LANXESS
Energizing Chemistry

Dibromodicyanobutane (DBDCB)

This document provides a brief description of DBDCB, 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 respective LANXESS Corporation safety data sheet.

Identification

Chemical Name:	1,2-Dibromo-2,4-dicyanobutane
Synonym(s):	2-Bromo-2-(bromomethyl)pentanedinitrile Dibromodicyanobutane (DBDCB) Methyldibromoglutaronitrile
CAS Number:	35691-65-7
LANXESS Products Containing DBDCB:	*For a list of materials containing DBDCB, please contact your LANXESS Corporation sales representative.*

Description

Overview: DBDCB is a white to off-white solid, at ambient temperatures, possessing a mildly, irritating odor.

Uses: DBDCB is the “active” ingredient in several Environmental Protection Agency (EPA) Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) registered LANXESS products. These EPA registered products may be used in industrial preservative or biocide in the manufacture of paints and coatings, adhesives, emulsions, joint compounds, metalworking fluids, printing fluids, and waxes and polishes.

Properties:

Solubility in Water:	Slightly soluble
Melting Point:	50°C to 53°C (122°C to 127.4°F)

Potential Human Health Effects

Occupational Exposure

Potential for occupational exposure exists during manufacture and in unloading, storage, staging and transfer operations at facilities using DBDCB as an additive. A much lower potential for exposure exists in facilities using the product in closed manufacturing processes by trained personnel.

Employee Training

Workers handling DBDCB should be trained to implement proper handling procedures and to understand the potential health and physical hazards of this product. Process enclosures, local exhaust ventilation or other engineering controls should be used to keep workers exposure to airborne DBDCB below any recommended or statutory limits. A NIOSH approved powered air-purifying particulate respirator with N-100 filters should be worn by all workers handling DBDCB. A positive pressure supplied air respirator is recommended if airborne concentrations of the chemical are unknown. In addition, it is recommended that workers wear tightly fitting, non-vented chemical goggles, permeation resistant nitrile rubber, polyvinyl chloride, or polychloroprene gloves, suitable work clothing and foot protection be worn when handling DBDCB and products containing this chemical.

Consumer Exposure

LANXESS Corporation does not sell DBDCB, nor materials containing the component, to the general public. The general population may only be exposed to DBDCB through dermal contact with materials containing the substance.

Short-Term Health Effects

DBDCB may be fatal if inhaled and irritating to the respiratory tract. Symptoms of inhalation may include coughing, sore throat, and runny nose. The component is also harmful if swallowed and corrosive to the digestive tract. Symptoms of ingestion may include coughing, burning, ulceration, abdominal pain, nausea, vomiting and diarrhea. Skin and/or eye contact may cause irritation with symptoms of redness, itching, swelling, burning, and possible permanent. Additional symptoms may cause burns to the mouth, throat and stomach.

Long-Term Health Effects

Prolonged or repeated skin contact may cause an allergic reaction in some individuals. Once sensitized, subsequent exposure to 1,2-dibromo-2,4-dicyanobutane at very low levels may cause a severe allergic reaction. Symptoms may include redness, swelling and rash. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Physical Hazards

1,2-dibromo-2,4-dicyanobutane is stable under normal conditions of use. Avoid contact with oxidizing agents, reducing agents, strong acids and strong bases. Heating to decomposition may release carbon dioxide, carbon monoxide, nitrogen oxides and halogenated compounds. Avoid heat, open flames and other potential sources of ignition.

Potential Environmental Impact

1,2-Dibromo-2,4-dicyanobutane is not readily biodegradable. An accidental release to the environment may pose a danger to fish, invertebrates and aquatic plants prior to degradation. 1,2-Dibromo-2,4-dicyanobutane is not expected to adsorb to suspended solids and sediment.

Federal Insecticide, Fungicide, Rodenticide Act (FIFRA) Label

FIFRA products are registered by the United States Environmental Protection Agency (EPA) and are subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for Occupational Safety and Health Administration (OSHA) workplace labels of industrial chemicals. The pesticide label also includes other important information, including directions for use.

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, 1,2-dibromo-2,4-dicyanobutane is not expected to pose a significant risk to human health or the environment.

References

European Chemicals Agency, 2-Bromo-2-(bromomethyl)pentanedinitrile, December 2017

Hazardous Substance Data Bank (HSDB), Bromothalonil, *ToxPlanet, 2017*

Safety Data Sheet (SDS), Tektamer 38, LANXESS Corporation

Contact Information

LANXESS Corporation, Product Safety & Regulatory Affairs, 111 RIDC Park West Drive, Pittsburgh, PA 15275-1112, USA, Phone 1-800-526-9377 [1-800-LANXESS]

Notices

Use and Application Information

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), 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 must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent.