

SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc. Revision date 30-Aug-2018 Version 1.1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Product Code 3,4-Dimethylphenylmagnesium chloride solution SC-226241

Recommended use of the chemical and restrictions on use For research use only. Not intended for diagnostic or therapeutic use.

Details of the supplier of the safety data sheet

Santa Cruz Biotechnology, Inc. 10410 Finnell Street Dallas, TX 75220 831.457.3800 800.457.3801 scbt@scbt.com Emergency telephone number Chemtrec 1.800.424.9300 (Within USA) +1.703.527.3887 (Outside USA)

2. HAZARDS IDENTIFICATION

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification

Acute toxicity - Oral Serious eye damage/eye irritation Carcinogenicity Specific target organ toxicity (single exposure) Flammable liquids Corrosive to metals

Label elements

Signal word Hazard statements

Symbols/Pictograms

Precautionary Statements - Prevention

Category 4 Category 2 Category 2 Category 3 Category 2 Category 1

Danger Harmful if swallowed Causes serious eye irritation Suspected of causing cancer May cause respiratory irritation Highly flammable liquid and vapor May be corrosive to metals



Obtain special instructions before use Do not handle until all safety precautions have been read and understood Use personal protective equipment as required Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Avoid breathing dust/fume/gas/mist/vapors/spray Use only outdoors or in a well-ventilated area Keep away from heat/sparks/open flames/hot surfaces. — No smoking Keep container tightly closed Ground/bond container and receiving equipment



	Use only non-sparking tools Take precautionary measures against static discharge Keep only in original container
	Keep cool
Precautionary Statements - Response	IF exposed or concerned: Get medical advice/attention IF IN EYES: Rinse cautiously with water for several minutes.
	Remove contact lenses, if present and easy to do. Continue rinsing
	If eye irritation persists: Get medical advice/attention
	IF ON SKIN (or hair): Remove/Take off immediately all
	contaminated clothing. Rinse skin with water/shower IF INHALED: Remove victim to fresh air and keep at rest in a
	position comfortable for breathing
	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
	Rinse mouth In case of fire: Use CO2, dry chemical, or foam for extinction
	Absorb spillage to prevent material damage
Precautionary Statements - Storage	Store in corrosive resistant container with a resistant inner liner
Precautionary Statements - Disposal	Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)	
Hazards not otherwise classified (HNOC)	Not applicable
Other Information	
Unknown acute toxicity	9.265% of the mixture consists of ingredient(s) of unknown toxicity.

2 3 0	2 1	HMIS	Health hazards Flammability Physical hazards Personal protection	2 3 0 -
	~		* = Chronic Health Hazard	

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No	102928-12-1
Molecular Weight	164.92
Formula	C8H9CIMg

Health hazards

Physical and chemical

Flammability Stability

properties

NFPA

Chemical name	CAS No.	Weight-%	Oral LD50	Dermal LD50	Inhalation LC50
Tetrahydrofuran	109-99-9	>90	= 1650 mg/kg(Rat)	-	= 21000 ppm (Rat) 3 h
3,4-Dimethylphenylmagnesi um chloride	102928-12-1	5 - 10	-	-	-

4. FIRST AID MEASURES

First Aid Measures General advice Eye contact	If symptoms persist, call a physician. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin Contact	Wash contaminated clothing before reuse. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and



Inhalation	shoes. Remove to fresh air Artificial respiration and/or oxygen may be necessary Call a physician Immediate medical attention is not required Move to fresh air in case of accidental inhalation of vapors If symptoms persist, call a physician
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician. Do NOT induce vomiting.
Self-protection of the first aider	Use personal protective equipment as required.
Most important symptoms and e Symptoms	effects, both acute and delayed No information available.
Indication of any immediate med Note to physicians	dical attention and special treatment needed Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Suitable Extinguishing Media Unsuitable Extinguishing Media	In case of fire: Use CO2, dry chemical, or foam for extinction. Contact with water liberates toxic, highly flammable gas. DO NOT USE WATER.
Specific hazards arising from the Specific hazards arising from the chemical Hazardous combustion products	he chemical Thermal decomposition can lead to release of toxic/corrosive gases and vapors. Highly flammable. Extremely flammable. Carbon oxides. Phosgene.
Explosion data Sensitivity to Mechanical Impact Sensitivity to Static Discharge	No information available. No information available.

