

# Material Safety Data Sheet

Data prepared: January 26, 2007

Data revised: 1st edition



## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

**Product Name:** New Stronger-Faster Gorilla Glue®  
**Product Type:** Polyurethane adhesive for wood and wood substrates  
**Distributor:** The Gorilla Glue Company  
4550 Red Bank Expressway  
Cincinnati, OH 45227  
Tel: (513) 271-3300  
Fax: (513) 527-3742  
Emergency: During business hours: The Gorilla Glue Company: (800) 966-3458.  
Outside business hours: ProSAR International Poison Center: (800) 420-7186.

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	% content
Urethane prepolymer	trade secret	40-50
Polymeric MDI*	9016-87-9	50-60

\*Polymeric MDI is a mixture of 4,4'-Diphenylmethane-diisocyanate, isomers and homologues.

## 3. HAZARDS IDENTIFICATION

Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.

## 4. FIRST AID MEASURES

<b>Inhalation</b>	If aerosol or vapour is inhaled in high concentrations: Move affected individual to fresh air and keep him warm, let him rest. If there is difficulty in breathing; call a doctor.
<b>Eye contact</b>	Flush eyes for at least 10 minutes while holding eyelids open. Contact a doctor.
<b>Skin contact</b>	Remove contaminated clothes immediately, and wash skin with a cleanser based on polyethylene glycol or with plenty of warm water and soap. Consult a doctor in the event of a skin reaction.
<b>Ingestion</b>	Product is not intended to be ingested or eaten. If this product is ingested, severe irritation of the gastrointestinal tract may occur, and should be treated symptomatically. Do not induce the patient to vomit. Call a doctor or ambulance.

## 5. FIRE FIGHTING MEASURES

<b>Upper flammable limit (UFL):</b>	Not determined
<b>Lower flammable limit (LFL):</b>	Not determined
<b>NFPA:</b>	Health – 3, Flammability – 1, Reactivity – 1
<b>HMIS:</b>	Health – 3, Flammability – 1, Reactivity – 1

### General fire hazards

Down-wind personnel must be evacuated. Do not reseal contaminated containers; a chemical reaction generating carbon dioxide gas pressure may occur resulting in rupture of the container. Dense smoke is emitted when product is burned without sufficient oxygen. When using water spray, boil-over may occur when product temperature reaches the boiling point of water, and the reaction forming carbon dioxide will accelerate. MDI vapour and other gases may be generated by thermal decomposition.



### Special hazards in fire

In case of fire, formation of carbon monoxide, carbon dioxide, nitrogen oxide, isocyanate vapour, and traces of hydrogen cyanide is possible.

### Extinguishing Media

Carbon dioxide, dry powder, and foam. In cases of large scale fires, alcohol-resistant foams are preferred. If water is used, it should be used in very large quantities. The reaction between water and isocyanate may be vigorous.

### Required special protective equipment for fire-fighters

Fire fighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling any combustion products.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Wear full-protective clothing and respiratory protection as required maintaining exposures during clean-up below the applicable exposure limits.

### Environmental precautions

Do not discharge spillage into drains.

### Clean-up procedures

Remove mechanically; cover remainders with wet absorbent material (e. g. sand, earth, sawdust). After approx. one hour transfer to waste container and do not seal (evolution of CO<sub>2</sub>). Keep damp in a safe ventilated area for several days.

## 7. HANDLING AND STORAGE

### Handling

Avoid contact with skin and eye. Do not smoke, eat and drink at the work-place.

Ventilation: If vapour or mist is generated during processing or use, local exhaust ventilation should be provided to maintain exposures below the applicable limits.

Personal protection: see Section 8.

### Storage

Keep product away from sources of alcohols, amines, or other materials that react with isocyanates. Avoid prolonged heating above 160°C/320°F. Store the product in tightly closed containers in a well-ventilated place and in accordance with national regulations. Keep out of reach of children.

## 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

For exposure controls see Section 15.

### Component exposure limits

Name	CAS no.	Type	ppm	mg/m <sup>3</sup>
4,4'-Diphenylmethane diisocyanate	101-68-8	OSHA PEL	0.02	0.2
		ACGIH (TLV-TWA)	0.005	

### Personal protection equipment

#### General

Wear suitable protective clothing, protective gloves and protective goggles/mask.

