

Chromium hydroxide sulfate

This document provides a brief description of chromium hydroxide sulfate, its uses, and the potential hazards associated with short and long term exposure. Environmental impact information for accidental releases is included. This information is general in nature and is not intended as a replacement for the safety data sheet (SDS), product label and other safe handling literature. For additional information consult the LANXESS safety data sheet.

Identification

Product Name:	Chromium hydroxide sulfate
Chemical Name:	Chromium hydroxide sulfate (Cr(OH)(SO ₄))
Synonym(s):	Basic chrome sulfate Monobasic chromium sulfate
CAS Number:	12336-95-7

Description

Overview:	Chromium hydroxide sulfate is a green, odorless solid at ambient temperatures. The chemical compound is sold in powder form.						
Uses:	Chromium hydroxide sulfate is sold by LANXESS primarily for use as a pigment or coloring agent in the manufacture of leather goods, building materials, paints and coatings, glass, rubber, ceramics, cosmetics, plastics, paper and other products.						
Properties:	<table><tr><td>Melting Point:</td><td>> 662°F (350°C)</td></tr><tr><td>Solubility in Water:</td><td>Soluble</td></tr><tr><td>Decomposition:</td><td>>1200°C</td></tr></table>	Melting Point:	> 662°F (350°C)	Solubility in Water:	Soluble	Decomposition:	>1200°C
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Potential Human Health Effects

Occupational Exposure

Potential for occupational exposure exists during manufacture, at storage and staging areas and during weighing, transfer and maintenance operations where chromium hydroxide sulfate is used as a pigment in the manufacture of other products. A much lower potential for exposure exists in facilities using the chemical in closed manufacturing processes by trained personnel.

Employee Training

Workers handling chromium hydroxide sulfate should be trained to implement proper handling procedures and to understand the potential health and physical hazards of the chemical. A NIOSH approved air purifying particulate respirator with N-95 filters is recommended where airborne concentrations may exceed exposure guidelines. In addition, LANXESS recommends that safety glasses with eye shields, long pants and long-sleeved shirts, gloves and foot protection be worn when handling chromium hydroxide sulfate.

Consumer Exposure

LANXESS Corporation does not sell chromium hydroxide sulfate to the general public. Consumers may be exposed to trace amounts of the chemical compound while handling products manufactured using chromium hydroxide sulfate as a coloring agent.

Short-Term Health Effects

Chromium hydroxide sulfate is not expected to be irritating to skin or eyes. Inhalation may cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose. Chromium hydroxide sulfate may be harmful if swallowed in sufficient quantities. Symptoms of ingestion may include nausea, abdominal pain, vomiting and diarrhea.

Long-Term Health Effects

No adverse chronic health effects are expected. Repeated or prolonged contact with chromium hydroxide sulfate may cause skin sensitization in susceptible individuals.

This chemical contains a trivalent chromium compound. IARC and NTP state "there is inadequate evidence for the carcinogenicity of metallic and trivalent chromium compounds in humans and experimental animals." However, NTP, IARC and ACGIH found that "there is sufficient evidence for the carcinogenicity of chromium and certain chromium compounds both in humans and experimental animals," specifically hexavalent chromium.

Physical Hazards

Chromium hydroxide sulfate is stable under normal conditions of use. Avoid contact with strong oxidizing agents and reducing agents. Heating chromium hydroxide sulfate to decomposition may release carbon oxides, sulfur oxides, nitrogen oxides and other potentially toxic gases/fumes. Dust/air mixtures may be fire and explosion hazards when exposed to high temperatures or ignition sources. Avoid heat, open flames and other potential sources of ignition.

Potential Environmental Impact

Chromium hydroxide sulfate is not readily biodegradable. An accidental release to water may pose a danger to fish (low toxicity), invertebrates (low toxicity) and aquatic plants (moderate toxicity) prior to degradation. The chemical is not expected to bioaccumulate.

Conclusion

Under normal conditions of anticipated use as described in this Product Safety Assessment, and if the recommended safe use and handling procedures are followed, chromium hydroxide sulfate is not expected to pose a significant risk to human health or the environment.

References

International Chemical Safety Cards (Chromium Hydroxide Sulfate), U.S. National Institute for Occupational Safety and Health (NIOSH)

IUCLID Dataset (Chromium Hydroxide Sulfate), European Chemicals Bureau, European Commission

Safety Data Sheet (SDS), CHROMOSAL B, LANXESS Corporation

MedlinePlus Medical Encyclopedia, U.S. National Library of Medicine and the National Institutes of Health

Contact Information

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Notices

Use and Application Information

The conditions of your use and application of our products, technical assistance and information (whether verbal, written or by way of production evaluation(s)), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis at least must include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by LANXESS. All information is given without warranty or guarantee. It is expressly understood and agreed that customer assumes and hereby expressly releases LANXESS from all liability, in tort, contract or otherwise, incurred in connection with the use of our products and information. Any statement or recommendation not contained herein is unauthorized and shall not bind LANXESS Corporation. Nothing herein shall be construed as a recommendation to use any product in violation of any patent covering any material or its use. No permission or license to use any patent is implied or in fact granted by this publication.