Isosorbide Mononitrate: sc-205723

MATERIAL SAFETY DATA SHEET

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	**Flammable solid.** **May react violently and/or evolve heat upon exposure to shock, heat, or friction.** **The health risks of this compound have not been fully determined.** **Exposure may cause irritation of the skin, eyes, and respiratory system.**	

Section I. Chemical Product and Company Identification

Chemical Name	Isosorbide Mononitrate
Catalog Number	sc-205723
CAS Number	16051-77-7
Chemical Formula	C6H9NO6
Synonym	5-Isosorbide Mononitrate

Supplier	Santa Cruz Biotechnology, Inc. 2145 Delaware Avenue Santa Cruz, California 95060 800.457.3801 or 831.457.3800
Emergency	**ChemWatch** **Within the US & Canada: 877-715-9305** **Outside the US & Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112**

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
5-Isosorbide Mononitrate	16051-77-7	Not available.	Not available.	Rat LD_{50} (oral) 2010 mg/kg Rat LD_{50} (intraperitoneal) 1760 mg/kg Rat LD_{50} (intravenous) 1750 mg/kg Mouse LD_{50} (oral) 1771 mg/kg

Section III. Hazards Identification

Acute Health Effects

No specific information is available in our data base regarding the toxic effects of this material for humans. However, exposure to any chemical should be kept to a minimum. Skin and eye contact may result in irritation. May be harmful if inhaled or ingested. Always follow safe industrial hygiene practices and wear proper protective equipment when handling this compound.

Chronic Health Effects

CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY: Rat (oral) 91gm/kg; duration in males: 91D prior to mating. Paternal effects: testes, epidimymis, sperm duct.
Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Section IV. First Aid Measures

Eye Contact

Check for and remove any contact lenses. DO NOT use an eye ointment. Flush eyes with running water for a minimum of 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention. Treat symptomatically and supportively.

Skin Contact

If the chemical gets spilled on a clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. Seek medical attention. Treat symptomatically and supportively. Wash any contaminated clothing before reusing.

Inhalation

If the victim is not breathing, perform artificial respiration. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention. Treat symptomatically and supportively.

Ingestion

INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt, or waistband. If the victim is not breathing, administer artificial respiration. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Seek immediate medical attention and, if possible, show the chemical label. Treat symptomatically and supportively.

Section V. Fire and Explosion Data

Flammability	Flammable.	Auto-Ignition	Not available.
Flash Points	Not available.	Flammable Limits	Not available.

Combustion Products

These products are toxic carbon oxides (CO, CO_2), nitrogen oxides (NO, NO_2).

Fire Hazards

Reactive with strong oxidizers. Vapors may travel to source of ignition and flash back. Closed containers may explode from the heat of a fire. Highly flammable in presence of open flames and sparks, of shocks, of heat.

Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: May reat violently and/or evolve heat. Risks of explosion of the product in presence of static discharge: Not available. No additional information is available regarding the risks of explosion.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemicals, CO_2, water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.

Section VI. Accidental Release Measures

Spill Cleanup Instructions	Flammable solid. Stop leak if without risk. DO NOT touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. Consult federal, state, and/or local authorities for assistance on disposal. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage

Handling and Storage Information	FLAMMABLE SOLID. May react violently and/or evolve heat upon exposure to shock, heat, or friction. Keep away from heat and sources of ignition. Reactive with strong oxidizers; may be ignited by heat, sparks, or flames. Vapors may travel to source of ignition and flash back. Tightly seal container and store in a cool place. Closed containers may explode from heat of a fire. Mechanical exhaust required. Avoid excessive heat and light. DO NOT breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Treat symptomatically and supportively. Avoid contact with skin and eyes. Always store away from incompatible compounds such as oxidizing agents. Store at room temperature.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Lab coat. Dust respirator. Boots. Gloves. A MSHA/NIOSH approved respirator must be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. 
Exposure Limits	Not available.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Solid.	Solubility	Not available.
Specific Gravity	Not available.		
Molecular Weight	191.14	Partition Coefficient	Not available.
Boiling Point	Not available.	Vapor Pressure	Not available.
Melting Point	Not available.	Vapor Density	Not available.
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Not available.
Viscosity	Not available.	Taste	Not available.

Section X. Stability and Reactivity Data

Stability	This material is stable if stored under proper conditions. (See Section VII for instructions)
Conditions of Instability	Avoid excessive heat and light. May explode by detonation, heat or shock.
Incompatibilities	Reactive with oxidizing agents.

Section XI. Toxicological Information

RTECS Number	LZ4386500
Routes of Exposure	Eye contact. Inhalation. Ingestion.
Toxicity Data	Rat LD_{50} (oral) 2010 mg/kg Rat LD_{50} (intraperitoneal) 1760 mg/kg Rat LD_{50} (intravenous) 1750 mg/kg Mouse LD_{50} (oral) 1771 mg/kg
Chronic Toxic Effects	**CARCINOGENIC EFFECTS** : Not available. **MUTAGENIC EFFECTS** : Not available. **TERATOGENIC EFFECTS** : Not available. **DEVELOPMENTAL TOXICITY**: Rat (oral) 91gm/kg; duration in males: 91D prior to mating. Paternal effects: testes, epididymis, sperm duct. Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Acute Toxic Effects	No specific information is available in our data base regarding the toxic effects of this material for humans. However, exposure to any chemical should be kept to a minimum. Skin and eye contact may result in irritation. May be harmful if inhaled or ingested. Always follow safe industrial hygiene practices and wear proper protective equipment when handling this compound.

Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	Not available.

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local or regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state, and local regulations when disposing of this substance.

Section XIV. Transport Information

DOT Classification	DOT CLASS 4.1: Flammable solid.
PIN Number	UN3251
Proper Shipping Name	Isosorbide-5-mononitrate
Packing Group (PG)	III
DOT Pictograms	

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This product is **NOT** on the EPA Toxic Substances Control Act (TSCA) inventory. The following notices are required by 40 CFR 720.36 (C) for those products not on the inventory list: (i) These products are supplied solely for use in research and development by or under the supervision of a technically qualified individual as defined in 40 CFR 720.0 et sec. (ii) The health risks of these products have not been fully determined. Any information that is or becomes available will be supplied on an MSDS sheet.
WHMIS Classification (Canada)	Not controlled under WHMIS (Canada).
EINECS Number (EEC)	Not available.
EEC Risk Statements	Not available.
Japanese Regulatory Data	Not available.

Section XVI. Other Information

Notice to Reader:	***The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.***

10/20/2011