#### Suitable materials for safety gloves

Natural rubber/natural latex – NR ( $\geq 0.5$  mm)

Polychloroprene – CR ( $\geq 0.5$ mm)

Nitrile rubber – NBR ( $\geq 0.35$ mm)

Butyl rubber – IIR ( $\geq 0.5$  mm)

Fluorinated rubber – FKM ( $\geq 0.4$  mm)



## Personal protection equipment (continued)

<b>Respiratory protection</b>	Required in insufficiently ventilated working areas and during spraying. An air-fed mask, or for short periods of work, a combination of charcoal filter and particulate filter is recommended.
<b>Eyes protection</b>	Chemical goggles or full face shields are recommended. An eyewash fountain and safety shower should be available in the work area. Contact lenses should not be worn when working with this product.
<b>Skin protection</b>	Wear special gloves and working clothes to avoid skin irritation or sensitization. Depending on operation, chemical resistant boots, overshoes, and apron may also be required. Suitable materials for clothing: Polyethylene/ethylene vinyl alcohol laminates (PE/VAL) has been reported as an effective material of construction for chemical protective clothing for MDI.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical form</b> . . . . .	Liquid
<b>Color</b> . . . . .	Dark-Brown
<b>Odor</b> . . . . .	Earthy, musty
<b>Boiling point</b> . . . . .	>300°C
<b>Flash point</b> . . . . .	>250°C
<b>Vapour pressure</b> . . . . .	<0,00001 mbar at 20° C (diphenyl-methane-diisocyanate)
<b>Specific gravity</b> . . . . .	Approx. 1,14 g/cm <sup>3</sup> at 20° C
<b>Viscosity</b> . . . . .	4,000 – 7,000 mPa.s at 25° C (Brookfield sp. 6/20 rpm)
<b>Solubility in water</b> . . . . .	reacts
<b>Percent VOC</b> . . . . .	0%

## 10. STABILITY AND REACTIVITY

### Stability

The product is stable under the recommended handling and storage conditions (see section 7).

### Hazardous decomposition products

By exposure to high temperature, hazardous decomposition products may develop, such as isocyanate vapour and mist, carbon dioxide, carbon monoxide, nitrogen oxide, and traces of hydrogen cyanide.

### Hazardous reaction

Exothermic reaction with amines and alcohols; reacts with water forming heat, CO<sub>2</sub>, and insoluble polyurea. The combined effect of CO<sub>2</sub> and heat can produce enough pressure to rupture a closed container.

## 11. TOXICOLOGICAL INFORMATION

<b>Acute Toxicity</b>	LD <sub>50</sub> oral, rat: > 5000 mg/kg Skin and mucous membrane compatibility, rabbit: Skin 8 hour's exposure – slight reddening. Eyes – moderate reddening and slight swelling.
<b>Inhalation</b>	Over-exposure may cause irritating effects on nose throat and respiratory tract.
<b>Skin contact</b>	Prolonged or repeated contact may result in tanning and irritating effects.
<b>Eye contact</b>	Over-exposure may cause irritating effects on eyes.



## 12. ECOLOGICAL INFORMATION

Do not allow the product to escape into waters, wastewater or soil.

<b>Biodegradability</b>	0% after 28 days
<b>Acute fish toxicity</b>	LC0 > 1,000 mg/l (96 hrs.)
<b>Toxicity for daphnia</b>	EC 50 > 1,000 mg/l (24 hrs.)
<b>Acute bacteria toxicity</b>	EC 50 > 100 mg/l (3 hrs.)

## 13. DISPOSAL CONSIDERATIONS

The product remnants are classified as chemical waste. Dispose of waste according to Local, State, Federal, and Provincial Environmental Regulations.

## 14. TRANSPORTATION INFORMATION

This preparation is not classified dangerous according to international transport regulations ADR/RID/IMDG/IATA.

Other information: This product is not dangerous cargo. Irritating to skin and mucous membranes. Keep separated from foodstuffs.

## 15. REGULATION INFORMATION

This product and its components are listed on the TSCA 8(b) inventory.

### Symbol



### Hazard designation

Xn – Harmful.

### Contains

4,4'- Diphenylmethane diisocyanate (MDI), isomere.

### R-phrases

R20 – Harmful by inhalation.  
R36/37/38 – Irritating to eyes, respiratory system and skin.  
R42/43 – May cause sensitization by inhalation and skin contact.

### S-phrases

S23 – Do not breathe gas/fumes/vapour/spray.  
S36/37 – Wear suitable protective clothing and gloves.  
S45 – In case of accident or if you feel unwell, seek medical advice immediately.  
(show the label where possible).

Any existing national regulations on the handling of isocyanates must be observed.

## 16. OTHER INFORMATION

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or Provincial, and Local laws.

**Date** 01/26/2007

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