



# MATERIAL SAFETY DATA SHEET

## Section 1. Product and Company Identification

Product Name: EzFlow HD Monomer Liquid      DATE: 6/12/2007  
Formula: N/A      REV. 00  
Item#: 42060 , 42061, 42062, 42063

Manufacturer: American International Industries  
2220 Gaspar Ave  
Los Angeles, CA 90040  
Chem-Tel: (800) 255-3924

## Section 2. Composition / Information on Ingredients

### Hazardous Ingredients:

| Component                        | CAS #     | %     | TOXICOLOGICAL DATA                  |
|----------------------------------|-----------|-------|-------------------------------------|
| Ethyl Methacrylate               | 97-63-2   | 60-65 | OSHA PEL: N/E<br>ACGIH TLV/TWA: N/E |
| PEG-4 Dimethacrylate             | 109-17-1  | 10-15 | OSHA PEL: N/E<br>ACGIH TLV/TWA: N/E |
| Glycol HEMA-Methacrylate         | 97-90-5   | 10-15 | OSHA PEL: N/E<br>ACGIH TLV/TWA: N/E |
| Triethyleneglycol Dimethacrylate | 109-16-0  | 6-10  | OSHA PEL: N/E<br>ACGIH TLV/TWA: N/E |
| Dimethyltolylamine               | 99-97-8   | 0-1   | OSHA PEL: N/E<br>ACGIH TLV/TWA: N/E |
| Violet 2 (CI 60725)              | 81-48-1   | 0-1   | OSHA PEL: N/E<br>ACGIH TLV/TWA: N/E |
| Blue 1 (CI 42090)                | 3844-45-9 | 0-1   | OSHA PEL: N/E<br>ACGIH TLV/TWA: N/E |

N/E - None Established  
N/DA - No Data Available  
N/A - Not Applicable

## Section 3. Hazardous Identification

Flammable liquid and vapor!

### Potential Health Effects, Signs and Symptoms of Exposure:

Primary Route of Entry: Eyes, skin or inhalation

Eye: Vapor concentrations may cause irritation of eyes. Liquid contact with eyes can cause irritation and possible corneal damage.



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|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Skin:                | Liquid concentration may cause moderate skin irritation. Repeated or prolonged contact may cause allergic skin rashes, itching and swelling which become evident on re-exposure to this product. |
| Ingestion:           | Causes irritation, a burning sensation of the mouth, throat and respiratory tract and abdominal pain.                                                                                            |
| Inhalation:          | High vapor concentration may irritate the respiratory system. Prolonged exposure can lead to headaches, nausea, drowsiness and unconsciousness.                                                  |
| Sub-Chronic Effects: | Unlikely to cause a cancer hazard in man.                                                                                                                                                        |

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### **Section 4. First Aid Measures**

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|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| First Aid for Eye:        | Immediately flush with water for at least 15 minutes, including under eyelids. Seek medical attention if discomfort persists.                                   |
| First Aid for Skin:       | Wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse. Seek medical attention if discomfort persist.                          |
| First Aid for Inhalation: | If large amounts are inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen, and call a physician. |
| First Aid for Ingestion:  | Rinse mouth out with water. Only induce vomiting if directed by physician. Never give anything by mouth to an unconscious person. Seek prompt medical attention |

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### **Section 5. Fire Fighting Measures**

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|                             |                                                                                                                                                                                                                                                                              |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flash Point (°F/°C):        | 113°F/45°C (tag closed)                                                                                                                                                                                                                                                      |
| Flammable Limit (vol%):     | N/DA                                                                                                                                                                                                                                                                         |
| Auto-ignition Temp. (vol%)  | N/DA                                                                                                                                                                                                                                                                         |
| Extinguisher Media:         | Foam, Carbon Dioxide, Dry Chemical or Carbon Tetrachloride                                                                                                                                                                                                                   |
| Fire Fighting Instructions: | Wear self-contained breathing apparatus and full protective gear. Water may be ineffective unless used as a fine spray or fog. Use water spray to cool the exposed containers of methacrylate monomer.                                                                       |
| Unusual Hazards:            | Vapors may travel to source of ignition and flash back. Avoid ignition sources or excessive temperatures. Heat can induce polymerization with rapid release of energy. Closed containers may rupture explosively. Spontaneous polymerization may occur with prolonged aging. |



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### **Section 6. Accidental Release Measures**

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**Spill or Release Procedures:** Eliminate all sources of heat and ignition. Use absorbent material for spills and dike it, wash spill material into retaining containers. Place containers in a well ventilated area. Consult an expert on disposal regulations. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container. Do not use combustible materials such as sawdust. Do not flush to sewer!

