

# Material Safety Data Sheet

Mia F-37

Date of Preparation: May 19, 2009

## Section 1 Chemical Product and Company Identification

**Product/Chemical Name:** Mia F-37

**Chemical Family:** Polyester

**CAS Number:** N/A

**Other Designations:** N/A

**General Use:** N/A

**Manufacturer:** Freeman Manufacturing and Supply Company, 1101 Moore Road, Avon, OH 44011  
Phone (440) 934-1902, FAX (440) 934-7200, Hours of Operation 8-5,  
Emergency phone number 1-800-424-9300

HMIS	
<b>H</b>	2
<b>F</b>	3
<b>R</b>	1
<b>PPE</b> Sec.8.	

## Section 2 Composition/Information on Ingredients

Ingredient Name	CAS Number
Polyester Resin	Proprietary
Styrene Monomer	100-42-5

Ingredient	OSHA		ACGIH		Vapor Pressure
	PEL	STEL	TLV	STEL	
Styrene Monomer	50 ppm	100 ppm	50 ppm	100 ppm	4.5 mm Hg @ 68°F

## Section 3 Hazards Identification

### ☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Inhalation, Irritation, skin defatting

### Potential Health Effects

**Primary Entry Routes:** Inhalation, skin

#### Acute Effects:

**Inhalation:** Vapors may cause mucous membrane irritation and upper respiratory tract discomfort. High concentrations may result in headache, nausea, insensibility and other central nervous system effects. Repeated exposure to high concentrations may cause liver and kidney damage.

**Eye:** May cause irritation. Liquid splashes may result in more serious injuries. May cause tearing.(lachrymation)

**Skin:** Prolonged or frequent contact may cause defatting and dryness of the skin with resultant irritation and possible dermatitis. Styrene may be absorbed through the skin in toxic amounts.

**Ingestion:** May cause gastrointestinal disturbances, pain, and discomfort.

**Medical Conditions Aggravated by Long-Term Exposure:** Skin and eye conditions.

**Chronic Effects:** N/A

**Carcinogenicity:** The International Agency for Research on Cancer (IARC) has classified styrene as possibly carcinogenic to humans (Class 2B).

## Section 4 First Aid Measures

**Inhalation:** Remove to fresh air. If breathing is difficult, give oxygen and/or artificial respiration.

**Eye Contact:** Flush with plenty of water for 15 minutes and get medical attention.

**Skin Contact:** Wash thoroughly with soap and water. Remove contaminated clothing and launder before reuse.  
Destroy contaminated shoes.

**Ingestion:** Do not induce vomiting. Get medical attention.

## Section 5 Fire Fighting Measures

**Flash Point:** 90 °F (32 °C)

**Flash Point Method:** PMCC

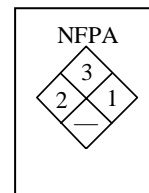
**LEL:** 1.1% by volume

**UEL:** 6.1% by volume

**Extinguishing Media:** Foam, water, CO<sub>2</sub>, or dry chemical

**Fire-Fighting Equipment:** Use self-contained breathing apparatus.

**Fire and Explosion Hazards:** Decomposition and combustion products may be toxic.



## Section 6 Accidental Release Measures

**Spill /Leak Procedures** Remove all sources of ignition (flames, hot surfaces and electrical, static, or friction sparks). Avoid breathing vapors. Ventilate area. Contain and remove with inert absorbent and non-sparking tools. Attention! Contaminated absorbent or used absorbent may heat and ignite a fire. Keep it outside and put some water in the container. When there is a spill, in presence of water, the styrene will float because specific gravity is lower than water. Styrene is weakly soluble in water. However, resin has a specific gravity higher than 1.

## Section 7 Handling and Storage

**Handling & Storage:** Use with adequate ventilation. Avoid prolonged breathing of vapor. Avoid prolonged or repeated contact with skin. Wear safety goggles or face shield. Wear gloves, apron and footwear impervious to this material. Wash clothing before reuse. Store at ambient temperatures.(below 100°F) Keep container tightly closed and upright when not in use to prevent leakage.

## Section 8 Exposure Controls/Personal Protection

**Ventilation:** Local exhaust recommended. General mechanical is acceptable. Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2).

