1. PRODUCT AND COMPANY IDENTIFICATION

- **Product identifier**
  - **CRL Catalog Numbers:** GN200A, GN200AS, GN201B
  - **Article number:** 13102
  - **Relevant identified uses of the substance or mixture.**
    - Adhesive
    - 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. HAZARDS IDENTIFICATION

- **Classification of the substance or mixture**
  - GHS02 Flame
    - Flammable, Liq. 2 H225 Highly flammable liquid and vapor.

  - GHS08 Health hazard
    - Repr. 2 H361 Suspected of damaging fertility or the unborn child.
    - STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
    - Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

- **Label elements**
  - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - GHS02
    - GHS08

- **Signal word** Danger
- **Hazard statements**
  - Highly flammable liquid and vapor.
  - Suspected of damaging fertility or the unborn child.
  - May cause damage to organs through prolonged or repeated exposure.
  - May be fatal if swallowed and enters airways.

(Contd. on page 2)
2. HAZARDS IDENTIFICATION (CONTINUED)

- **Precautionary statements**
  - Obtain special instructions before use.
  - Do not handle until all safety precautions have been read and understood.
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Keep container tightly closed.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Use only non-sparking tools.
  - Take precautionary measures against static discharge.
  - Do not breathe dust/fume/gas/mist/vapors/spray.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - If swallowed: Immediately call a poison center/doctor.
  - Do NOT induce vomiting.
  - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - IF exposed or concerned: Get medical advice/attention.
  - Get medical advice/attention if you feel unwell.
  - In case of fire: Use for extinction: CO2, powder or water spray.
  - Store in a well-ventilated place. Keep cool.
  - 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 = 3
    - Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**
  - Health = 1
  - Fire = 3
  - 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:**
  - 1332-58-7 Kaolin 25-50%
  - 64742-49-0 Naphtha (petroleum), hydrotreated light 5-20%
  - 64742-47-8 Distillates (petroleum), hydrotreated light 2.5-10%
  - 108-88-3 Toluene 2.5-10%
4. FIRST AID MEASURES

- Description of first aid measures
- **First aid measures**
  - *After inhalation:* Supply fresh air or oxygen; call doctor.
  - *In case of unconsciousness:* Place patient in side position and transport.
  - *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:* Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
  - *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.
- **Advice for firefighters**
  - Firefighters use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
- **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.
- **Protective Action Criteria for Chemicals**

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th>Toluene</th>
<th>67 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>67 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th>Toluene</th>
<th>560 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>560 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-3:</th>
<th>Toluene</th>
<th>3700 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>3700 ppm</td>
</tr>
</tbody>
</table>
7. HANDLING AND STORAGE

- **Handling:**
  - **Precautions for safe handling**
    Ensure good ventilation/exhaustion at the workplace.
    Open and handle receptacle with care.
    Prevent formation of aerosols.
  - **Information about protection against explosions and fires:**
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
    Keep container closed when not in use.

- **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.
      Store as flammable liquid.
  - **Further information about storage conditions:**
    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; see item 7.

- **Control parameters**
  - **Components with limit values that require monitoring at the workplace:**
    The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
    At this time, the other constituents have no known exposure limits.

<table>
<thead>
<tr>
<th>1332-58-7 Kaolin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PEL</strong></td>
</tr>
<tr>
<td><strong>REL</strong></td>
</tr>
<tr>
<td><strong>TLV</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>108-88-3 toluene</td>
</tr>
<tr>
<td><strong>PEL</strong></td>
</tr>
<tr>
<td><strong>REL</strong></td>
</tr>
<tr>
<td><strong>TLV</strong></td>
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</tbody>
</table>

(Contd. on page 5)
8. EXPOSURE CONTROLS / PERSONAL PROTECTION (CONTINUED)

- **Ingredients with biological limit values:**

<table>
<thead>
<tr>
<th>108-88-3 toluene</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BEI</strong> 0.02 mg/L</td>
</tr>
<tr>
<td>Medium: blood</td>
</tr>
<tr>
<td>Time: prior to last shift of workweek</td>
</tr>
<tr>
<td>Parameter: Toluene</td>
</tr>
<tr>
<td>0.03 mg/L</td>
</tr>
<tr>
<td>Medium: urine</td>
</tr>
<tr>
<td>Time: end of shift</td>
</tr>
<tr>
<td>Parameter: Toluene</td>
</tr>
<tr>
<td>0.3 mg/g creatinine</td>
</tr>
<tr>
<td>Medium: urine</td>
</tr>
<tr>
<td>Time: end of shift</td>
</tr>
<tr>
<td>Parameter: o-Cresol with hydrolysis (background)</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.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Store protective clothing separately.

