

## Section 1. Identification of the Mixture and of the Company

Trade Name: **EasyFlo Spray FR Liquid Plastic Part A**  
 Product Codes: EasyFloSprayFRA  
 Use of Preparation: Part A of two-part liquid polyurethane casting resin  
 Chemical Name: Methylene bis(phenylisocyanate) and flame retardant  
 Synonym(s): Diphenylmethane diisocyanate, Methylene bis(phenylisocyanate), MDI  
 Company: Polytek Development Corp.  
 55 Hilton St. Easton, PA 18042 USA  
 Telephone: 610-559-8620  
[csalisbury@polytek.com](mailto:csalisbury@polytek.com)  
 EU Only Representative: Stewardship Solutions  
 Green Lowe Farm, Shawclough Rd  
 Waterfoot, Rossendale, Lancs.BB4 9SA, UK  
 Telephone: (+44) 01706 220901  
 Emergency Telephone: 610-559-8620 (9 am to 5 pm EST)

## Section 2. Hazards Identification

HAZARD CLASSIFICATION (1999/45/EC): Harmful, Xn

HEALTH HAZARDS:

Harmful by inhalation

Harmful if swallowed

Irritating to eyes, respiratory system, and skin

May cause sensitization by inhalation and skin contact

CHRONIC SYMPTOMS: Long-term exposure to vapor may cause respiratory sensitization.

Repeated contact may cause skin sensitization.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Bronchitis, asthma, and other respiratory complaints

EXPLOSION HAZARD: Reaction with water liberates carbon dioxide. Pressure buildup in a sealed container may cause explosion.



## Section 3. Composition/Information on Ingredients

<u>Chemical Name</u>	<u>CAS Number/ EINECS Number</u>	<u>% of Product</u>	<u>Hazard Classification</u>
Diphenylmethane diisocyanate, (Polymeric MDI), contains 4,4'-methylenediphenyl diisocyanate	9016-87-6 (Contains 101-68-8/ 202-966-0)	80-90	Xn - R20; Xi - R36/37/38, R42/43
Proprietary fire retardant	Proprietary	10-20	Xn, - R22

## Section 4. First-Aid Measures

EYE CONTACT: Flush with copious amount of water. Remove contact lenses, if present, after the first 5 min., then continue flushing. Seek medical attention.

SKIN CONTACT: Wipe off. Wash with industrial cleanser or soap and warm water. Or, if available, use a polyglycol-based skin cleanser or corn oil: both have been shown to be more effective than soap and water. Discard contaminated items that cannot be decontaminated (i.e., leather watch bands, belts and shoes).

INHALATION: Remove to fresh air. Perform artificial respiration if necessary. Qualified medical personnel may administer oxygen. Seek medical attention. Note to physician: Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms may be delayed. Persons receiving significant exposure should be observed for 24-48 hours for signs of respiratory distress.

INGESTION: Seek medical attention. Do not induce vomiting unless so directed by a medical professional.

## Section 5. Fire-Fighting Measures

FLASH POINT: >200 °C (estimated)

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, or water fog or fine spray.

THERMAL DECOMPOSITION PRODUCTS: May include carbon monoxide, carbon dioxide, nitrogen oxides, and hydrogen cyanide.

OTHER INFORMATION: Firefighters wear full-face positive pressure breathing apparatus and full chemical protective suit. Violent steam generation or eruption may occur upon application of water stream to hot product.

## Section 6. Accidental Release Measures

Clear non-emergency personnel from the area. Avoid contact with sources of ignition. Spill response personnel wear protective clothing to prevent inhalation and eye and skin contact (see Section 8). Contain spill to minimize environmental contamination. Absorb spilled material with an absorbent such as sand or earth. Collect and containerize material. Do not seal containers of spill residue since carbon dioxide is generated upon contact with moisture and dangerous pressure buildup can occur. Decontaminate floor area with a mixture of water, ammonia, and isopropyl alcohol. Clean floor before material reacts with moisture in the air and forms a difficult to remove rubber. Dispose of contaminated materials as hazardous waste in accordance with the Environmental Protection Act of 1990.

## Section 7. Handling and Storage

HANDLING: Avoid breathing vapor. Use in adequately ventilated area. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke in work area. Wash hands after handling. See also Section 8 of MSDS.

STORAGE: Store at room temperature in a well-ventilated area. Do not store above 40°C. Store in tightly closed container and protect from atmospheric moisture.

## Section 8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Provide general and/or local exhaust to maintain airborne concentrations below exposure limits.