**Respiratory Protection:** Use a NIOSH approved respirator when vapor/mist exposure is likely.

**Eye Protection:** Wear splash-proof chemical goggles.

**Skin Protection:** Wear impermeable gloves.

**Safety Stations:** Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

## Section 9 Physical and Chemical Properties

**Appearance and Odor:** Pink colored liquid,

**Vapor Pressure:** (styrene) 5 mm Hg @ 68°F

**Vapor Density (Air=1):** 3.6

**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** 1.2±0.1

**Water Solubility:** Slight

**Boiling Point:** Not determined

**% Volatile:** Not determined

**Evaporation Rate:** Not determined

**pH:** Not determined

## Section 10 Stability and Reactivity

**Stability:** Unstable under certain condition

**Hazardous polymerization :** may occur with an exothermic reaction.

**Conditions to avoid :** elevated temperatures. Improper addition of promoter and/or catalyst. Avoid direct contact of methyl ethyl ketone peroxide catalyst (MEKP) with accelerator( cobalt, calcium, potassium's salts). If an accelerator such as cobalt drier has to be added, mix this accelerator with base material before adding catalyst.

**Incompatibility :** oxidizers, peroxides, strong acids. Hazardous decomposition products: thermal decomposition or combustion can produce fumes containing organic acids, carbon dioxide and carbon monoxide.

## Section 11 Toxicological Information

**Acute Inhalation Exposure Effects:** Irritation to nose and throat. Extended or repeated exposure to concentrations above the recommended exposure limits may cause brain or nervous system depression, with symptoms such as dizziness, headache or nausea and if continued indefinitely, loss of consciousness, liver and kidney damage.

**Skin Irritation:** Irritation, can cause defatting of skin which may lead to dermatitis.

**Eye Irritation:** Irritation, tearing, redness, discomfort

**Carcinogenicity:** The International Agency for Research on Cancer (IARC) has classified styrene as possibly carcinogenic to humans (Class 2B).

**Styrene:** LD<sub>50</sub> (Oral/Rat) 5 gm/kg; LD<sub>50</sub> (Dermal/Rabbit) 2820 Mg/Kg; LC<sub>50</sub> (Inhalation Rat) 5000 ppm/ 8 hours

## Section 12 Ecological Information

No Known evidence of adverse effects from available information

## Section 13 Disposal Considerations

**Disposal:** Dispose of in safety containers as a solid water material. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations

## Section 14 Transport Information

### DOT Transportation Data (49 CFR 172.101):

**Shipping Name:** Resin Solution,

**Shipping Symbols:**

**Hazard Class:** 3

**ID No.:** UN 1866

**Packing Group:** III

**Label:**

**Special Provisions (172.102):**

**Packaging**

**Authorizations**

a) **Exceptions:**

b) **Non-bulk Packaging:**

c) **Bulk Packaging**

**Quantity Limitations**

a) **Passenger, Aircraft, or Railcar:**

b) **Cargo Aircraft Only:**

**Vessel Stowage Requirements**

a) **Vessel Stowage:**

b) **Other:**

## Section 15 Regulatory Information

### US Federal Regulations:

OSHA (Occupational Safety and Health Act): This Material Safety Data Sheet has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

RCRA (Resource Conservation and Recovery Act): Not a hazardous waste under RCRA (40 CFR 261).

SARA 311/312 Codes: Acute Health Hazard, Chronic Health Hazard, Fire Hazard

SARA Toxic Chemical (40 CFR 372.65): This product contains the following toxic chemical subject to the reporting requirements of Section 313 of SARA Title III of 1986 and of 40 CFR 372.

None

TSCA Inventory Status: All ingredients listed on TSCA inventory requirements.

### State Regulations:

CA Proposition: No component listed

Styrene (100-42-5) is listed on the New Jersey and Pennsylvania Right to Know Lists

## Section 16 Other Information

**Disclaimer:** The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.

# Material Safety Data Sheet

## Mia MEKP-9

Date of Preparation: June 3, 2009

### Section 1 Chemical Product and Company Identification

**Product/Chemical Name:** Mia MEKP-9

**Chemical Family:** Organic Peroxide

**CAS Number:** N/A

**Other Designations:** N/A

**General Use:** N/A

**Manufacturer:** Freeman Manufacturing and Supply Company, 1101 Moore Road, Avon, OH 44011  
Phone (440) 934-1902, FAX (440) 934-7200, Hours of Operation 8-5,  
Emergency phone number 1-800-424-9300

#### HMIS

<b>H</b>	3
<b>F</b>	2
<b>R</b>	2
<b>PPE</b>	Sec.8.

