



microgenics

MAS[®]
CONTROLS

Material Safety Data Sheet

Section 1 – Chemical Product and Company Identification

MSDS Name:

MAS chemTRAK H - Liquid Chemistry Control

Catalog Numbers:

CHA-1, CHA-2, CHA-3, CHA-SP, CHU-1, CHU-2, CHU-3, CHU-SP

Synonyms:

None Known.

Company Identification:

Microgenics Corporation

46360 Fremont Blvd.

Fremont, CA 94538

Company Phone Number:

(510) 979-5000

Emergency Phone Number:

(510) 979-5000

CHEMTREC Phone Number, US:

(800) 424-9300

CHEMTREC Phone Number, Europe:

(202) 483-7616

Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ ELINCS
66-81-9	Cycloheximide	<0.1%	200-636-0
64-17-5	Ethyl alcohol	<0.1%	200-578-6
50-06-6	Phenobarbital	<0.1%	200-007-0

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Clear amber liquid

Caution! This material is prepared from bovine source material. May be harmful if swallowed. May cause respiratory and digestive tract irritation. May cause eye and skin irritation. The toxicological properties of this material have not been fully investigated.

Target Organs: no data found.

Potential Health Effects

Eye:

May cause eye irritation.

Skin:

May cause skin irritation.



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Ingestion:

May cause irritation of the digestive tract. May be harmful if swallowed.

Inhalation:

May cause respiratory tract irritation.

Chronic:

No information found.

Section 4 - First Aid Measures

Eyes:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin:

In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion:

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media:

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Autoignition Temperature:

No information found.

Explosion Limits:

Lower: Not available. Upper: Not available.

Flash Point:

No information found.

NFPA Rating:

(estimated) Health: 1; Flammability: 0; Instability: 0

Section 6 – Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Wash area with a 5% chlorine bleach solution or equivalent, then rinse with water.

Section 7 – Handling and Storage

Handling:

Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Material produced in compliance to USDA and/or CPMP/BWP/1230/98 (or amendment as applicable) (Guidance on Minimizing the Risk of Transmitting Animal Spongiform Encephalopathy Agents via Medicinal Products). This is a CPMP/BWP/1230/98 Category IV material: It does not contain, nor is it derived from Specified Risk Materials as defined in Commission decision 97/534/EC (or successive amendments).

**Storage:**

Store in a tightly closed container. For shelf life, store between -15° to -25°C.

Section 8 – Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Cycloheximide	None listed.	None listed.	None listed.
Ethyl alcohol	1000 ppm TWA	1000 ppm TWA; 1900 mg/m ³ TWA 3300 ppm IDLH	1000 ppm TWA; 1900 mg/m ³ TWA ;
Phenobarbital	None listed.	None listed.	None listed.

OSHA Vacated PELs

Ethyl alcohol: 1000 ppm TWA; 1900 mg/m³ TWA

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9 – Physical and Chemical Properties

Physical State:	Liquid
Color:	clear amber
Odor:	No information found.
pH:	7.6
Vapor Pressure:	No information found.
Vapor Density:	No information found.
Evaporation Rate:	No information found.
Viscosity:	No information found.
Boiling Point:	No information found.
Freezing/Melting Point:	No information found.
Decomposition Temperature:	No information found.
Solubility in water:	Miscible.
Specific Gravity/Density:	No information found.
Molecular Formula:	Solution
Molecular Weight	No information found.



Section 10 – Stability and Reactivity

Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid:

Excess heat.

Incompatibilities with Other Materials

None reported.

Hazardous Decomposition Products

None.

Hazardous Polymerization

Has not been reported

Section 11 – Toxicological Information

RTECS:

CAS# 66-81-9: MA4375000.

CAS# 64-17-5: KQ6300000.

CAS# 50-06-6: CQ6825000.

LD50/LC50:

CAS# 66-81-9:

Draize test, rabbit, skin: 1 pph/24H Moderate

Oral, mouse: LD50 = 133 mg/kg

Oral, rat: LD50 = 2 mg/kg.

CAS# 64-17-5:

Draize test, rabbit, eye: 500 mg Severe

Draize test, rabbit, eye: 500 mg/24H Mild

Draize test, rabbit, skin: 20 mg/24H Moderate

Inhalation, mouse: LC50 = 39 gm/m³/4H

Inhalation, rat: LC50 = 20000 ppm/10H

Oral, mouse: LD50 = 3450 mg/kg

Oral, rabbit: LD50 = 6300 mg/kg

Oral, rat: LD50 = 9000 mg/kg

Oral, rat: LD50 = 7060 mg/kg.

CAS# 50-06-6:

Oral, mouse: LD50 = 137 mg/kg

Oral, rabbit: LD50 = 185 mg/kg

Oral, rat: LD50 = 162 mg/kg.

Carcinogenicity:

CAS# 66-81-9: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 64-17-5

ACGIH: A4 - Not Classifiable as a Human Carcinogen

California: Not listed.

NIOSH: Not listed.

NTP: Not listed.

OSHA: Not listed.

IARC: Not listed.

CAS# 50-06-6

ACGIH: Not listed.

California: carcinogen; initial date 1/1/90

NIOSH: Not listed.

NTP: Not listed.

OSHA: Possible Select carcinogen

IARC: Group 2B carcinogen

Epidemiology:

No information found.

**Teratogenicity:**

No information found.

Reproductive:

No information found.

Mutagenicity

No information found.

Neurotoxicity

No information found.

Other:

The toxicological properties have not been fully investigated.

Section 12– Ecological Information

No information found.

Section 13 – Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P Series Wastes

None of the components are on this list.

RCRA U Series Wastes

None of the components are on this list.

Section 14 – Transport Information

	US DOT	Canadian TDG
Proper Shipping Name:	Not regulated as a hazardous material	No information found.
Hazard Class:	Not regulated as a hazardous material	Not available.
UN Number:	Not regulated as a hazardous material	
Packing Group:	Not regulated as a hazardous material	

Section 15 – Regulatory Information

US Federal

TSCA

CAS# 66-81-9 is not listed on the TSCA Inventory. It is for research and development use only.

CAS# 64-17-5 is listed on the TSCA Inventory.

CAS# 50-06-6 is not listed on the TSCA Inventory. It is for research and development use only.

Health and Safety Reporting List

None of the components are on this list.

Chemical Test Rules

None of the components are on this list.

TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

**CERCLA Hazardous Substances and corresponding RQs**

None of the components are on this list.

SARA Section 302 Extremely Hazardous Substances

CAS# 66-81-9: 100 lb TPQ (lower threshold); 10,000 lb TPQ (upper threshold)

SARA Hazard Categories

CAS# 66-81-9: acute, chronic.

CAS# 64-17-5: acute, chronic, fire.

SARA Section 313

None of the components are on this list.

Clean Air Act - Hazardous Air Pollutants (HAPs)

None of the components are on this list.

Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors

None of the components are on this list.

Clean Water Act - Hazardous Substances

None of the components are on this list.

Clean Water Act - Priority Pollutants

None of the components are on this list.

Clean Water Act - Toxic Pollutants

None of the components are on this list.

OSHA - Highly Hazardous

None of the components are on this list.

OSHA - Specifically Regulated Chemicals

None of the components are on this list.

US State**State Right to Know**

Cycloheximide can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Massachusetts.

Ethyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Phenobarbital can be found on the following state Right-to-Know lists: California, Minnesota, Massachusetts.

California Prop 65

CAS# 66-81-9 No information found.

CAS# 64-17-5 No information found.

WARNING: This product contains Phenobarbital, a chemical known to the State of California to cause cancer.

WARNING: This product contains Cycloheximide, a chemical known to the state of California to cause birth defects or other reproductive harm.

WARNING: This product contains Cycloheximide, a chemical known to the state of California to cause birth defects or other reproductive harm.

California No Significant Risk Level

CAS# 66-81-9 No information found.

CAS# 64-17-5 No information found.

CAS# 50-06-6: 2 ug/day NSRL

European/International Regulations**European Labelling in Accordance with EC Directives:**

Hazard Symbols: Not available.

Risk Phrases: Not available.

Safety Phrases: S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

No information found.

United Kingdom Occupational Exposure Limits

CAS# 64-17-5: OES-United Kingdom, TWA 1000 ppm TWA; 1920 mg/m³ TWA

**United Kingdom Maximum Exposure Limits**

No information found.

Canadian DSL/NDSL

CAS# 64-17-5 is listed on Canada's DSL List.

CAS# 50-06-6 is listed on Canada's DSL List.

Canadian WHMIS Classifications

This product does not have a WHMIS classification.

Canadian Ingredient Disclosure List

CAS# 64-17-5 is listed on the Canadian Ingredient Disclosure List.

Exposure Limits

CAS# 64-17-5: OEL-AUSTRALIA:TWA 1000 ppm (1900 mg/m³)

OEL-BELGIUM:TWA 1000 ppm (1880 mg/m³)

OEL-CZECHOSLOVAKIA:TWA 1000 mg/m³;STEL 5000 mg/m³

OEL-DENMARK:TWA 1000 ppm (1900 mg/m³)

OEL-FINLAND:TWA 1000 ppm (1900 mg/m³);STEL 1250 ppm (2400 mg/m³)

OEL-FRANCE:TWA 1000 ppm (1900 mg/m³);STEL 5000 pp

OEL-GERMANY:TWA 1000 ppm (1900 mg/m³)

OEL-HUNGARY:TWA 1000 mg/m³;STEL 3000 mg/m³

OEL-THE NETHERLANDS:TWA 1000 ppm (1900 mg/m³)

OEL-THE PHILIPPINES:TWA 1000 ppm (1900 mg/m³)

OEL-POLAND:TWA 1000 mg/m³

OEL-RUSSIA:STEL 1000 mg/m³

OEL-SWEDEN:TWA 1000 ppm (1900 mg/m³)

OEL-SWITZERLAND:TWA 1000 ppm (1900 mg/m³)

OEL-THAILAND:TWA 1000 ppm (1900 mg/m³)

OEL-TURKEY:TWA 1000 ppm (1900 mg/m³)

OEL-UNITED KINGDOM:TWA 1000 ppm (1900 mg/m³) JAN9

OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

OES-United Kingdom: TWA 1000 ppm TWA; 1920 mg/m³ TWA

No information found.

Section 16 – Other Information

Color information has been updated.

MSDS Creation Date: September 23, 2003

Revision: 1

This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposal of product purchased from Fisher Scientific, and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warnings provided with the product. Please consult your institution's policies regarding use of this product. If you have obtained this MSDS other than in connection with the supply of this product from Fisher Scientific, this MSDS should be consulted for general information only, and should not be relied upon for any purpose. As with the use of all hazardous materials, you should in all instances follow the guidance of the MSDS provided or available with the specific product purchased.