MAXIMUM AIRBORNE EXPOSURE LIMITS:

UK WEL	8-Hour TWA:	0.02 mg/m <sup>3</sup> (for -NCO, Isocyanates)
UK WEL	15-Min. STEL:	0.07 mg/m <sup>3</sup> (for -NCO, Isocyanates)
ACGIH	TWA	0.005 ppm

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION: In the absence of good ventilation, use a respirator equipped with organic vapor cartridges. Respirators should conform to the EN 405.

HAND: Chemical protective gloves conforming to EN 374 are recommended.

EYES: Eye protection conforming to EN 166 is recommended.

SKIN: When handling bulk quantities of this material, chemical protective clothing conforming to EN 368 is recommended.

## Section 9. Physical & Chemical Properties

APPEARANCE: Clear yellow liquid  
ODOUR: Slightly sweet acrid odour  
VISCOSITY: 40 cP @ 25 °C  
pH: Not determined  
BOILING POINT: Not determined  
MELTING POINT: Not applicable  
FLASH POINT: >200 °C (estimated)  
AUTOFLAMMABILITY: No data available  
EXPLOSIVE PROPERTIES: Not explosive  
OXIDISING PROPERTIES: Not an oxidizer  
VAPOUR PRESSURE: 0.0007 mm Hg @ 20 °C  
RELATIVE VAPOUR DENSITY (Air=1): >1  
SPECIFIC GRAVITY: 1.2 @ 25°C  
SOLUBILITY IN WATER: Insoluble in water, reacts with evolution of CO<sub>2</sub>  
SOLUBILITY IN SOLVENT: Soluble in alcohols (but avoid since reaction occurs)

## Section 10. Stability and Reactivity

CHEMICAL STABILITY: Stable under recommended storage conditions.  
CONDITIONS TO AVOID: Temperatures <24 °C and >40 °C. Avoid moisture.  
INCOMPATIBILITIES: Avoid contact with water, acids, bases, alcohols, oxidizers, metal compounds, and amines. Reaction with water generates carbon dioxide, and results in heat and pressure buildup in closed systems.  
HAZARDOUS DECOMPOSITION PRODUCTS: Depends on temperature, air supply and presence of other materials (potentially isocyanate vapor, carbon monoxide, nitrogen oxides, and traces of hydrogen cyanide).

## Section 11. Toxicological Information

SKIN: Irritant  
EYES: Irritant  
INHALATION: Irritant. Risk of sensitisation.  
INGESTION: Low oral toxicity, but ingesting large amounts may induce severe gastrointestinal effects.  
CHRONIC EFFECTS: Repeated or prolonged exposure to isocyanates above exposure limits may cause an allergic sensitisation of the respiratory tract causing an asthma-like response upon re-exposure. Repeated overexposure to isocyanates has been associated with lung damage. Repeated or prolonged dermal contact with this product may cause allergic skin sensitisation in some individuals

## Section 12. Ecological Information

ECOTOXICITY: No formal data is available; but product should not be allowed to enter water courses based on data available for concentrated isocyanate solutions.

## Section 13. Disposal Considerations

Dispose according to local and national regulations

## Section 14. Transport Information

NOT A HAZARDOUS MATERIAL FOR SHIPPING PURPOSES, BASED ON *UNITED NATIONS RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS*.  
UN NUMBER: Not applicable;  
SHIPPING NAME: Not applicable

## Section 15. Regulatory Information

HAZARD SYMBOL: Harmful, Xn

RISK PHRASES:

R20 - Harmful by inhalation  
R22 - Harmful if swallowed  
R36/37/38 - Irritating to eyes, respiratory system, and skin  
R42/43 - May cause sensitisation by inhalation and skin contact

SAFETY PHRASES:

S24/25 – Avoid contact with the skin and eyes  
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
S28 -After contact with skin, wash immediately with water or industrial hand cleaner  
S38 - In case of insufficient ventilation, wear suitable respiratory equipment  
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show label where possible)

OTHER PHRASES:

Keep containers tightly closed when not in use  
Protect from ingress of moisture  
Contains isocyanates

REACH: Substances in this formulation for which export is >1 tonne/yr to EU were pre-registered with ECHA prior to Dec. 1, 2008.

## Section 16. Other Information

TRAINING ADVICE: All personnel using/handling this product should be trained in proper chemical handling and the need for and use of control measures including protective equipment.

RECOMMENDED USES AND RESTRICTIONS: This product is intended for industrial use only. Further details of intended applications and guidance relating to technical aspects of use are contained in the relevant Technical Bulletin/Advice sheet.

REVISION INDICATOR: First EU version SDS. Version 1.0.

DISCLAIMER: The information contained herein has been compiled from data that is, to the best of our knowledge, valid at the date of issue. However, as the conditions under which the product is used are not under our control, the user is responsible to ensure that a risk assessment is undertaken in accordance with current legislation and that all necessary precautions are employed.