



MATERIAL SAFETY DATA SHEET

MSDS Name: Titebond HiPURformer Kit
MSDS Number: M745-4002, M745-4003, M745-4004, M745-4005 (1341)
Revision Date: 8/3/01

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Titebond HiPURformer Kit
CAS Number: none
HMIS Hazard Rating: Health: 2 Fire: 1 Reactivity: 1

Supplier: RPM, WFG.
3194 Hickory Blvd.
Hudson, NC 28638
Phone: 828-728-8266

Manufacturer Identification: Franklin International
2020 Bruck Street
Columbus OH 43207
www.Titebond.comFranklin International

Contact: Franklin Technical Services
Telephone/Fax: (800) 877-4583 (614) 445-1493
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(614) 445-1300
Chemtrec (24 Hour): (800) 424-9300
Chemtrec International: (703) 527-3887

Product Class: MDI
Product Use: reactive hot melt adhesive
Product Code: 7005, 57004, 57003

Division: Construction Adhesives & Sealants

SECTION 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

Table with 3 columns: Hazardous Ingredients, CAS Number, Percent. Row: 4,4'-diphenylmethane diisocyanate, 101-68-8, 3.00

The above information is for Titebond WW30 and Titebond WW60.

Titebond MP75:

Table with 3 columns: Hazardous Ingredients, CAS Number, Percent. Row: 4,4'-diphenylmethane diisocyanate, 101-68-8, 1.0

OSHA PELs & ACGIH TLVs are listed in Section 8 where applicable.

### SECTION 3 - HAZARD IDENTIFICATION

#### EMERGENCY OVERVIEW:

POTENTIAL SKIN AND RESPIRATORY SENSITIZER. Contains isocyanate containing polymers. In its normal state, this product is a solid with little or no adverse effects. However, when the product is heated and/or liquified, MDI vapors and/or aerosols can be released. If spilled, absorb product while utilizing appropriate personal protective equipment and shovel into open container. Do not make pressure tight.

#### ROUTES OF ENTRY:

Ingestion: Yes  
Inhalation: Yes  
Skin: Yes  
Eye: Yes

#### INHALATION:

At room temperature this product is not expected to be an inhalation hazard. In normal usage, product is heated and may cause respiratory sensitization in susceptible individuals. MDI concentrations below exposure guidelines may cause allergic reactions in individuals already sensitized. Symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Effects may be delayed. Impaired lung function (decreased ventilation capacity) has been associated with overexposure to isocyanates.

#### INGESTION:

No hazard is expected in normal industrial use. Do not eat, drink, or smoke around chemicals.

#### SKIN:

May cause skin irritation. Material may be absorbed through the skin leading to allergic reaction or respiratory sensitization. Material may stick to skin causing irritation upon removal. May stain skin.

#### EYE:

May cause slight eye irritation. Corneal injury is unlikely.

#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Respiratory conditions such as asthma.

#### CARCINOGENICITY:

IARC: No  
NTP: No  
OSHA: No  
ACGIH: No

#### REPRODUCTIVE TOXICITY:

In laboratory animals, MDI/polymeric MDI do not produce birth defects; other fetal effects occurred only at doses which were toxic to the mother.

#### TARGET ORGANS:

Eyes, skin, and respiratory tract.

#### SECTION 4 - FIRST AID MEASURES

##### INHALATION:

Remove to fresh air. If not breathing give mouth to mouth resuscitation. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

##### INGESTION:

If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

##### EYE:

Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel. Material containing MDI may react with moisture of the eye forming thick material which may be difficult to wash from the eye.

#### SECTION 5 - FIRE-FIGHTING MEASURES

Flammability Class (OSHA)	IIIB
Flash Point:	> 350.°F
Explosive Range:	Not Applicable

##### EXTINGUISHING MEDIA:

Carbon dioxide, dry chemical, or foam. For large scale fires, alcohol resistant foams are preferred if available. Water may be used as a blanket for fire extinguishment. If water is used, it should be used in a very large quantity. The reaction between water and isocyanate may be vigorous. If possible, contain fire run off water.

##### HAZARDOUS COMBUSTION PRODUCTS:

When burning, product will release carbon monoxide, carbon dioxide, nitrogen oxide fumes, and isocyanate vapors.

##### FIRE FIGHTING PROCEDURES:

Fire fighters should use positive pressure self-contained breathing apparatus and full protective clothing. Down-wind personnel must be evacuated.

