

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Durabond U04FL Urethane Adhesive
 Item number: Part A Part of kit: 29342
 Product Type: Adhesive
 Company Address: Loctite Corporation
 1001 Trout Brook Crossing
 Rocky Hill, Connecticut. 06067
 Medical Emergency Number: (860) 571-5100
 Fax: (860) 571-5465

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	%	Exposure Limits
Methylene bisphenyl isocyanate	101-68-8	20-30	TWA: 0.051 mg/m3 ACGIH TWA: 0.005 ppm ACGIH CEIL: 0.02 ppm OSHA CEIL: 0.2 mg/m3 OSHA
Homologues of methylene bisphenyl isocyanate	9016-87-9	40-60	Not established.
Polyether glycol	25190-06-1	40-60	Not established.
Bis (2-ethylhexyl) phthalate	117-81-7	5-10	TWA: 5 mg/m3 ACGIH TWA: 5 mg/m3 OSHA
Modified silicon dioxide	67762-90-7	1-5	TWA: 10 mg/m3 ACGIH total TWA: 3 mg/m3 ACGIH respirable TWA: 6 mg/m3 Other total TWA: 15 mg/m3 OSHA total TWA: 5 mg/m3 OSHA respirable
Titanium dioxide	13463-67-7	0.5-1	TWA: 10 mg/m3 ACGIH TWA: 15 mg/m3 OSHA total

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

PHYSICAL STATE:Liquid. COLOR:Colorless to straw colored ODOR: Slight Musty.

WARNING! MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.
 MAY CAUSE EYE, SKIN, AND RESPIRATORY TRACT IRRITATION.

Potential Health Effects

Eye:
Mild eye irritant. Corneal damage may occur.

Skin:
Allergic skin reaction. Itching. Rash. Moderate skin irritation.
Redness.

MATERIAL SAFETY DATA SHEET

Page 02 of 06

Product Name: Durabond® U04FL Urethane Adhes
Item No.: Part A

Ingestion:

Irritating and corrosive to mouth, stomach, and digestive tract. Sore throat. Nausea/vomiting.

Inhalation:

Allergic respiratory reaction. Sensitization. Moderate respiratory tract irritation. Shortness of breath. Coughing. Cross sensitization with other isocyanates may occur. Sensitized persons should not be exposed to unreacted methylene bisphenyl isocyanate.

Conditions Aggravated by Exposure:

Respiratory disorders. Skin disorders.

Chronic:

Detailed information provided in section 11.

4. FIRST AID MEASURES

Eye:

Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin:

Immediately flush skin with plenty of water (using soap, if available) for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if symptoms occur.

Ingestion:

Keep individual calm. DO NOT induce vomiting. Get medical attention.

Inhalation:

Remove to fresh air. If symptoms develop and persist, get medical attention. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Note to Physician:

Following severe exposure medical follow-up should be monitored for at least 48 hours. Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flash Point:

CLOSED CUP : 415.F (213.C). Pensky-Martens.

In case of fire, use water spray (fog), foam, dry chemicals, or CO2.

Extinguishing Media:

Flammable Limits:

Not available.

Special Fire Fighting Procedures:

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Use cold water to cool containers exposed to fire.

MATERIAL SAFETY DATA SHEET

Page 03 of 06

Product Name: Durabond® U04FL Urethane Adhes
Item No.: Part A

Hazardous Combustion Products:

Toxic gases. Irritating organic fragments. Isocyanates.

Unusual Fire or Explosion Hazards:

Polymeric methylene bis isocyanate can polymerize and decompose at temperatures greater than 400o F. As a result pressure can build up in closed containers. Explosive rupture is possible.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak:

Absorb with an inert absorbent. Place into an unsealed container for transfer to a well-ventilated area. Treat with a neutralizing solution composed of 90% water, 3 to 8% concentrated ammonia, and 2% detergent. Use about 10 parts of neutralizer per part of product. Let stand at least 24 hours to allow carbon dioxide to escape.

7. HANDLING AND STORAGE

Handling:

Do not breathe vapor or mist. Avoid contact with eyes. Avoid contact with skin and clothing. Wash thoroughly after handling.

Storage:

Keep container tightly closed. Keep in a cool and well-ventilated area. Store between 68 to 86.F (20 to 30.C)

For information on product shelf life, contact Loctite Customer Service at 1(800)243-4874

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Use local exhaust ventilation to maintain airborne concentrations below established exposure limits.

Eye/Face Protection:

Chemical splash goggles or safety glasses with side shields.

