

**Safety Data Sheet**  
acc. to OSHA HCS

Printing Date 12/17/2014

Revision Number 1

Revision Date 12/17/2014

**1 Identification**

- **Product identifier**
- **Trade name: Double Bubble Urethane High Peel Strength D50 Part A (04022)**
- **Relevant identified uses of the substance or mixture.** Adhesive
- **Application of the substance / the mixture** Adhesive
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Royal Adhesives & Sealants  
800 E. Anaheim Street  
Wilmington, CA 90744  
(310) 830-9904
- **Information department:** Environment protection department.
- **Emergency telephone number:**  
ChemTrec: Day or Night within USA and Canada: 1-800-424-9300.  
Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

**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.

Repr. 1B H360 May damage fertility or the unborn child.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

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

STOT SE 3 H335 May cause respiratory irritation.

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**



GHS07



GHS08

- **Signal word** Danger

- **Hazard statements**

Causes skin and eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

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May damage fertility or the unborn child.

May cause respiratory irritation.

· **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Wear respiratory protection.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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).

If experiencing respiratory symptoms: Call a poison center/doctor.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Call a poison center/doctor if you feel unwell.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If on skin: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**

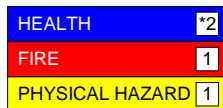


Health = 2

Fire = 1

Reactivity = 1

· **HMIS-ratings (scale 0 - 4)**



Health = \*2

Fire = 1

Physical Hazard = 1

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### \* 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture: consisting of the following components.

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<b>· Dangerous components:</b>		
101-68-8	4,4'-methylenediphenyl diisocyanate	5-20%
85-68-7	Butyl Benzyl Phthalate	5-20%
<b>· SVHC</b>		
85-68-7	Butyl Benzyl Phthalate	

### 4 First-aid measures

**· Description of first aid measures**

**· After inhalation:**

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

**· After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**· After eye contact:**

Rinse opened eye for 20 minutes under running water. If eye becomes irritated, obtain medical treatment.

**· After swallowing:** Seek medical treatment.

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

**· Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Fire-fighting measures

**· Extinguishing media**

**· Suitable extinguishing agents:**

Use water fog, dry chemical, foam, Carbon Dioxide.

Use fire fighting measures that suit the environment.

**· Advice for firefighters**

**· Protective equipment:** Protective clothing and respiratory protective device.

### 6 Accidental release measures

**· Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Wear protective clothing.

**· 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).

**· 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

**· Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Use only in well ventilated areas.

**· Information about protection against explosions and fires:**

Product reacts with water. Reaction may produce heat and/or gases.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store in a cool location away from direct heat.  
Protect from moisture. Keep packages dry.
- **Information about storage in one common storage facility:** Keep away from open flames and high temperatures.
- **Further information about storage conditions:** Store in a cool place.
- **Specific end use(s)** No further relevant information available.

### \* 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data.
- **Control parameters**

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

#### 101-68-8 4,4'-methylenediphenyl diisocyanate (5-20%)

PEL	Ceiling limit value: 0.2 mg/m <sup>3</sup> , 0.02 ppm
REL	Long-term value: 0.05 mg/m <sup>3</sup> , 0.005 ppm Ceiling limit value: 0.2* mg/m <sup>3</sup> , 0.02* ppm *10-min
TLV	Long-term value: 0.051 mg/m <sup>3</sup> , 0.005 ppm

- **Additional information:**  
MDI products have poor warning properties, since recognition of an odor is far above the TLV. Observe OSHA regulations for respirator use (29 CFR 1910.134).  
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.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
Not necessary if room is well-ventilated.  
In the absence of adequate ventilation, use NIOSH-certified respiratory protection when chemical exposure is excessive or above an established exposure limit. Comply with OSHA 29 CFR 1910.134.
- **Protection of hands:**



Protective gloves

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

- **Material of gloves**  
Chloroprene rubber, CR  
Nitrile rubber, NBR  
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.