#### SECTION 6 - ACCIDENTAL RELEASE MEASURES

##### CLEAN-UP:

Spread absorbent over spill and shovel product/absorbent mixture into an approved container. If product has dried, scrape up and place in an approved container. Do not make pressure tight.

##### EMERGENCY MEASURES:

Isolate hazard area. Keep unnecessary and unprotected personnel from entering area. Wear all appropriate personal protection equipment (PPE) (see Section 8).

#### SECTION 7 - HANDLING AND STORAGE

##### HANDLING:

In accordance with good manufacturing practices, good ventilation of

the processing area is recommended. Gloves are recommended as product is difficult to remove from effected areas if contact with skin occurs.

STORAGE:

Store in tightly closed containers to protect from atmospheric moisture. Replace outage with inert nitrogen. Store at temperature of 75F to 105F.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational Exposure Limits

	ACGIH TLV	ACGIH TLV-C	ACGIH STEL	OSHA STEL	OSHA PEL
4,4'-diphenylmethane diisocyanate	N/est	N/est	N/est	N/est	N/est

The ACGIH TLV for 4,4'-diphenylmethane diisocyanate is .005 ppm. The OSHA Ceiling for 4,4'-diphenylmethane diisocyanate is .02 ppm. The OSHA Ceiling for 4,4'-diphenylmethane diisocyanate is 0.02 ppm

ENGINEERING CONTROLS:

Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RESPIRATORY PROTECTION:

Atmospheric levels should be maintained below the exposure guidelines. For emergency and other conditions where an exposure guidelines may be exceeded, use an approved positive-pressure self contained breathing apparatus or supplied air respirator with an auxiliary self-contained air supply.

EYE PROTECTION:

Use safety glasses.

SKIN PROTECTION:

Use impervious materials made of butyl or nitrile rubber where skin contact may occur.

GENERAL:

Safety shower and eye wash station.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form:	Solid
Appearance/Color:	White in solid state
Odor:	Mild
Solubility (in water):	Nil
pH Value:	Not Applicable
Boiling Range/Point:	Not Applicable
Evaporation Rate:	Slower than n-Butyl Acetate
% Volatile:	Not Applicable
Specific Gravity:	1.17
VOC:	0 g/l

SECTION 10 - STABILITY AND REACTIVITY

Stability:	This product is stable
Hazardous Polymerization:	Hazardous polymerization will not occur

CONDITIONS TO AVOID:

Stable when stored under normal conditions. Decomposition begins at 350F (177C).

INCOMPATIBILITY:

Water, acids, bases, alcohols, metal compounds, and surface active materials. Avoid water as it reacts to generate heat, CO<sub>2</sub>, and insoluble urea. Some reactions may be vigorous.

HAZARDOUS DECOMPOSITION PRODUCTS:

Excessive heating can produce isocyanate vapor, mist and other hazardous organic compounds. Decomposition may occur with incompatible reactants, especially strong bases, water or temperatures over 320F (160C).

SECTION 11 - TOXICOLOGICAL INFORMATION

This formulation has not been tested for toxicological effects.

SECTION 12 - ECOLOGICAL INFORMATION

This formulation has not been tested for environmental effects.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

Disposal of this product must comply with all applicable federal, state and local regulations.

CONTAINER DISPOSAL:

Disposal of this container should comply with all applicable federal, state and local regulations.

SECTION 14 - TRANSPORT INFORMATION

UN Number	None
UN Pack Group	N/A
UN Class	Nonhaz
ICAO/IATA Class	Nonhazardous
IMDG Class	Nonhazardous
Shipping Name	Nonhazardous

Packaging may not be approved for shipping by air. Please contact Franklin International for further information.

SECTION 15 - REGULATORY INFORMATION

SARA TITLE III SECTION 313:

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

Chemical Name	CAS Number	Percent
4,4'-diphenylmethane diisocyanate	101-68-8	3.00

TSCA (Toxic Substances Control Act Inventory):

All components of this product are listed on the TSCA inventory except

as exempted.

PENNSYLVANIA:

Hazardous component required to be listed at 1% or greater:

4,4'-diphenylmethane diisocyanate 101-68-8

Non-hazardous components required to be listed at 3% or greater:

reacted urethane prepolymer, mixture

NEW JERSEY:

reacted urethane prepolymer, mixture

4,4'-diphenylmethane diisocyanate, 101-68-8

SECTION 16 - OTHER INFORMATION

DISCLAIMER:

While the information and recommendations set forth herein are believed to be accurate as of the data hereof, Franklin International makes no warranty, express or implied, with respect thereto and disclaims all liability from reliance thereon.

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