medium potential that the general population and the environment might be exposed to this chemical.
- Workers: EPA identifies a low relative ranking for potential worker exposure based on the moderate vapor pressure of 0.009 mmHg, use information, potential inhalation exposure to vapor only, and limited industrial uses. This chemical does not have an OSHA Permissible Exposure Limit (PEL).
- Consumers: EPA identifies a low potential that consumers might be exposed from products containing this chemical. No uses of this chemical in consumer products were reported in the IUR or in other data sources.
- Children: EPA identifies a low potential that children might be exposed. No uses in products intended to be used by children were reported in the IUR or other data sources.

Risk Characterization Summary:

- Potential Risk to Aquatic Organisms from Environmental Releases: *LOW CONCERN*. EPA identifies a medium potential that aquatic organisms might be exposed from environmental releases. This chemical has a low potential for bioaccumulation. These characteristics, in combination with low toxicity to fish, aquatic invertebrates and plants, indicate a low concern for potential risk to these organisms.
- Potential Risk to the General Population from Environmental Releases: *LOW CONCERN*. EPA identifies a medium potential that the general population might be exposed from environmental releases. The potential health hazard is low. The available information indicates a low concern for potential risk to the general population from environmental releases.
- Potential Risk to Workers: *LOW CONCERN*. EPA identifies a low relative ranking for potential worker exposure. The potential human health hazard is low. Therefore, the available information suggests a low concern for potential risks to workers.
- Potential Risk to Consumers from Known Uses: *LOW CONCERN*. EPA identifies a low potential that consumers might be exposed because there are no reported commercial/consumer uses of this chemical. The potential human health hazard is low. The available information suggests a low concern for potential risks to consumers.
- Potential Risk to Children: *LOW CONCERN*. EPA identifies a low potential that children might be exposed because no uses in consumer products or products intended to be used by children were reported in the IUR or in other data sources. In rats, exposure during early life stages showed low toxicity. The available information suggests a low concern for potential risks to children.

Regulatory and Related Information Summary:

- This chemical is listed on the TSCA Inventory. It is not otherwise regulated under TSCA.
- This chemical is identified as a RCRA U Waste based on toxicity and is included in CERCLA as a result of its listing in RCRA Section 3001 as a hazardous chemical.

- This chemical is a phenolic metabolite of the pesticide carbofuran, but is not deemed to be of toxicological significance.⁶

Assumptions and Uncertainties:

- EPA has no information on releases of this chemical, and assumes potential exposures based on reported uses.

Rationale Leading To Prioritization Decision:

- Available data suggest a low hazard to the environment and to humans.

Prioritization Decision:

- LOW PRIORITY – Follow-up action not suggested at this time.

Supporting Documentation:

Screening-Level Risk Characterization: September 2008

Screening-Level Hazard Characterization: September 2008

Screening-Level Exposure Characterizations: September 2008

⁶ http://www.epa.gov/pesticides/reregistration/REDS/carbofuran_red.pdf.