### Section 2 Composition/Information on Ingredients

Ingredient Name	CAS Number
Methyl Ethyl Ketone Peroxide	1338-23-4
Dimethyl Phthalate	131-11-3
Stabilizer	Proprietary

Ingredient	OSHA		ACGIH	
	PEL	STEL	TLV	STEL
Methyl Ethyl Ketone Peroxide	Not estab.	1 ppm	Not estab.	0.2 ppm
Dimethyl Phthalate	Not estab.	Not estab.	Not estab.	Not estab.
Stabilizer	Not estab.	Not estab.	Not estab.	Not estab.

### Section 3 Hazards Identification

#### ☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Severe Irritant, Decomposition

#### Potential Health Effects

**Primary Entry Routes:** Inhalation, skin

**Acute Effects:**

**Eye:** Eye contact causes severe corrosion and may cause blindness.

**Skin:** Severe skin irritant, causes redness, blistering, and edema

**Ingestion:** Human systemic effects by ingestion: changes in structure or function of esophagus, nausea, or vomiting, and other gastrointestinal effects.

**Inhalation:** Moderately toxic by inhalation

**Medical Conditions Aggravated by Long-Term Exposure:** Skin and eye conditions.

**Chronic Effects:** N/A

**Carcinogenicity:**

### Section 4 First Aid Measures

**Inhalation:** Remove to fresh air. If breathing is difficult, give oxygen and/or artificial respiration.

**Eye Contact:** Flush with plenty of water for 15 minutes and get medical attention.

**Skin Contact:** Wash thoroughly with soap and water. Remove contaminated clothing and launder before reuse.  
Destroy contaminated shoes.

**Ingestion:** Do not induce vomiting. Get medical attention.

## Mia MEKP-9

### Section 5 Fire Fighting Measures

**Flash Point:** >200°F (>93 °C)

**Flash Point Method:** C.O.C

**LEL:** Not Established

**UEL:** Not Established

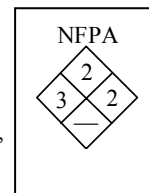
**Extinguishing Media:** Water from a safe distance - preferably with a fog nozzle. In case of very small fires, other means such as carbon dioxide, foam or dry chemical extinguishers may be effective.

Dry chemical combined with MEKP formulations may re-ignite.

Light water additives may be particularly effective at extinguishing MEKP fires.

**Fire-Fighting Equipment:** Use self-contained breathing apparatus.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** The heat of decomposition of the peroxides adds to the heat of the fire. Dry chemical fire extinguishing agent may catalyze the decomposition.



### Section 6 Accidental Release Measures

**Spill /Leak Procedures** Dike spill to prevent runoff from entering drains, sewers, streams, etc. Wet spilled material with water and absorb with an inert absorbent material such as perlite, vermiculite, or sand. Sweep up using non-sparking tools and place in a clean polyethylene drum or a polyethylene pail.

**DO NOT place into a steel container, lined or unlined, as a decomposition may occur.** Treat any contaminated cardboard packaging as hazardous waste. **Wet container contents with additional water prior to sealing.**

### Section 7 Handling and Storage

**Handling & Storage:** Ground containers when pouring. Use with adequate ventilation. Avoid prolonged breathing of vapor. Avoid prolonged or repeated contact with skin. Wear safety goggles or face shield. Wear gloves, apron and footwear impervious to this material. Wash clothing before reuse. Store at ambient temperatures.(below 100°F) Keep container tightly closed and upright when not in use to prevent leakage.

### Section 8 Exposure Controls/Personal Protection

**Ventilation:** Local exhaust recommended. General mechanical is acceptable. Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2).

**Respiratory Protection:** Use a NIOSH approved respirator when vapor/mist exposure is likely.

**Eye Protection:** Wear splash-proof chemical goggles.

**Skin Protection:** Wear impermeable gloves.

**Safety Stations:** Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

### Section 9 Physical and Chemical Properties

**Appearance and Odor:** Water white liquid,

**Vapor Pressure:** Not determined

**Vapor Density (Air=1):** >1

**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** 1.1

**Water Solubility:** Slight

**Boiling Point:** Not determined

**% Volatile:** Not determined

**Evaporation Rate:** Not determined

**pH:** Not determined

### Section 10 Stability and Reactivity

**STABILITY** Stable when kept in original, closed container, out of direct sunlight at temperatures below 80°F (27°C).  
**CONDITIONS TO AVOID** Contamination. Direct sunlight. Open flames. Prolonged storage above 100°F (38°C). Storage above SADT(140°F). Storage near flammable or combustible materials.

