

Safety Data Sheet
acc. to OSHA HCS

Printing Date 09/15/2014

Revision Number 1

Revision Date 09/15/2014

1 Identification

- **Product identifier**
- **Trade name:** *EMC Urethane Adhesive*
- **Relevant identified uses of the substance or mixture.** *No further relevant information available.*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*Royal Adhesives And Sealants, LLC
2001 W. Washington Street
South Bend IN 46628-2023
Information Phone Number: 574-246-5000*
- **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.*

Eye Irrit. 2A H319 *Causes serious eye irritation.*

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

STOT SE 3 H335 *May cause respiratory 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 irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause respiratory irritation.*
- **Precautionary statements**
*If medical advice is needed, have product container or label at hand.
Keep out of reach of children.*

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Read label before use.

In case of inadequate ventilation wear respiratory protection.

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

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).

Store locked up.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 2

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

HEALTH	1
FIRE	2
PHYSICAL HAZARD	0

Health = *1

Fire = 2

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:**

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	2.5-10%
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* 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. Call a Doctor immediately.

· **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:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray.

Use fire fighting measures that suit the environment.

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- **For safety reasons unsuitable extinguishing agents:** Do not use direct water stream.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters** Use water spray in a fire condition.
- **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:**
Cover spilled material with neutralization solution (see below) and mix Wait 15 minutes. Collect material in open-head metal containers. Repeat neutralization and cleaning process until surface is decontaminated. Apply drum lid but DO NOT secure. Allow containers to vent for 72 hours to let carbon dioxide escape.
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**
Neutralization solutions:
 1. A mixture of 90% water, 3-8% ammonium hydroxide or concentrated ammonia, and 2% liquid detergent.
 2. A mixture of 80% water, 20% non-ionic surfactant.
 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**
Avoid prolonged or repeated contact with skin.
Avoid contact with eyes.
Wash thoroughly after handling.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Product reacts with water. Reaction may produce heat and/or gases.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Keep containers tightly closed when not in use. Protect from atmospheric moisture.
- **Information about storage in one common storage facility:** Keep away from open flames and high temperatures.
- **Further information about storage conditions:**
Protect from contamination.
Protect from humidity and water.
Protect product from freezing.
Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

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- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **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.
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:**
Use approved respiratory protection equipment when airborne exposure is excessive. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.
- **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
Butyl rubber, BR
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:**
Safety glasses with side shields.



Tightly sealed goggles

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Liquid
Color:	Light brown
- **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:	> 61 °C (> 142 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	400 °C (752 °F)
· 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):	1.26 g/cm ³ (10.515 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
Solids content:	100.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Keep away from extreme heat, sparks, open flames.
- **Possibility of hazardous reactions**
Contact with moisture, other materials that react with isocyanates, or temperatures above 350F, may cause polymerization.
- **Conditions to avoid** Temperatures below 40F (4.4C)
- **Incompatible materials:** Water, acids, bases, alkalis, amines, alcohols, copper alloys.
- **Hazardous decomposition products:**
Carbon dioxide, carbon monoxide, oxides of nitrogen, dense black smoke, hydrogen cyanide, isocyanic acid, other undetermined compounds.

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11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **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:**

- *As a result of previous repeated overexposures or a single large dose, certain individuals may develop sensitization to diisocyanates that may cause them to react to a later exposure that is far below the TLV or PEL.*

- *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)**

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- **NTP (National Toxicology Program)**

- *None of the ingredients is listed.*

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

- *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.

- **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 not be disposed of together with household garbage. Do not allow product to reach sewage system.*

- *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	not regulated
· UN proper shipping name	
· DOT, ADR, ADN, IMDG, IATA	not regulated
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	not regulated
· Packing group	
· DOT, ADR, IMDG, IATA	not regulated
· 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.
· Transport/Additional information:	DOT, ADR, IMDG, IATA - Not regulated in transport. Not dangerous according to the above specifications.
· 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):	
	All ingredients are listed.
· 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.
· Carcinogenity categories	
· EPA (Environmental Protection Agency)	
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues
	CBD
· TLV (Threshold Limit Value established by ACGIH)	
	None of the ingredients listed.

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· MAK (German Maximum Workplace Concentration)

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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 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 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:** 04/21/2011
- **Date of preparation / last revision** 09/15/2014 / -
- **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)
 - ICAO: International Civil Aviation Organization
 - 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)
 - Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 - Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
 - Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
 - Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
 - STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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