US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. the toll free number for the US Coast Guard National Response Center is (800) 424-8802. If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and flush spills away from exposures.

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### **Section 7. Handling and Storage**

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**Handling:** Keep away from heat, sparks, flames and other sources of ignition. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use adequate ventilation. Ground all metal containers when transferring and use explosion-proof equipment. Follow all MSDS/label precautions even after the container is emptied because it may retain product residues. Wash skin thoroughly after handling.

**Storage:** Store in a cool, dry area. Keep container closed when not in use. Store in ambient temperatures out of direct sunlight. Store in a well ventilated place. Store in accordance with National Fire Protection Association recommendations. Maintain air space inside storage containers. Inhibitor requires air (oxygen) contact to function. Check inhibitor levels after 3 months and return to original level.

**Explosion Hazard:** Avoid ignition sources or excessive temperatures. Heat can induce polymerization with rapid release of energy. Closed containers may rupture explosively. Spontaneous polymerization may occur with prolonged aging.

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### **Section 8. Exposure Controls / Personal Protective Equipment**

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**Engineering Controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

**General:** To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product. Provide eye wash stations and safety showers. wear impervious clothing to prevent ANY contact with this product, such as gloves, apron, boots, or whole body suit. Nitrile rubber is better than PVC

**Eye Protection:** Wear safety glasses. Wear coverall chemical splash goggles and face shield when the possibility exists for eye and face contact due to splashing or spraying of material.



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|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Skin Protection:</b>                       | Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Neoprene and Nitrile rubber is better than PVC                                                                                                                                                                                                                                                                                                                                             |
| <b>Personal Respirators (NIOSH Approved):</b> | A NIOSH/MSHA approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Wear a NIOSH/MSHA or European Standard EN 149 approved full-face piece airline respirator in the positive pressure mode with emergency escape provisions. Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. |

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### **Section 9. Physical and Chemical Properties**

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|                            |                         |                          |                      |
|----------------------------|-------------------------|--------------------------|----------------------|
| <b>Appearance @ 25°C:</b>  | Clear, colorless liquid | <b>Viscosity (RVT):</b>  |                      |
| <b>Odor @ 25°C:</b>        | Sharp ester-like        | <b>Vapor Pressure:</b>   | mm Hg: 0.69 kPa @38° |
| <b>pH</b>                  | Not applicable          | <b>Vapor Density:</b>    | 3.9 (Air = 1)        |
| <b>Specific Gravity:</b>   | 0.95                    | <b>Evaporation Rate:</b> | 1.25                 |
| <b>Ignition:</b>           | Not applicable          | <b>% Volatiles:</b>      | W/W % : 99+          |
| <b>Boiling Point:</b>      | EMA=243°F               |                          |                      |
| <b>Solubility in Water</b> | Not applicable          |                          |                      |

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### **Section 10. Stability and Reactivity**

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|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Stability:</b>                            | Stable under ordinary conditions of use and storage. Heat and sunlight can contribute to instability.                                                    |
| <b>Hazardous Decomposition Products:</b>     | Oxides of carbon when burned.                                                                                                                            |
| <b>Incompatibility (Materials to Avoid):</b> | Reducing and oxidizing agents and UV light.                                                                                                              |
| <b>Hazardous Polymerization:</b>             | May occur                                                                                                                                                |
| <b>Conditions to Avoid:</b>                  | Temperatures above 60°F/16°C, oxidizing or reducing agents, peroxides and amines, storage in absence of inhibitor, and inadvertent addition of catalyst. |

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### **Section 11. Toxicological Information**

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Acute Oral Toxicity: (Rat) LD50 : 13300mg/kg

Acute Dermal Toxicity: (Rabbit) LD50 : >9100mg/kg

Acute Inhalation: (Rabbit) LD50 : 3800 ppm

Mutagenicity: Test positive as a mutagen on laboratory animals.

