Azoxymethane: sc-358746

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Azoxymethane
Product Number: sc-358746

Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, CA 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

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Flammable liquid. Carcinogen. Target Organ Effect. Highly toxic by ingestion. Corrosive.

Target Organs

Large intestine. Teeth. Kidney. Nerves. Liver. Heart. Pancreas. Blood. Central nervous system.

GHS Classification

Flammable liquids (Category 3)
Acute toxicity, Oral (Category 2)
Skin corrosion (Category 1A)
Serious eye damage (Category 1)
Carcinogenicity (Category 1B)

GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)

H226	Flammable liquid and vapor.
H300	Fatal if swallowed.
H314	Causes severe skin burns and eye damage.
H350	May cause cancer.

Precautionary statement(s)

P201	Obtain special instructions before use.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard:	3
Chronic Health Hazard:	*
Flammability:	3
Physical hazards:	4

NFPA Rating

Health hazard: 3
Fire: 3
Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin May be harmful if absorbed through skin. Causes skin burns.
Eyes Causes eye burns.
Ingestion May be fatal if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: AOM
Formula: C2H6N2O
Molecular Weight: 74.08

CAS-No.	*EC-No.*	*Index-No.*	*Concentration*
Azoxymethane 25843-45-2	-	-	-
Acetic acid 64-19-7	200-580-7	607-002-00-6	0 - 30 %
Diethyl ether 60-29-7	200-467-2	603-022-00-4	5 - 10 %
Ethanol 64-17-5	200-578-6	603-002-00-5	0 - 30 %
Methylene chloride 75-09-2	200-838-9	602-004-00-3	0 - 10 %
Nitromethane 75-52-5	200-876-6	609-036-00-7	0 - 5 %

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.Continue rinsing eyes during transport to hospital.
If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions - carbon oxides, nitrogen oxides (NOx), hydrogen chloride gas.
Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. May form explosive peroxides. Store at -20 °C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Acetic acid	64-19-7	TWA	10 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye & Upper Respiratory Tract irritation Pulmonary function			
		STEL	15 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Eye & Upper Respiratory Tract irritation Pulmonary function			
		TWA	10 ppm 25 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	10 ppm 25 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m3 is approximate.			
		TWA	10 ppm 25 mg/m3	USA. NIOSH Recommended Exposure Limits
		ST	15 ppm 37 mg/m3	USA. NIOSH Recommended Exposure Limits
Ethanol	64-17-5	TWA	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Upper Respiratory Tract irritation Confirmed animal carcinogen with unknown relevance to humans			
		TWA	1,000 ppm 1,900 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	1,000 ppm 1,900 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m3 is approximate.			

		TWA	1,000 ppm 1,900 mg/m3	USA. NIOSH Recommended Exposure Limits
Remarks	Potential Occupational Carcinogen See Appendix A			
Methylene chloride	75-09-2	TWA	50 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Central Nervous System impairment Carboxyhemoglobinemia Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans			
	Substance listed; for more information see OSHA document 1910.1052			
	See 1910.1052			
Nitromethane	75-52-5	TWA	20 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Upper Respiratory Tract irritation Thyroid effects Lung damage Confirmed animal carcinogen with unknown relevance to humans			
		TWA	100 ppm 250 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	100 ppm 250 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m3 is approximate. Substance listed; for more information see OSHA document 1910.1009			
	See Appendix D - Substances with No Established RELs			

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	liquid	pH	no data available
Melting point/freezing point	no data available	Boiling point	97 - 99 °C - lit.
Flash point	24 °C	Ignition temperature	no data available
Auto-ignition temperature	no data available	Lower explosion limit	no data available
Upper explosion limit	no data available	Vapour pressure	no data available
Density at 25 °C	0.991 g/mL	Water solubility	no data available
Relative vapor density	no data available	Odor	no data available
Odor Threshold	no data available	Evaporation rate	no data available
Partition coefficient n-octanol/water	no data available		

