1 Identification

- **Product identifier**
  - **Trade name:** SolidSeal (Black)
  - **Article number:** 12232
- **Relevant identified uses of the substance or mixture. Sealant**
- **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: Day or Night within USA and Canada: 1-800-424-9300.
  - Outside USA and Canada: +1 703-527-3887 (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.
    - Carc. 2 H351 Suspected of causing cancer.
  - GHS07
    - Skin Sens. 1 H317 May cause an allergic skin reaction.
- **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**
  - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  - May cause an allergic skin reaction.
  - Suspected of causing cancer.
- **Precautionary statements**
  - [In case of inadequate ventilation] wear respiratory protection.
  - Avoid breathing dust/fume/gas/mist/vapors/spray
  - Wear protective gloves.

(Contd. on page 2)
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.
Specific treatment (see on this label).
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
Wash contaminated clothing before reuse.
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
If exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water.
Store locked up.
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
    - Health = 2
  - FIRE
    - Fire = 1
  - PHYSICAL HAZARD
    - 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: Mixture

- Hazardous components:
  - 1330-20-7 xylene <5.0%
  - 90622-57-4 isoparaffinic hydrocarbons ≤2.5%
  - 101-68-8 4,4’-methylenediphenyl diisocyanate ≤0.5%
  - 25686-28-6 Diphenylmethane Diisocyanate (Homopolymer) ≤0.5%

### 4 First-aid measures

- Description of first aid measures
  - After inhalation:
    - Call a doctor immediately.
    - Overexposure, remove to fresh air and seek medical attention.
  - After skin contact:
    - Immediately wash with water and soap and rinse thoroughly.
  - After eye contact:
    - Rinse opened eye for several minutes under running water.
  - After swallowing:
    - Seek medical treatment.
  - Information for doctor:
    - Most important symptoms and effects, both acute and delayed 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 or alcohol resistant foam.
  Use fire fighting measures that suit the environment.
· Advice for firefighters
· Protective equipment: Mouth 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 Ensure good ventilation/exhaustion at the workplace.
· 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 in a cool location away from direct heat.
· Information about storage in one common storage facility: Store away from oxidizing agents.
· Further information about storage conditions:
  Keep receptacle tightly sealed.
  Protect from heat and direct sunlight.
  Protect product from freezing.
  Store in dry conditions.
· 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.
Trade name: 12232 SolidSeal (Black)

### Control parameters

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

<table>
<thead>
<tr>
<th>1330-20-7 xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PEL</strong></td>
</tr>
<tr>
<td>Long-term value: 435 mg/m³, 100 ppm</td>
</tr>
<tr>
<td><strong>REL</strong></td>
</tr>
<tr>
<td>Short-term value: 655 mg/m³, 150 ppm</td>
</tr>
<tr>
<td>Long-term value: 435 mg/m³, 100 ppm</td>
</tr>
<tr>
<td><strong>TLV</strong></td>
</tr>
<tr>
<td>Short-term value: 651 mg/m³, 150 ppm</td>
</tr>
<tr>
<td>Long-term value: 434 mg/m³, 100 ppm</td>
</tr>
<tr>
<td><strong>BEI</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>101-68-8 4,4'-methylenediphenyl diisocyanate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PEL</strong></td>
</tr>
<tr>
<td>Ceiling limit value: 0.2 mg/m³, 0.02 ppm</td>
</tr>
<tr>
<td><strong>REL</strong></td>
</tr>
<tr>
<td>Long-term value: 0.05 mg/m³, 0.005 ppm</td>
</tr>
<tr>
<td>Ceiling limit value: 0.2* mg/m³, 0.02* ppm</td>
</tr>
<tr>
<td>*10-min</td>
</tr>
<tr>
<td><strong>TLV</strong></td>
</tr>
<tr>
<td>Long-term value: 0.051 mg/m³, 0.005 ppm</td>
</tr>
</tbody>
</table>

#### Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>1330-20-7 xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BEI</strong></td>
</tr>
<tr>
<td>1.5 g/g creatinine</td>
</tr>
<tr>
<td>Medium: urine</td>
</tr>
<tr>
<td>Time: end of shift</td>
</tr>
<tr>
<td>Parameter: Methylhippuric acids</td>
</tr>
</tbody>
</table>

#### 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:

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

#### Material of gloves

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.

#### 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:**
    - **Form:** Viscous paste
    - **Color:** Black
  - **Odor:** Characteristic
  - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.
  - **Change in condition**
    - **Melting point:** Undetermined.
    - **Boiling point:** Not applicable.
    - **Flash point:** Not applicable.
  - **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.
  - **Vapor pressure:** Not determined.
  - **Specific gravity at 20 °C (68 °F):** 1.19 g/cm³ (9.931 lbs/gal)
  - **Relative density** Not determined.
  - **Vapor density** Not determined.
  - **Evaporation rate** Not determined.
  - **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
  - **Partition coefficient (n-octanol/water):** N/D
  - **Viscosity:**
    - **Dynamic:** Not determined.
    - **Kinematic:** Not determined.
  - **Solvent content:**
    - **VOC (Per EPA 24):** Not available GMS/L
    - **Other information:** VOC's - 69.3 grams/liter

* * *

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
  - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
  - **Possibility of hazardous reactions** No dangerous reactions known.
  - **Conditions to avoid** Heat, flames, sparks.
  - **Incompatible materials:**
    - Reacts with amines.
    - Reacts with alcohols.
    - Reacts with water.
  - **Hazardous decomposition products:**
    - Carbon monoxide and carbon dioxide