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- **Eye protection:** 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:**

· <b>Form:</b>	Liquid
· <b>Color:</b>	Amber
· <b>Odor:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· <b>Melting point:</b>	Undetermined.
· <b>Boiling point:</b>	Undetermined.

· **Flash point:** > 204 °C (> 399 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 435 °C (815 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Flammable limits:**

· <b>Lower:</b>	0.4 Vol %
· <b>Upper:</b>	3.2 Vol %

· **Vapor pressure at 20 °C (68 °F):** 1 hPa (1 mm Hg)

· **Specific gravity at 20 °C (68 °F):** 1.11 g/cm<sup>3</sup> (9.263 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:**

· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.

· **Solvent content:**

· **VOC (Per EPA 24)** 1.665 GMS/L

· **Other information** No further relevant information available.

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### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
Contact with moisture, other materials that react with isocyanates, or temperatures above 350F (177C), may cause polymerization.
- **Possibility of hazardous reactions**  
MDI reacts slowly with water to form Carbon Dioxide gas. Reaction with water at high temperatures may be more severe. Avoid contact with bases, alcohols and amines.
- **Conditions to avoid Moisture**
- **Incompatible materials:**  
Reacts with amines, caustic alkali solutions, alcohols, ammonia, oxidizers, acids, polyols.  
Reacts with water forming carbon dioxide-may rupture sealed containers if contaminated with water.  
May produce violent reactions with bases and numerous organic substances including alcohols and amines.
- **Hazardous decomposition products:**  
Carbon dioxide, carbon monoxide, oxides of nitrogen, dense black smoke, hydrogen cyanide, isocyanic acid, other undetermined compounds.

### 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**
- |   |      |                    |
|---|------|--------------------|
| · <b>LD/LC50 values that are relevant for classification:</b> |      |                    |
| <b>101-68-8 4,4'-methylenediphenyl diisocyanate</b>           |      |                    |
| Oral  | LD50 | 2200 mg/kg (mouse) |
- **Primary irritant effect:**
  - **on the skin:** Irritant to skin and mucous membranes.
  - **on the eye:** Irritating effect.
  - **Sensitization:**  
Inhalation - Sensitization possible through inhalation.  
Skin Contact - Sensitization possible through skin contact.
  - **Additional toxicological information:**  
May cause allergic respiratory reaction. Respiratory sensitization is possible by skin contact. Use skin protection.  
Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product.  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Irritant
  - **Carcinogenic categories**
- |   |                                     |   |
|---|-------------------------------------|---|
| · <b>IARC (International Agency for Research on Cancer)</b> |                                     |   |
| 101-68-8  | 4,4'-methylenediphenyl diisocyanate | 3 |
| 85-68-7   | Butyl Benzyl Phthalate              | 3 |
- **NTP (National Toxicology Program)**  
None of the ingredients is listed.
  - **OSHA-Ca (Occupational Safety & Health Administration)**  
None of the ingredients is listed.

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### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **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.

### 14 Transport information

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

### 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.

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· **Section 313 (Specific toxic chemical listings):**

101-68-8	4,4'-methylenediphenyl diisocyanate
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· **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.

· **Chemicals known to cause developmental toxicity:** 85-68-7 Butyl Benzyl Phthalate

· **(DSL) Canada Domestic Substance List**

All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

101-68-8	4,4'-methylenediphenyl diisocyanate	CBD
85-68-7	Butyl Benzyl Phthalate	C

· **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.

· **National regulations:**

· **Water hazard class:** Water hazard class 2 (Self-assessment): 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 SDS are presented in good faith and are believed to be correct as of the date of this SDS, 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 SDS.

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

· **Creation Date:** 09/21/2009

· **Date of preparation / last revision** 12/17/2014 / -

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

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

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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  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B  
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1  
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
Repr. 1B: Reproductive toxicity, Hazard Category 1B  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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