- **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
      - 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 breakthrough 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.

- **Body protection:** Protective work clothing
9. PHYSICAL AND CHEMICAL PROPERTIES

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Form:** Paste
    - **Color:** Black
    - **Odor:** Characteristic
    - **Odor threshold:** Not determined.
  - **Change in condition**
    - **Melting point:** Undetermined.
    - **Boiling point:** 98 °C (208.4 °F)
  - **Flash point:** 4 °C (39.2 °F)
  - **Ignition temperature:** 215 °C (419 °F)
  - **Auto igniting:** Product is not self-igniting.
  - **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
  - **Flammable limits:**
    - **Lower:** 1.1 Vol %
    - **Upper:** 7 Vol %
  - **Vapor pressure at 20 °C (68 °F):** 48 hPa (36 mm Hg)
  - **Specific gravity at 20 °C (68 °F):** 1.102 g/cm³ (9.19619 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.
  - **Viscosity:**
    - **Dynamic:** Not determined.
    - **Kinematic:** Not determined.
  - **Solvent content:**
    - **Organic solvents:** Not determined
  - **Solids content:** 65. %
  - **Other information**
    - **VOC = 376 G/L (3.14 LBS/GAL)**
    - **SCAQMD = 376 G/L**
    - **WEIGHT PER GALLON = 9.06 LBS/GAL**

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, hot surfaces, ignition sources.
- **Incompatible materials:** Reacts with oxidizing agents.
- **Hazardous decomposition products:** Oxides of carbon and nitrogen.

(Contd. on page 7)
10. STABILITY AND REACTIVITY (CONTINUED)

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

- Information on toxicological effects
- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    - 108-88-3 toluene
      - Oral LD50: 5,000 mg/kg (rat)
      - Dermal LD50: 12,124 mg/kg (rabbit)
      - Inhalative LC50/4 h: 5,320 mg/l (mouse)

- Primary irritant effect:
  - on the skin: Skin irritant.
  - on the eye: May irritate the eye. Vapors may be irritating to the eyes.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
  The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    - 9003-55-8 1,3-butadiene-styrene block polymer: 3
    - 108-88-3 toluene: 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.
  - Ecotoxicological effects:
  - Remark: Toxic for fish
  - 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

- **UN-Number**
  - DOT, IMDG, IATA UN1133

- **UN proper shipping name**
  - DOT Adhesives
  - IMDG, IATA ADHESIVES

- **Transport hazard class(es)**
  - **DOT**
    - Class 3 Flammable liquids
    - Label 3

  - **IMDG, IATA**
    - Class 3 Flammable liquids
    - Label 3

- **Packing group**
  - DOT, IMDG, IATA II

- **Environmental hazards:**
  - Not applicable.

- **Special precautions for user**
  - **Warning:** Flammable liquids
  - Danger code (Kemler): 33
  - EMS Number: F-E,S-D
  - Stowage Category B

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - Not applicable.

- **UN "Model Regulation":**
  - UN 1133 ADHESIVES, 3, II
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):
    108-88-3 toluene
  
  · 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 for females:
    None of the ingredients is listed.

  · Chemicals known to cause reproductive toxicity for males:
    None of the ingredients is listed.

  · Chemicals known to cause developmental toxicity:
    108-88-3 toluene

  · (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:
  
  1332-58-7 Kaolin
  108-88-3 toluene

- New Jersey Special Hazardous Substance List:
  
  108-88-3 toluene

- Pennsylvania Right-to-Know List:
  
  1332-58-7 Kaolin
  108-88-3 toluene

- Pennsylvania Special Hazardous Substance List:
  
  108-88-3 toluene

- Cancerogenity categories

  · EPA (Environmental Protection Agency)
    108-88-3 toluene

  · TLV (Threshold Limit Value established by ACGIH)
    1332-58-7 Kaolin
    108-88-3 toluene

  · MAK (German Maximum Workplace Concentration)
    None of the ingredients is listed.

  · NIOSH-Ca (National Institute for Occupational Safety and Health)
    None of the ingredients is listed.

(Contd. on page 10)  USA
15. REGULATORY INFORMATION (CONTINUED)

- **National regulations:**
- **Water hazard class:** Water hazard class 3 (Self-assessment): extremely hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

- **Department issuing SDS:** Environment protection department.
- **Creation Date:** 05/02/2018
- **Date of preparation / last revision** 05/02/2018 / 2
- **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 Organisation
  - 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
  - BEI: Biological Exposure Limit
  - Flam. Liq. 2: Flammable liquids – Category 2
  - Repr. 2: Reproductive toxicity – Category 2
  - STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
  - Asp. Tox. 1: Aspiration hazard – Category 1