(Contd. on page 6)
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)
    - Primary irritant effect:
      - on the skin: May irritate the skin.
      - on the eye: May irritate the eye.
      - Sensitization: Skin Contact - Sensitization possible through skin contact.
    - Additional toxicological information:
      - The product shows the following dangers according to internally approved calculation methods for preparations: Harmful

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    - 1330-20-7 xylene 3
    - 101-68-8 4,4'-methylenediphenyl diisocyanate 3
    - 100-41-4 ethylbenzene 2B
    - 1333-86-4 Carbon black 2B
    - 9002-86-2 polyvinyl chloride 3
    - 98-88-4 benzoyl chloride 2A
    - 108-95-2 phenol 3
  - 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.
  - 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.
Safety Data Sheet
acc. to OSHA HCS

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· 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
· 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 not regulated
  · 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.
· UN "Model Regulation":
  · not regulated

15 Regulatory information
· Safety, health and environmental regulations/legislation specific for the substance or mixture
· Sara
  · Section 355 (extremely hazardous substances):
    108-95-2 phenol
  · Section 313 (Specific toxic chemical listings):
    1330-20-7 xylene
    101-68-8 4,4'-methylene diphenyl disocyanate
    100-41-4 ethylbenzene
    98-88-4 benzoyl chloride
    108-95-2 phenol
    67-56-1 methanol
  · TSCA (Toxic Substances Control Act):
    All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.
Trade name: 12232 SolidSeal (Black)

- **Proposition 65**
  - Chemicals known to cause cancer:
    28553-12-0 di-“isononyl” phthalate
    100-41-4 ethylbenzene
  - Chemicals known to cause reproductive toxicity:
    67-56-1 methanol
  - Chemicals known to cause developmental toxicity:
    67-56-1 methanol
  - (DSL) Canada Domestic Substance List
    All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.
  - New Jersey Right-to-Know List:
    1330-20-7 xylene
    101-68-8 4,4’-methylene diphenyl diisocyanate
    100-41-4 ethylbenzene
    9002-86-2 polyvinyl chloride
    98-88-4 benzoyl chloride
    108-95-2 phenol
    67-56-1 methanol
  - New Jersey Special Hazardous Substance List:
    1330-20-7 xylene
    100-41-4 ethylbenzene
    98-88-4 benzoyl chloride
    108-95-2 phenol
    67-56-1 methanol
  - Pennsylvania Right-to-Know List:
    1330-20-7 xylene
    101-68-8 4,4’-methylene diphenyl diisocyanate
    100-41-4 ethylbenzene
    98-88-4 benzoyl chloride
    108-95-2 phenol
  - Pennsylvania Special Hazardous Substance List:
    1330-20-7 xylene
    101-68-8 4,4’-methylene diphenyl diisocyanate
    100-41-4 ethylbenzene
    98-88-4 benzoyl chloride
    108-95-2 phenol
  - Cancerogenity categories
    - EPA (Environmental Protection Agency)
      1330-20-7 xylene I
      101-68-8 4,4’-methylene diphenyl diisocyanate D, CBD
      100-41-4 ethylbenzene D
      108-95-2 phenol E
### 42.0.13 TLV (Threshold Limit Value established by ACGIH)

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical</th>
<th>TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1330-20-7</td>
<td>xylene</td>
<td>A4</td>
</tr>
<tr>
<td>100-41-4</td>
<td>ethylbenzene</td>
<td>A3</td>
</tr>
<tr>
<td>1333-86-4</td>
<td>Carbon black</td>
<td>A4</td>
</tr>
<tr>
<td>9002-86-2</td>
<td>polyvinyl chloride</td>
<td>A4</td>
</tr>
<tr>
<td>98-88-4</td>
<td>benzoyl chloride</td>
<td>A4</td>
</tr>
<tr>
<td>108-95-2</td>
<td>phenol</td>
<td>A4</td>
</tr>
</tbody>
</table>

### 42.0.14 MAK (German Maximum Workplace Concentration)

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical</th>
<th>MAK</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-68-8</td>
<td>4,4'-methylene diphenyl diisocyanate</td>
<td>4</td>
</tr>
<tr>
<td>100-41-4</td>
<td>ethylbenzene</td>
<td>3A</td>
</tr>
<tr>
<td>1333-86-4</td>
<td>Carbon black</td>
<td>3B</td>
</tr>
<tr>
<td>98-88-4</td>
<td>benzoyl chloride</td>
<td>3B</td>
</tr>
<tr>
<td>108-95-2</td>
<td>phenol</td>
<td>3B</td>
</tr>
</tbody>
</table>

### 42.0.15 NIOSH-Ca (National Institute for Occupational Safety and Health)

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1333-86-4</td>
<td>Carbon black</td>
</tr>
</tbody>
</table>

### 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:** 08/11/2010
- **Date of preparation / last revision** 02/10/2016 / 4
- **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
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - NIOSH: National Institute for Occupational Safety
  - OSHA: Occupational Safety & Health
  - TLV: Threshold Limit Value
  - PEL: Permissible Exposure Limit
  - REL: Recommended Exposure Limit
Trade name: 12232 SolidSeal (Black)

BEI: Biological Exposure Limit
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Carc. 2: Carcinogenicity, Hazard Category 2

(Contd. of page 9)