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.
Possibility of hazardous reactions
Vapors may form explosive mixture with air.
Conditions to avoid
Heat, flames and sparks.
Materials to avoid
Strong bases, Bases, Oxidizing agents, Alkali metals, Strong acids and strong bases, Strong oxidizing agents, Metals, Copper, Amines, Ammonia, Strong acids, Vinyl compounds, Alcohols, Peroxides, permanganates, e.g. potassium permanganate, Aluminum, Strong reducing agents, Soluble carbonates and phosphates, Magnesium, Hydroxides
Hazardous decomposition products
Hazardous decomposition products formed under fire conditions - carbon oxides, nitrogen oxides (NOx), hydrogen chloride gas.
Other decomposition products
no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50 no data available
Inhalation LC50 no data available
Dermal LD50 no data available
Other information on acute toxicity no data available

Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitization
no data available
Germ cell mutagenicity
no data available
Carcinogenicity

IARC:	2B - Group 2B: Possibly carcinogenic to humans (Methylene chloride)
IARC:	2B - Group 2B: Possibly carcinogenic to humans (Nitromethane)
NTP:	Reasonably anticipated to be a human carcinogen (Methylene chloride)
NTP:	Reasonably anticipated to be a human carcinogen (Nitromethane)

Reproductive toxicity
no data available
Teratogenicity
no data available
Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available
Aspiration hazard
no data available
Potential Health Effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.
Ingestion	May be fatal if swallowed.

Signs and Symptoms of Exposure
Central nervous system depression, narcosis, Nausea, Dizziness, Damage to the heart. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated., Dichloromethane is metabolized in the body producing carbon monoxide which increases and sustains carboxyhemoglobin levels in the blood, reducing the oxygen-carrying capacity of the blood., Acts as a simple asphyxiant by displacing air., anesthetic effects, Breathing difficulties, Headache
Synergistic effects
no data available
Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity
no data available
Bioaccumulative potential
no data available
PBT and vPvB assessment
no data available
Persistence and degradability
no data available
Mobility in soil
no data available
Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1992 Class: 3 (6.1) Packing group: III
Proper shipping name: Flammable liquids, toxic, n.o.s. (Ethanol, Azoxymethane)
Reportable Quantity (RQ): 20000 lbs
Marine Pollutant: No
Poison Inhalation Hazard: No
IMDG
UN number: 1992 Class: 3 (6.1) Packing group: III EMS-No: F-E, S-D
Proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S. (Azoxymethane, Ethanol)
Marine Pollutant: No
IATA
UN number: 1992 Class: 3 (6.1) Packing group: III
Proper shipping name: Flammable liquid, toxic, n.o.s. (Azoxymethane, Ethanol)

15. REGULATORY INFORMATION

OSHA Hazards
Flammable liquid, Carcinogen, Target Organ Effect, Highly toxic by ingestion, Corrosive
SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Acetic acid	CAS-No. 64-19-7
Diethyl ether	CAS-No. 60-29-7
Ethanol	CAS-No. 64-17-5
Methylene chloride	CAS-No. 75-09-2
Nitromethane	CAS-No. 75-52-5

Pennsylvania Right To Know Components

Azoxymethane	CAS-No. 25843-45-2
Acetic acid	CAS-No. 64-19-7
Diethyl ether	CAS-No. 60-29-7
Ethanol	CAS-No. 64-17-5
Methylene chloride	CAS-No. 75-09-2
Nitromethane	CAS-No. 75-52-5

New Jersey Right To Know Components

Azoxymethane	CAS-No. 25843-45-2
Acetic acid	CAS-No. 64-19-7
Diethyl ether	CAS-No. 60-29-7
Ethanol	CAS-No. 64-17-5
Methylene chloride	CAS-No. 75-09-2
Nitromethane	CAS-No. 75-52-5

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

Methylene chloride	CAS-No. 75-09-2
Nitromethane	CAS-No. 75-52-5

16. OTHER INFORMATION

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.

11/20/2013