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### **Section 12. Ecological Information**

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Chemical Fate Information:

Biodegradability: N/DA

Chemical Oxygen Demand: N/DA

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### **Section 13. Disposable Considerations**

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Dispose of diking materials and absorbent in compliance with State, Local, and Federal regulations. Residual vapors may explode on ignition; do not cut, drill or weld on or near the container. mix with compliance chemical which is less flammable and incinerate. Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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### **Section 14. Transportation Information**

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#### **<DOT Information> (49 CFR 172)**

|                        |                                                                                                  |
|------------------------|--------------------------------------------------------------------------------------------------|
| Proper Shipping Name:  | Flammable liquids, n.o.s., (ethyl methacrylate, ethylene glycol dimethacrylate), 3, UN1993, PGII |
| Identification Number: | UN1993                                                                                           |
| Marine Pollutant:      | no                                                                                               |
| Special Provisions:    | T8 , T31                                                                                         |

**Emergency Response Guidebook (ERG) # :** 128  
**IATA (DGR) :**

|                       |                                                                                                  |
|-----------------------|--------------------------------------------------------------------------------------------------|
| Proper Shipping Name: | Flammable liquids, n.o.s., (ethyl methacrylate, ethylene glycol dimethacrylate), 3, UN1993, PGII |
| Class or Division:    | 3                                                                                                |
| UN or ID Number:      | UN1993                                                                                           |



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Packaging Instructions:

Emergency Response Guidebook (ERG) # :

IMO (IMDG) :

Proper Shipping Name:

Flammable liquids, n.o.s., (ethyl methacrylate, ethylene glycol dimethacrylate), 3, UN1993, PGII

Class or Division:

3.3

UN or ID Number:

Un1993

Special Provisions & Stowage/Segregation:

None

Other Information:

Flash Point = 45°C

### Section 15. Regulatory Information

Federal Regulatory Status:

**Resource Conservation & Recover Act (RCRA) Classification:**

Ethyl methacrylate, CAS# 97-63-2, RCRA Code: U118

Characteristic of Ignitability, RCRA Code:D001

**FDA:** This product has not been approved by the FDA for use in food packaging and/or other applications as an indirect food additive.

**Clean Water Act:** Priority Pollutant: None

**Clean Air Act: HAP/ODS:** This product contains the following hazardous air pollutants (HAP) and ODS's as defined by the U.S Clean Air Act; Benzophenone CAS # 119-61-9 (HAP) This product does not contain any Class 1 or Class 2 ODS

**Occupational Safety and Health Act:** This Product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard. Its hazards are: Immediate (acute) health hazard. Fire Hazard

**SARA Title III: Section 302 (TPQ):** None

**SARA Title III: Section 302 (RQ):** This product contains chemicals regulated under section 304 as extremely hazardous chemicals for emergency release notification ("CERCLA" List).

Ethyl methacrylate, CAS# 97-63-2, RQ (Lbs): 1000

**Superfund Amendment & Reauthorization Act (SARA) Title III:**

**SARA Hazard Categories (311/312):** Fire Hazard. Immediate (Acute) Health Hazard.

**SARA Toxic Release Inventory (TRI) (313):** None

State Regulatory Status:

The following chemical are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

**MA Right-to-Know Law:**

Ethyl methacrylate, CAS# 97-63-2

**NJ Right-to Know Law:**



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Ethyl methacrylate, CAS# 97-63-2

**PA Right-to-Know:**

Ethyl methacrylate, CAS# 97-63-2

**FL Right-to-Know:**

Ethyl methacrylate, CAS# 97-63-2

**MN Right-to-Know:**

none

**International Regulations:**

CDSL: Canadian Inventory (on Canadian Transitional List)

Ethyl methacrylate: DSL regulatory status: Included, WHMIS: B2: flammable liquid D-2B: Toxic

N, N-dimethyl-p-toluidine: DSL regulatory status: Included, WHMIS: none

2-hydroxyethyl methacrylate: DSL regulatory status: Included, WHMIS: D2A

Ethylene glycol dimethacrylate esters: DSL regulatory status: Included, WHMIS: D2B

Benzophenone: DSL regulatory status: Included, WHMIS: none

EINECS: European Inventory

EzFlow HD Monomer Liquid:

HAZARD SYMBOLS: **Xi**, **F**: Irritant, Highly Flammable

RISK PHRASES: **R10**: flammable, **R20/22**: harmful by inhalation and if swallowed, **R36/37/38**:

Irritating to eyes, respiratory system and skin, **R43**: May cause sensitization by skin contact

SAFETY PHRASES: **S7/9**: keep container tightly close and in a well ventilated place, **S16**: keep

away from sources of ignition- no smoking, **S29**: do not empty into drains, **S33**: take

precautionary measures against static discharges, **S36/37/39**: wear suitable protective clothing,

gloves and eye/face protection, **S45**: in case of accident or if you feel unwell, seek medical

advise immediately (show the label where possible)

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### Section 16. Other Information

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HMIS:

Health=1

Flammability=2

Reactivity=1