

Initial Risk-Based Prioritization of High Production Volume Chemicals

Rosin and Rosin Salts Category

Rosin (CASRN 8050-09-7)

Rosin, sodium salt (CASRN 61790-51-0)

(9th CI and CA Index Name: Resin acids and Rosin acids, sodium salts)

Rosin, potassium salt (CASRN 61790-50-9)

(9th CI and CA Index Name: Resin acids and Rosin acids, potassium salts)

Rosin, hydrogenated (CASRN 65997-06-0)

Rosin, distillation overheads (CASRN 68425-08-1)

(9th CI and CA Index Name: Rosin, distn. overheads)

Rosin, low-boiling fraction (CASRN 68783-82-4)

This document is based on screening-level characterizations done by EPA on the environmental fate, hazard, and exposure of the listed chemicals. 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 these chemicals 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 these chemicals 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:** Acute oral toxicity for the category members is low. Systemic toxicity in oral repeated-dose studies in rats is low. A combined oral reproductive/developmental toxicity study showed low developmental, reproductive, and systemic toxicity. The category members were not tested for genetic toxicity.

¹ US EPA, HPV Challenge Program information: <http://www.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/>.

- Environment: Available data indicate the acute hazard is low to fish and aquatic plants based on no effects observed at the water solubility limit (saturation) of CASRN 8050-09-7, and high for aquatic invertebrates. The physical-chemical properties and fate characteristics of these chemicals indicate they may be soluble or dispersible in water at concentrations that raise uncertainty regarding the potential to have chronic effects.
- Persistence and Bioaccumulation:
 - Available data indicate that all members of this category appear to have moderate persistence except for CASRN 65997-06-0 which has high persistence.
 - The potential for bioconcentration in aquatic organisms for the components of these mixtures is expected to be low.

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: The ranges reported below are based on 2006 IUR submissions. Four category members are HPV chemicals:
 - CASRN 8050-09-7: = 100 - < 500 million lbs.
 - CASRN 61790-50-9: = 10 - < 50 million lbs.
 - CASRN 61790-51-0: = 1 - < 10 million lbs.
 - CASRN 65997-06-0: = 1 - < 10 million lbs.One category member is a moderate production volume (MPV) chemical:
 - CASRN 68425-08-1: < 500,000 lbs.No IUR report was submitted for one chemical:
 - CASRN 68783-82-4 had no 2006 IUR submissions.
- Uses: Non-confidential IUR information for many of the chemicals in this category indicates that these chemicals are used as adhesive and binding agents, intermediates or process regulators in a variety of industries. Four of the six chemicals in this category have IUR submissions that indicate industrial processing and use, as well as commercial or consumer use. The HPV Challenge Program submission states that CASRN 8050-09-7 is mainly used in the production of derivatives or chemical intermediates that have various industrial applications, particularly in the production of printing inks, adhesives, chewing gum and coatings. CASRN 61790-51-0 is used in paper sizing chemicals to give the finished product a better surface finish and water resistance. CASRN 61790-50-9 is used in the production of various soaps and detergents. CASRN 65997-06-0 is used in specialty adhesive applications where product stability and color are important. CASRNs 68425-08-1 and 68783-82-4 are used in the production of rosin derivatives for the end use applications described above, or if the quality of the substances is undesirable, they may be consumed for their fuel value.
- General Population and Environment: It is likely that there would be some releases to water or air during manufacturing, processing and use. A search of additional relevant databases did not provide further information on releases of these chemicals. EPA identifies a medium potential that the general population and the environment might be exposed.
- Workers: EPA identifies a high relative ranking for potential worker exposure. This relative ranking is based on the relatively high number of potentially exposed workers at manufacturing, industrial processing and use sites (100-999 workers for CASRN 65997-

06-0 and >1,000 workers for all other chemicals); moderate to high production volume, particularly CASRN 68955-98-6; and a number of industrial processing uses. These chemicals do not have OSHA Permissible Exposure Limits (PELs).