Skin Protection:

Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact. Butyl gloves. Nitrile gloves. Polyvinyl alcohol gloves may be preferred.

Respiratory Protection:

Use a NIOSH approved air purifying respirator with an organic cartridge if there is potential to exceed exposure limits.

See Section 2 COMPOSITION/INFORMATION ON INGREDIENTS for exposure limits

9. PHYSICAL AND CHEMICAL PROPERTIES

Color: Colorless to straw colored
Material State: Liquid.
Odor: Slight Musty.

MATERIAL SAFETY DATA SHEET

Page 04 of 06

Product Name: Durabond® U04FL Urethane Adhes
Item No.: Part A

Boiling point: 406.F (208.C)
pH: Not applicable.
Solubility in Water: Reacts slowly with water to liberate carbon dioxide.
Specific gravity: 1.21
VOC: Not available.
Vapor Pressure: <0 kPa (@ 20.C)
Vapor density: 8.5 (Air = 1)
Evaporation Rate: Not available.

10. STABILITY AND REACTIVITY

Stability:

Stable.

Conditions to Avoid:

Heat.

Incompatibility:

Oxidizing agents, Acids, Alkalis, Moisture.

Hazardous Polymerization:

May occur. Materials that react with isocyanate. Temperatures above 204oC (400oF) Moisture.

Hazardous Decomposition Products:

None known

11. TOXICOLOGY INFORMATION

Product Toxicology Data:

ORAL (LD50): Acute: >15800 mg/kg [Rat].

DERMAL (LD50): Acute: 7900 mg/kg [Rabbit].

Ingredient	NTP	Carcinogen	
		IARC	OSHA
Methylene bisphenyl isocyanate	No	N/A	No
Homologues of methylene bisphenyl isocyanate	No	N/A	No
Polyether glycol	No	No	No
Bis (2-ethylhexyl) phthalate	2	N/A	No
Modified silicon dioxide	No	No	No
Titanium dioxide	No	No	No

Key to abbreviations:

NTP 2 - Reasonably anticipated carcinogen. IARC N/A - Not applicable.

Ingredient	Health Effects/Target organs
Methylene bisphenyl isocyanate	Allergen. Irritant. Respiratory.
Homologues of methylene bisphenyl isocyanate	Allergen. Irritant. Kidney. Liver. Respiratory.
Polyether glycol	No target organs.
Bis (2-ethylhexyl) phthalate	Developmental. Kidney. Liver. Reproductive. Central nervous system. Some evidence of carcinogenicity.
Modified silicon dioxide	No target organs.

MATERIAL SAFETY DATA SHEET

Page 05 of 06

Product Name: Durabond® U04FL Urethane Adhes
Item No.: Part A

Titanium dioxide Irritant. Respiratory.

12. ECOLOGICAL INFORMATION

Ecological Information:
None known

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal:
Dispose according to EPA and local governmental regulations.
EPA Hazardous Waste Number:
Not applicable.

14. TRANSPORTATION INFORMATION

Domestic Transportation (D.O.T. 49 CFR)-GROUND

Shipping Description:
Not regulated.
Exceptions:
Not applicable.

International Air Transportation (ICAO/IATA)-

Shipping description:
Not regulated.
Exceptions:
Not applicable.

Marine pollutant:
None known

15. REGULATORY INFORMATION

SARA Title III Section 313 Chemicals:
Methylene bisphenyl isocyanate, Homologues of methylene bisphenyl
isocyanate, Bis (2-ethylhexyl) phthalate

SARA Title III Section 311/312:
Reactive, Immediate health hazard, Delayed health hazard

Toxic Substances Control Act:
All components are listed on or are exempt from listing on the Toxic
Substances Control Act Inventory.

TSCA Section 12(b) annual:
None.

TSCA Section 12(b) one time:
Bis (2-ethylhexyl) phthalate

Canadian Inventory Status:
All components are listed on or are exempt from listing on the Canadian
Domestic Substances List.

MATERIAL SAFETY DATA SHEET

Page 06 of 06

Product Name: Durabond® U04FL Urethane Adhes
Item No.: Part A

California Proposition 65:

This product contains chemicals known to the state of California to cause cancer. (Bis (2-ethylhexyl) phthalate).

16. OTHER INFORMATION

NFPA Code:

Health: 3
Flammability: 1
Reactivity: 1
Special: None

HMIS Code:

Health: 3 *

Flammability: 1
Reactivity: 1
Protective Equipment: See Section 8.

Prepared by: Safety, Health and Regulatory Affairs - North America