

Material Safety Data Sheet

Data prepared: June 4, 2002

Data revised: August 2005



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

Product Name: 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	60-70
Polymeric MDI*	9016-87-9	30-40

*MDI: 4,4'-Diphenylmethane diisocyanate. Polymeric MDI is a mixture of monomeric MDI, isomeres and homopolymer.

3. HAZARDS IDENTIFICATION

Vapors from the product may be irritating to the eyes, respiratory system and skin. MDI in product is a strong sensitiser, resulting in possible allergic reactions. Skin and eye contact may cause irritation and sensitisation.

4. FIRST AID MEASURES

Inhalation	Move affected individual to fresh air, administer oxygen and artificial respiration as necessary. Call doctor if any problem persists.
Eye contact	Flush eyes for at least 20 minutes while holding eyelids open. Seek medical attention.
Skin contact	Remove contaminated clothes immediately, and wash skin thoroughly with soap and warm water. Get medical attention if irritation or sensitization develops or persists.
Ingestion	Product is not intended to be ingested or eaten. If this product is ingested, severe irritation or blockage of the gastrointestinal tract may occur, and should be treated symptomatically. Call doctor or ambulance.

5. FIRE FIGHTING MEASURES

Upper flammable limit (UFL):	Not determined
Lower flammable limit (LFL):	Not determined
NFPA:	Health – 3, Flammability – 1, Reactivity – 1
HMIS:	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 vapor 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 vapor, 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 to maintain exposures during clean-up below the applicable exposure limits.

Environmental precautions

Do not discharge spillage into drains. Dam remainders with sand, earth, or other suitable absorbent. MDI in contaminated areas can be neutralised with an ammonia/water solution (90% water, 3-8% ammonia, plus 2% detergent. Use 10 parts neutraliser per one part isocyanate.)

Clean-up procedures

Dispose of spilled material in accordance with federal, state, and local regulations in permitted hazardous waste management facility. Incineration is the preferred method of disposal. Empty containers must be handled with care due to product residue. Do not heat or cut empty containers with electric or gas torch.

7. HANDLING AND STORAGE

Handling

Avoid skin and eye contact. Avoid inhalation of fumes. Smoking, eating and drinking are not allowed in the work-place. Personal protection: see Section 8.

Storage

Keep product away from sources of alcohols, amines, or other materials that react with diisocyanates. Avoid prolonged heating above 160°C/320°F. Store 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.	ppm	mg/m ³
4,4'-Diphenylmethane diisocyanate	101-68-8	0.02	0.2

Personal protection equipment

General

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

Suitable materials for safety gloves

Natural rubber/natural latex – NR (≥ 0.5 mm)
Polychloroprene – CR (≥ 0.5 mm)
Nitrile rubber – NBR (≥ 0.35 mm)
Butyl rubber – IIR (≥ 0.5 mm)



Personal protection equipment (continued)

Suitable materials for clothing	Polyethylene/ethylene vinyl alcohol laminate (PE/VAL) has been reported as an effective material of construction for chemical protective clothing for MDI.
Respiratory protection	Must be used if concentration above the critical values.
Hand protection	Use protective lotion or gloves.
Eyes protection	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.
Skin protection	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.
Ventilation	If vapor or mist is generated during processing or use, local exhaust ventilation should be provided to maintain exposures below the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical form	Liquid
Color	Dark-brown
Odor	Mild amine
Boiling point	368°C (>694°F)
Flash point	>250°C (>482°F)
Vapour pressure	< 0,00001 mbar at 20°C (68°F)
Specific gravity	1,15 g/cm ³ at 20°C (68°F)
Viscosity	5,500 – 8,500 mPa.s at 25°C (77°F)
Solubility in water	Reacts
pH	Not applicable
Percent volatile	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 vapor 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, CO₂, and insoluble polyurea. The combined effect of CO₂ and heat can produce enough pressure to rupture a closed container.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity	LD ₅₀ oral, rat: > 5000 mg/kg
Carcinogenicity	Gorilla Glue, with the exception of unavoidable ubiquitous traces, does not contain any substances currently classified by EU Council Directive 67/548/EEC, its amendments and adaptations to technical progress, as a carcinogen category 1, 2 or 3.
Inhalation	May cause irritation of the mucous membranes of nose, throat or trachea.
Skin contact	Prolonged or repeated contact may result in dermatitis, either irritative or allergic.
Eye contact	May result in conjunctiva irritation and mild corneal opacity.
Medical information	Symptomatic treatment.



12. ECOLOGICAL INFORMATION

The product should not be discharged into drains or streams.

Biodegradability	0% after 28 days
Acute fish toxicity	LC0 = > 1000 mg/l (96 hrs.)
Toxicity for daphnia	EC 50 = > 1000 mg/l (24 hrs.)
Acute bacteria toxicity	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 product is not classified as hazardous material for transport.

UN number	-	Sea transport	
Packaging group	-	IMDG class	-
Land transport		Correct technical name	-
Transport class	-	Other information	-
Risk code	-	Air transport	
Name according to bill of freight	-	ICAO/IATA class	Not restr.
Other information	-	Correct technical name	-
		Other information	-

15. REGULATION INFORMATION

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

Hazard designation	Xn – Harmful.
Contains	4,4'- Diphenylmethane diisocyanate (MDI), isomere.
R-phrases	20 – Harmful by inhalation. 36/37/38 – Irritating to eyes, respiratory system and skin. 42/43 – May cause sensitization by inhalation and skin contact.
S-phrases	23 – Do not breathe gas/fumes/vapor/spray. 36/37 – Wear suitable protective clothing and gloves. 45 – 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 08/01/2005

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