- Consumers: EPA identifies a high potential that consumers might be exposed based on the use of products containing these chemicals. Four of the six chemicals have IUR submissions that indicate commercial or consumer uses. One of the six chemicals does not have any IUR submissions. There is also potential for exposure to consumers based on information from public data sources. Information from the National Institutes of Health Household Products Database indicates that CASRN 61790-51-0 and CASRN 8050-09-7 are found in household products.
- Children: EPA has identified a high potential that children might be exposed based on the use of products containing these chemicals. In the IUR submissions, one chemical had reported uses in products intended to be used by children; one chemical had reports that such information was not readily obtainable. One chemical had reports that claimed this information to be CBI.

Risk Characterization Summary:

- Potential Risk to Aquatic Organisms from Environmental Releases: *LOW/MEDIUM CONCERN*. EPA identifies a medium potential that aquatic organisms might be exposed from environmental releases. A low acute aquatic hazard to fish and aquatic plants considered in combination with the environmental fate characteristics of most category members of moderate persistence and low bioaccumulation suggest a low concern for potential risk to these aquatic organisms from environmental releases. The high potential acute hazard to aquatic invertebrates, combined with moderate to high persistence and low bioaccumulation, suggest a medium concern for potential risk of acute toxicity to aquatic invertebrates.
- 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 human health hazard is expected to be low due to the lack of specific toxicity to animals following exposure to high doses. The low hazard, moderate persistence, and low bioaccumulation suggest a low concern for potential risk to the general population from environmental releases.
- Potential Risk to Workers: *LOW CONCERN*. EPA identifies a high relative ranking for potential worker exposure. Overall, the potential health hazard of the category members is low. Available information suggests a low overall concern for potential risks to workers.
- Potential Risk to Consumers from Known Uses: *LOW CONCERN*. EPA identifies a high potential that consumers might be exposed to products containing the chemicals in this category. The potential human health hazard is expected to be low due to the lack of specific toxicity to animals following exposure to high doses. Therefore, the available information suggests a low concern for potential risks to consumers.
- Potential Risk to Children: *LOW CONCERN*. EPA identifies a high potential that children might be exposed. The potential human health hazard is expected to be low due to the lack of specific toxicity to young animals following exposure to high doses. Therefore, the available information suggests a low concern for potential risks to children.

Regulatory and Related Information Summary:

- CASRNs 68425-08-1 and 68783-82-4 only appear on the TSCA Inventory. The remaining 4 chemicals appear on the Inventory and appear in the following regulatory and related sources:
 - CASRNs 8050-09-7, 61790-51-0, 61790-50-9, and 65997-06-0 are considered as inert ingredients permitted for use in nonfood use pesticide products under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).
 - The National Institute of Occupational Safety and Health (NIOSH), an institute of the U.S. Centers for Disease Control and Prevention (CDC), includes safe handling recommendations for CASRN 8050-09-7 on International Chemical Safety Cards for combustibility.

Assumptions and Uncertainties:

- EPA has no information on releases of this chemical, and assumes potential exposures based on reported uses.
- Chronic aquatic toxicity data were identified as a data gap under the HPV Challenge Program. Given the physical-chemical properties and fate of these chemicals, additional information on environmental releases could be useful in determining whether or not it would be appropriate to conduct chronic aquatic toxicity studies.

Rationale Leading To Prioritization Decision:

- Available data suggest a low hazard to humans in all potential exposure groups and a low hazard to the environment except to aquatic invertebrates which has a medium hazard.

Prioritization Decision:

- LOW PRIORITY – Follow-up action not suggested at this time.
- Information on environmental releases and studies on chronic toxicity to aquatic organisms could help resolve the remaining uncertainty concerning potential environmental risk concerns.

Supporting Documentation:

Screening-Level Risk Characterization: September 2008

Screening-Level Hazard Characterization: September 2008

Screening-Level Exposure Characterizations: September 2008