Protective equipment and precautions for firefighters

Protective equipment and precautions As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

 Personal precautions
 Use personal protective equipment as required. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

 Environmental precautions
 See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

 Methods and material for containment and cleaning up
 Prevent further leakage or spillage if safe to do so. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Thermal decomposition can lead to release of toxic/corrosive gases and vapors. Contact



with water liberates toxic, highly flammable gas. Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. May form explosive peroxides. Store at 4 °C.
Incompatible materials	O. None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Tetrahydrofuran	STEL: 100 ppm	TWA: 200 ppm	IDLH: 2000 ppm
109-99-9	TWA: 50 ppm	TWA: 590 mg/m ³	TWA: 200 ppm
	S*	(vacated) TWA: 200 ppm	TWA: 590 mg/m ³
		(vacated) TWA: 590 mg/m ³	STEL: 250 ppm
		(vacated) STEL: 250 ppm	STEL: 735 mg/m ³
		(vacated) STEL: 735 mg/m ³	

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls

Showers Eyewash stations Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection	Tight sealing safety goggles. Face protection shield.
Skin and Body Protection	Wear protective gloves and protective clothing.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General Hygiene Considerations	When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Values
Physical State	liquid
Appearance	No information available
Odor	No information available

pH Melting point/freezing point Boiling point Flash point Liquid Density Evaporation rate Upper flammability limits No information available <u>Values</u> No information available No information available 65 °C -17 °C CC (closed cup)

0.910 g/cm³ No information available No information available



Lower flammability limit Vapor pressure Vapor density Specific gravity Water solubility Solubility in other solvents Partition coefficient Autoignition temperature Decomposition temperature Kinematic viscosity Explosive properties Oxidizing properties No information available No information available

10. STABILITY AND REACTIVITY

Reactivity	Not applicable
Chemical stability Possibility of Hazardous Reactions Hazardous polymerization Conditions to avoid Incompatible materials	May form explosive peroxides. Contact with water liberates toxic, highly flammable gas. No information available. Extremes of temperature and direct sunlight. Strong oxidizing agents.
Hazardous Decomposition Products	Carbon oxides. Phosgene.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	No data available.
Eye contact	No data available.
Skin Contact	No data available.
Ingestion	No data available.

Information on toxicological effects

Symptoms

No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic ToxicityAvoid repeated exposure.Target Organ EffectsCentral nervous system, Eyes, Respiratory system.CarcinogenicityThe table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Tetrahydrofuran	A3	Group 2B	-	Х
109-99-9				

ACGIH (American Conference of Governmental Industrial Hygienists) A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer) Group 2B - Possibly Carcinogenic to Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor) X - Present

Numerical measures of toxicity - Product Information

Unknown acute toxicity 9.265% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	1818 mg/kg
ATEmix (inhalation-vapor)	23144 mg/l

12. ECOLOGICAL INFORMATION



Ecotoxicity

May cause long lasting harmful effects to aquatic life

Chemical name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Tetrahydrofuran 109-99-9	-	2700 - 3600: 96 h Pimephales promelas mg/L LC50 static 1970 - 2360: 96 h Pimephales promelas mg/L LC50 flow-through	-	5930: 24 h Daphnia magna mg/L EC50

9.265% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Persistence and degradability
Bioaccumulation
Mobility

No information available. No information available. No information available.

Chemical name	Partition coefficient
Tetrahydrofuran	0.45
109-99-9	

13. DISPOSAL CONSIDERATIONS

Disposal of wastes	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
Contaminated packaging US EPA Waste Number California Hazardous Waste Status	Do not reuse container. D001 This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Tetrahydrofuran	Toxic
109-99-9	Ignitable

14. TRANSPORT INFORMATION

DOT UN/ID no Hazard Class Subsidiary class Packing Group Proper shipping name Reportable Quantity (RQ) Description Emergency Response Guide Number	UN2924 3 8 II Flammable liquids, corrosive, n.o.s. (Tetrahydrofuran: RQ (kg)= 454.00) UN2924, Flammable liquids, corrosive, n.o.s. (Tetrahydrofuran), 3 (8), II 132
IMDG UN/ID no Hazard Class Subsidiary hazard class Packing Group Proper shipping name Description Special Provisions	UN2924 3 8 II Flammable liquid, corrosive, n.o.s. UN2924, Flammable liquid, corrosive, n.o.s. (Tetrahydrofuran), 3 (8), II, (-17°C c.c.) 274
EmS-No	F-E, S-C

```
UN/ID no
```

UN2924



Hazard Class	3
Subsidiary hazard class	8
Packing Group	II
Proper shipping name	Flammable liquid, corrosive, n.o.s.
Description	UN2924, Flammable liquid, corrosive, n.o.s. (Tetrahydrofuran), 3 (8), II
ERG Code	3CH

15. REGULATORY INFORMATION

International Inventories

All of the components in the product are on the following Inventory lists No information available

Chemical name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Tetrahydrofuran	Х	Х	-	Х	-	Х	Х	Х	Х	Х

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Tetrahydrofuran	Х	Х	Х
109-99-9			

16. OTHER INFORMATION

Revision note

No information available

Disclaimer



The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet