



Material Safety Data Sheet

Catalog Number: 880020
Revision date: 26-Apr-2006

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY INFORMATION

Catalog Number: 880020

Product name: BetaMax ES™ Liquid Scintillation Fluid

Supplier:

MP Biomedicals, LLC
29525 Fountain Parkway
Solon, OH 44139
tel: 440-337-1200

Emergency telephone number: CHEMTREC: 1-800-424-9300 (1-703-527-3887)

2. COMPOSITION/INFORMATION ON INGREDIENTS

This liquid scintillation cocktail is classified as non-hazardous, in accordance with EPA regulations: Resources Conservation and Recovery Act, CFR Title 40, Part 261.20 to 261.24

Components	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA Exposure Limits:
Linear Alkylbenzene	68648-87-3	30-70%	None	None
Phenylxylylethane	6196-95-8	5-50%	None	None
p-bis-(o-METHYLSTYRYL)	13280-61-0	<1%	None	None
BENZENE				
2,5-DIPHENYLOXAZOLE	92-71-7	<1%	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: May cause skin irritation and/or dermatitis

Principle routes of exposure: Skin

Inhalation: May cause irritation of respiratory tract

Ingestion: May be harmful if swallowed.

Skin contact: May cause allergic skin reaction

Eye contact: Avoid contact with eyes

Statements of hazard MAY CAUSE ALLERGIC SKIN REACTION.

Statement of Spill or Leak - ANSI Label Eliminate all ignition sources. Absorb and/or contain spill with inert materials (e.g., sand, vermiculite). Then place in appropriate container. For large spills, use water spray to disperse vapors, flush spill area. Prevent runoff from entering waterways or sewers.

4. FIRST AID MEASURES

General advice: In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Inhalation: Move to fresh air. Call a physician immediately.

Skin contact: Rinse immediately with plenty of water and seek medical advice

Ingestion: Do not induce vomiting without medical advice.

Eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Protection of first-aiders: No information available

Medical conditions aggravated by exposure: None known

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:

Use dry chemical, CO₂, water spray or "alcohol" foam

Specific hazards:

Burning produces irritant fumes.

Unusual hazards:

None known

Special protective equipment for firefighters:

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

Specific methods:

Water mist may be used to cool closed containers.

Flash point:

155°C

Autoignition temperature:

Not determined

NFPA rating:

NFPA Health:	1
NFPA Flammability:	2
NFPA Reactivity:	0

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Use personal protective equipment.

Environmental precautions:

Small spills - No special environmental precautions required.
Large spills - Do not flush into surface water or sanitary sewer system.

Methods for cleaning up:

Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Storage:

ROOM TEMPERATURE

Handling:

Use only in area provided with appropriate exhaust ventilation.

Safe handling advice:

Wear personal protective equipment.

Incompatible products:

Oxidising and spontaneously flammable products

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: Ensure adequate ventilation.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection: Breathing apparatus only if aerosol or dust is formed.

Hand protection: Pvc or other plastic material gloves

Skin and body protection: Usual safety precautions while handling the product will provide adequate protection against this potential effect.

Eye protection: Safety glasses with side-shields

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor	Clear and colorless; aromatic odor
Physical state:	Liquid
Formula:	Not applicable
Melting point/range:	No data available at this time.
Boiling point/range:	300°C
Density:	0.9 - 1.0 g/ml @ 20°C
Vapor pressure:	< 0.1 mm Hg at 20 C
Evaporation rate:	< 1.0
Vapor density:	~7
Solubility (in water):	Dispersible
Flash point:	155°C
Autoignition temperature:	Not determined

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Polymerization:	None under normal processing.
Hazardous decomposition products:	Decomposes to H ₂ O and CO ₂ , The cocktail ultimately decomposes to water and carbon dioxide.
Materials to avoid:	Strong oxidising agents
Conditions to avoid:	Exposure to air or moisture over prolonged periods.

11. TOXICOLOGICAL INFORMATION

Product Information

Acute toxicity

Components

Linear Alkylbenzene

Phenylxylylethane

p-bis-(o-METHYLSTYRYL)

BENZENE

2,5-DIPHENYLOXAZOLE

RTECS Number:

Not Available

Not Available

Not Available

RP6825000

Selected LD50s and LC50s

Not Determined

Not Determined

Not Determined

Not Determined

Chronic toxicity:	Chronic exposure may cause nausea and vomiting, higher exposure causes unconsciousness.
Local effects:	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Specific effects:	May include moderate to severe erythema (redness) and moderate edema (raised skin), nausea, vomiting, headache.
Primary irritation:	No data is available on the product itself.
Carcinogenic effects:	No data is available on the product itself.
Mutagenic effects:	No data is available on the product itself.
Reproductive toxicity:	No data is available on the product itself.

12. ECOLOGICAL INFORMATION

Mobility:	No data available
Bioaccumulation:	No data available
Ecotoxicity effects:	No data available
Aquatic toxicity:	May cause long-term adverse effects in the aquatic environment.

Components	U.S. DOT - Appendix B - Marine Pollutan	U.S. DOT - Appendix B - Severe Marine Pollutants	United Kingdom - The Red List:
Linear Alkylbenzene	Not Listed	Not Listed	Not Listed
Phenylxylylethane	Not Listed	Not Listed	Not Listed
p-bis-(o-METHYLSTYRYL) BENZENE	Not Listed	Not Listed	Not Listed
2,5-DIPHENYLOXAZOLE	Not Listed	Not Listed	Not Listed

Components	Germany VCI (WGK)	World Health Organization (WHO) - Drinking Water	Ecotoxicity - Fish Species Data
Linear Alkylbenzene	Not Listed	Not Listed	Not Listed
Phenylxylylethane	Not Listed	Not Listed	Not Listed
p-bis-(o-METHYLSTYRYL) BENZENE	Not Listed	Not Listed	Not Listed
2,5-DIPHENYLOXAZOLE	Not Listed	Not Listed	Not Listed

Components	Ecotoxicity - Freshwater Algae Data	Ecotoxicity - Microtox Data	Ecotoxicity - Water Flea Data
Linear Alkylbenzene	Not Listed	Not Listed	Not Listed
Phenylxylylethane	Not Listed	Not Listed	Not Listed
p-bis-(o-METHYLSTYRYL) BENZENE	Not Listed	Not Listed	Not Listed
2,5-DIPHENYLOXAZOLE	Not Listed	Not Listed	Not Listed

Components	EPA - ATSDR Priority List	EPA - HPV Challenge Program Chemical List	California - Priority Toxic Pollutants
Linear Alkylbenzene	Not Listed	indicator 2; Not sponsored	Not Listed
Phenylxylylethane	Not Listed	indicator 0; Not sponsored	Not Listed
p-bis-(o-METHYLSTYRYL) BENZENE	Not Listed	Not Listed	Not Listed
2,5-DIPHENYLOXAZOLE	Not Listed	Not Listed	Not Listed

Components	California - Priority Toxic Pollutants	California - Priority Toxic Pollutants
Linear Alkylbenzene	Not Listed	Not Listed
Phenylxylylethane	Not Listed	Not Listed
p-bis-(o-METHYLSTYRYL) BENZENE	Not Listed	Not Listed
2,5-DIPHENYLOXAZOLE	Not Listed	Not Listed

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:

Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous.

Contaminated packaging:

Do not re-use empty containers

14. TRANSPORT INFORMATION

UN/Id No:

Not regulated

DOT:

Proper shipping name:

Not Regulated

Components	U.S. DOT - Appendix A Table 1 - Reportable Quantities
Linear Alkylbenzene	Not Listed
Phenylxylylethane	Not Listed
p-bis-(o-METHYLSTYRYL) BENZENE	Not Listed
2,5-DIPHENYLOXAZOLE	Not Listed

TDG (Canada):

WHMIS hazard class: Non-controlled

IMDG/IMO

IMDG - Hazard Classifications Not Applicable

Components	U.S. DOT - Appendix B - Marine Pollutan	U.S. DOT - Appendix B - Severe Marine Pollutants
Linear Alkylbenzene	Not Listed	Not Listed
Phenylxylylethane	Not Listed	Not Listed
p-bis-(o-METHYLSTYRYL) BENZENE	Not Listed	Not Listed
2,5-DIPHENYLOXAZOLE	Not Listed	Not Listed

IMO-labels:**15. REGULATORY INFORMATION****International Inventories****Components**

Linear Alkylbenzene

Inventory - United States TSCA - Sect. 8(b) Present

Canada DSL Inventory List - Present

Australia (AICS): Present

Inventory - China: Present

EU EINECS List - 272-008-4

Korean KECL: KE-02157

Philippines PICCS: Present

Components

Phenylxylylethane

Inventory - United States TSCA - Sect. 8(b) Present

Canada DSL Inventory List - Present

Australia (AICS): Present

Inventory - China: Present

EU EINECS List - 228-249-2; C16H18

Inventory - Japan: 4-38; 4-244

Korean KECL: KE-11779

Philippines PICCS: Present

Components

p-bis-(o-METHYLSTYRYL) BENZENE

Inventory - United States TSCA - Sect. 8(b) Present

Canada DSL Inventory List - Present

Inventory - China: Present

Catalog Number: 880020

Product name: BetaMax ES™ Liquid
Scintillation Fluid

EU EINECS List -	236-285-5; C24H22
Korean KECL:	KE-03298
Components	
2,5-DIPHENYLOXAZOLE	
Inventory - United States TSCA - Sect. 8(b)	Present
Canada DSL Inventory List -	Not Listed
Australia (AICS):	Present
EU EINECS List -	202-181-3; C15H11NO
Inventory - Japan:	5-192
Korean KECL:	KE-12092
Philippines PICCS:	Present

U.S. regulations:

Components	California Proposition 65	Massachusetts Right to Know List:	New Jersey Right to Know List:	Pennsylvania Right to Know List:
Linear Alkylbenzene	Not Listed	Not Listed	Not Listed	Not Listed
Phenylxylylethane	Not Listed	Not Listed	Not Listed	Not Listed
p-bis-(o-METHYLSTYRYL)	Not Listed	Not Listed	Not Listed	Not Listed
BENZENE				
2,5-DIPHENYLOXAZOLE	Not Listed	Not Listed	Not Listed	Not Listed

Components	Florida substance List:	Rhode Island Right to Know List:	Illinois - Toxic Air Contaminants	Connecticut - Hazardous Air Pollutants
Linear Alkylbenzene	Not Listed	Not Listed	Not Listed	Not Listed
Phenylxylylethane	Not Listed	Not Listed	Not Listed	Not Listed
p-bis-(o-METHYLSTYRYL)	Not Listed	Not Listed	Not Listed	Not Listed
BENZENE				
2,5-DIPHENYLOXAZOLE	Not Listed	Not Listed	Not Listed	Not Listed

Components	SARA 313 Emission reporting/Toxic Release of Chemicals	CERCLA/SARA - Section 302 Extremely Haz	NTP:	IARC:
Linear Alkylbenzene	Not Listed	Not Listed	None	None
Phenylxylylethane	Not Listed	Not Listed	None	None
p-bis-(o-METHYLSTYRYL)	Not Listed	Not Listed	None	None
BENZENE				
2,5-DIPHENYLOXAZOLE	Not Listed	Not Listed	None	None

SARA 313 Notification: The above is your notification as to the SARA 313 listing for this product(s) pursuant to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

If you are unsure if you are subject to the reporting requirements of Section 313, or need more information, please call the EPA Emergency Planning and Community Right-To-Know Information Hotline: (800) 535-0202 or (202) 479-2499 (in Washington, DC or Alaska).

State Notification: The above information is your notice as to the Right-to-Know listings of the stated product(s). Individual states will list chemicals for a variety of reasons including, but not limited to, the compounds toxicity; carcinogenic, tumorigenic and/or reproductive hazards; and the compounds environmental impact if accidentally released.

16. OTHER INFORMATION

Prepared by: Health & Safety

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End of Safety Data Sheet