**MATERIALS TO AVOID** Dimethylaniline, cobalt napthenate and other promoters, promoted resins, accelerators, oxidizing and reducing agents, strong acids, bases, metals, metal alloys and salts, sulfur compounds, amines or any hot material.

**HAZARDOUS DECOMPOSITION PRODUCTS**

Decomposition products are flammable. Acrid smoke and irritating fumes.

**HAZARDOUS POLYMERIZATION** Will not occur.

### Section 11 Toxicological Information

**Methyl Ethyl Ketone Peroxide Hazard Data:**

**Inhalation:** Rat--LC<sub>50</sub>: 200 ppm/4 hr,  
**Intraperitoneal:** Rat--LD<sub>50</sub>: 65 mg/kg.  
**Oral:** Rat--LD<sub>50</sub>: 484 mg/kg;

**Dimethyl Phthalate Hazard Data:**

**Intraperitoneal:** Mouse--LD<sub>50</sub>: 1380 mg/kg.  
**Oral:** Rat & Mouse--LD<sub>50</sub>: 6800 mg/kg,

**Proprietary Stabilizer Hazard Data:**

**Eye:** Rabbit: 93 mg, severe.  
**Inhalation:** Human--TC<sub>Lo</sub>: 50mg/kg, eye effects, nose effects, and pulmonary system effects.  
**Intraperitoneal:** Mouse--LD<sub>50</sub>: 1299 mg/kg.  
**Oral:** Rat--LD<sub>50</sub>: >3200 mg/kg.

### Section 12 Ecological Information

No Known evidence of adverse effects from available information

### Section 13 Disposal Considerations

**Disposal:** Dispose of in safety containers as a solid water material. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations

### Section 14 Transport Information

**DOT Transportation Data (49 CFR 172.101):**

<p><b>Shipping Name:</b> Organic Peroxide type D, Liquid(Methyl Ethyl Ketone Peroxide ≤ 45%)  <b>Shipping Symbols:</b>  <b>Hazard Class:</b> 5.2  <b>ID No.:</b> UN 3105  <b>Packing Group:</b> II  <b>Label:</b> 5.2 (Organic Peroxide)  <b>Special Provisions (172.102):</b></p>	<p><b>Packaging Authorizations</b>  a) <b>Exceptions:</b>  b) <b>Non-bulk Packaging:</b>  c) <b>Bulk Packaging</b></p>	<p><b>Quantity Limitations</b>  a) <b>Passenger, Aircraft, or Railcar:</b>  b) <b>Cargo Aircraft Only:</b>  <b>Vessel Stowage Requirements</b>  a) <b>Vessel Stowage:</b>  b) <b>Other:</b></p>
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## Section 15 Regulatory Information

### US Federal Regulations:

OSHA (Occupational Safety and Health Act): This Material Safety Data Sheet has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

RCRA (Resource Conservation and Recovery Act): Not a hazardous waste under RCRA (40 CFR 261).

SARA 311/312 Codes: Acute Health Hazard, Chronic Health Hazard, Fire Hazard

SARA Toxic Chemical (40 CFR 372.65): This product contains the following toxic chemical subject to the reporting requirements of Section 313 of SARA Title III of 1986 and of 40 CFR 372.

Chemical Name	CAS Number	Percent
Dimethyl Phthalate	131-11-3	35 - 60
Methyl Ethyl Ketone	78-93-3	0 - 2

### Reportable Quantity

2-Butanone Peroxide (MEKP): 10 lbs (4.54 kg)

TSCA Inventory Status: All ingredients listed on TSCA inventory requirements.

### State Regulations:

CA Proposition: No component listed

May contain small amounts of hydrogen peroxide (CAS # 7722-84-1) which is found on the New Jersey and Pennsylvania Right to Know lists.

May contain small amounts of Methyl Ethyl Ketone (78-93-3) which is found on the New Jersey, Pennsylvania and Massachusetts Right to Know lists

## Section 16 Other Information

**Disclaimer:** The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.