

Safety Data Sheet
acc. to OSHA HCS

Printing Date 01/15/2014

Revision Number 1

Revision Date 01/15/2014

1 Identification

- **Product identifier**
- **Trade name: Millennium Series 4010 Urethane Wood Adhesive**
- **Relevant identified uses of the substance or mixture. Adhesive**
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Royal Coatings and Specialty Polymers
863 South East Main Street
Simpsonville, SC 29681
(864) 967-7691
- **Information department: Environment protection department.**
- **Emergency telephone number: ChemTrec: UNITED STATES 1(800)424-9300 INTERNATIONAL 703-527-3887**

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Eye Irrit. 2B H320 Causes eye irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS08

- **Signal word** Danger
- **Hazard statements**
Causes skin irritation.
Causes eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
- **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
In case of inadequate ventilation wear respiratory protection.

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Avoid breathing dust/fume/gas/mist/vapours/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific treatment (see on this label).

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 1

Physical Hazard = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

* 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Aromatic Isocyanate Prepolymer Adhesive Composition

· **Dangerous components:**

and Non-Dangerous Components:

1317-65-3	Limestone	25-50%
101-68-8	4,4'-methylenediphenyl diisocyanate	≤1.0%

* 4 First-aid measures

· **Description of first aid measures**

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Wipe excess from skin.

Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for 20 minutes under running water. Call a Doctor immediately.

· **After swallowing:**

Rinse out mouth with water. Drink 1 - 2 glasses of water but **DO NOT** induce vomiting. Do not give liquids to a drowsy, convulsing or unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Seek medical treatment.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray.
Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Protective clothing and respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste in accordance with federal state and local regulations.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Avoid prolonged or repeated contact with skin.
Avoid contact with eyes.
Wash thoroughly after handling.
Prevent formation of aerosols.
Open containers in a well ventilated area and avoid breathing headspace vapors.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store above 40F.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:**
Protect from contamination.
Protect product from freezing.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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- Control parameters

- Components with limit values that require monitoring at the workplace:

101-68-8 4,4'-methylenediphenyl diisocyanate ($\leq 1.0\%$)

PEL Short-term value: C 0.2 mg/m³, C 0.02 ppm

REL Short-term value: C 0.2* mg/m³, C 0.02* ppm

Long-term value: 0.05 mg/m³, 0.005 ppm

*10-min

TLV Long-term value: 0.051 mg/m³, 0.005 ppm

- Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls

- Personal protective equipment (see listings below)

- General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

- Breathing equipment: Not necessary if room is well-ventilated.

- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- Material of gloves

Nitrile rubber, NBR

Chloroprene rubber, CR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:



Tightly sealed goggles

Safety glasses with side shields.

- Body protection: Protective work clothing

9 Physical and chemical properties

- Information on basic physical and chemical properties

- General Information

- Appearance:

Form: Liquid

Color: Tan

- Odor: Characteristic

- Odour threshold: Not determined.

- pH-value: Not determined.

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· Change in condition	
Melting point:	Undetermined.
Boiling point:	Undetermined.
· Flash point:	> 100 °C (> 212 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	
Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Flammable limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not determined.
· Specific gravity at 20 °C (68 °F):	1.38 g/cm ³ (11.516 lbs/gal)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
VOC (Per EPA 24)	not available GMS/L
· Other information	VOC's < 30. g/l

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No further information is available.
- **Conditions to avoid** Temperatures below 40F (4.4C)
- **Incompatible materials:** Reacts with oxidizing agents.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

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11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

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

Oral	LD50	2200 mg/kg (mouse)
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- **Primary irritant effect:**
- **on the skin:** Skin irritant.
- **on the eye:** Irritating effect.
- **Sensitization:** Inhalation - Sensitization possible through inhalation.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

101-68-8	4,4'-methylenediphenyl diisocyanate	3
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- **NTP (National Toxicology Program)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** At present there are no ecotoxicological assessments.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Must be specially treated adhering to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

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14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

15 Regulatory information

- | | |
|--|--|
| · Safety, health and environmental regulations/legislation specific for the substance or mixture | |
| · Sara | |
| · Section 355 (extremely hazardous substances): | |
| None of the ingredients is listed. | |
| · Section 313 (Specific toxic chemical listings): | |
| 101-68-8 | 4,4'-methylenediphenyl diisocyanate |
| · TSCA (Toxic Substances Control Act): | |
| All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements. | |
| · Proposition 65 | |
| · Chemicals known to cause cancer: | |
| None of the ingredients is listed. | |
| · Chemicals known to cause reproductive toxicity: | |
| None of the ingredients is listed. | |
| · (DSL) Canada Domestic Substance List | |
| All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements. | |
| · Cancerogenity categories | |
| · EPA (Environmental Protection Agency) | |
| 101-68-8 | 4,4'-methylenediphenyl diisocyanate CBD |
| · TLV (Threshold Limit Value established by ACGIH) | |
| None of the ingredients listed. | |
| · MAK (German Maximum Workplace Concentration) | |
| 101-68-8 | 4,4'-methylenediphenyl diisocyanate 4 |

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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **National regulations:**

- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

* 16 Other information

Although the information and recommendations set forth in this MSDS are presented in good faith and are believed to be correct as of the date of this MSDS, Royal Adhesives & Sealants makes no representations as to the completeness or accuracy thereof. Information is supplied on the condition that the persons receiving and using it will make their own determination as to the suitability for their purpose prior to use. In no event will Royal Adhesives & Sealants or any affiliate thereof be responsible for damages of any nature whatsoever resulting from the use or reliance on the information set forth in the MSDS.

· **Department issuing MSDS:** Environment protection department.

· **Creation Date:** 01/15/2014

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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