1 Identification

- **Product identifier**
- **Trade name:** U301
- **Application of the substance / the mixture** UV-curable adhesive

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    Cyberbond LLC
    401 North Raddant Road
    Batavia, IL 60510
    USA
    sales@cyberbond1.com
    630-761-8900
  - **Information department:** Product safety department
  - **Emergency telephone number:**
    International-1-(352)-323-3500
    US & Canada-1-(800)-535-5053

2 Hazard(s) identification

- **Classification of the substance or mixture**

  ![GHS07](Image)

  Acute Tox. 4 H302 Harmful if swallowed.
  Acute Tox. 4 H312 Harmful in contact with skin.
  Acute Tox. 4 H332 Harmful if inhaled.
  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.

  ![H227](Image)

  Combustible liquid.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

  ![Irritant](Image)

  Irritating to eyes, respiratory system and skin. May cause sensitisation by skin contact.

  ![Dangerous for the environment](Image)

  Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Information concerning particular hazards for human and environment:**
  The product has to be labeled due to the calculation procedure of international guidelines.

- **Classification system:**
  The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

Label elements

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

![GHS07](Image)

(Contd. on page 2)
Trade name: U301

- **Signal word** Warning

- **Hazard-determining components of labeling:**
  - N,N-dimethylacrylamide
  - 2-hydroxyethyl methacrylate
  - isobornyl acrylate
  - Urethane Acrylate

- **Hazard statements**
  - Combustible liquid.
  - Harmful if swallowed, in contact with skin or if inhaled.
  - Causes skin irritation.
  - Causes serious eye irritation.
  - May cause an allergic skin reaction.
  - May cause respiratory irritation.

- **Precautionary statements**
  - Keep away from flames and hot surfaces. – No smoking.
  - Avoid breathing dust/fume/gas/mist/vapors/spray
  - Wear protective gloves / eye protection / face protection.
  - Wear protective gloves.
  - Wear protective gloves / protective clothing.
  - Wash thoroughly after handling.
  - Do not eat, drink or smoke when using this product.
  - Use only outdoors or in a well-ventilated area.
  - Contaminated work clothing must not be allowed out of the workplace.
  - 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 swallowed: Call a poison center/doctor if you feel unwell.
  - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
  - Wash contaminated clothing before reuse.
  - If skin irritation or rash occurs: Get medical advice/attention.
  - If eye irritation persists: Get medical advice/attention.
  - Rinse mouth.
  - In case of fire: Use for extinction: CO2, powder or water spray.
  - 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.
  - Store in a well-ventilated place. Keep cool.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**

- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures

  - **Description:** Mixture of the substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5888-33-5 isobornyl acrylate</td>
<td>25-50%</td>
</tr>
<tr>
<td>Urethane Acrylate</td>
<td>≤25%</td>
</tr>
<tr>
<td>2880-03-7 N,N-dimethylacrylamide</td>
<td>10-&lt;25%</td>
</tr>
<tr>
<td>888-77-9 2-hydroxyethyl methacrylate</td>
<td>2.5-&lt;10%</td>
</tr>
<tr>
<td>2530-85-0 3-trimethoxysilylpropyl methacrylate</td>
<td>2.5-&lt;10%</td>
</tr>
</tbody>
</table>

### 4 First-aid measures

- **Description of first aid measures**

  - **After inhalation:** Supply fresh air; consult doctor in case of complaints.
  - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
Trade name: U301

(Contd. of page 2)

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
  - Most important symptoms and effects, both acute and delayed: Breathing difficulty
  - 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 or alcohol resistant foam.
  - **For safety reasons unsuitable extinguishing agents:** Water with full jet

- **Special hazards arising from the substance or mixture:** No further relevant information available.

- **Advice for firefighters**
  - **Protective equipment:** Wear self-contained respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures:** Ensure adequate ventilation

- **Environmental precautions:**
  - Do not allow product to reach sewage system or any water course.
  - Inform respective authorities in case of seepage into water course or sewage system.

- **Methods and material for containment and cleaning up:** 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**
    - Store in cool, dry place in tightly closed receptacles.
    - Keep away from heat and direct sunlight.
    - 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.
    - Store only in the original receptacle.
  - **Information about storage in one common storage facility:** Store away from oxidizing agents.
  - **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 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:**
    - **General protective and hygienic measures:**
      - The usual precautionary measures for handling chemicals should be followed.
      - Keep away from foodstuffs, beverages and feed.
      - Immediately remove all soiled and contaminated clothing.

(Contd. on page 4)
Avoid contact with the eyes and skin.

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

- **Protection of hands:**
  - Neoprene gloves
  - Impervious gloves
  - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
  - **Material of gloves:** Nitrile rubber, NBR

- **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.

- **Not suitable are gloves made of the following materials:**
  - Cotton or natural fibers
  - PVC gloves

- **Eye protection:**
  - Safety glasses

- **Body protection:** Protective work clothing

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:**
    - **Form:** Liquid
    - **Color:** Light yellow
    - **Odor:** Characteristic
    - **Odour threshold:** Not determined.
    - **pH-value:** Not determined.
  - **Change in condition**
    - **Melting point/Melting range:** Undetermined.
    - **Boiling point/Boiling range:** Undetermined.
  - **Flash point:** 70 °C (158 °F)
  - **Flammability (solid, gaseous):** Not applicable.
  - **Ignition temperature:**
    - **Decomposition temperature:** Not determined.
  - **Auto igniting:** Product is not selfigniting.
  - **Danger of explosion:** Not determined.
  - **Explosion limits:**
    - **Lower:** Not determined.
    - **Upper:** Not determined.
  - **Vapor pressure:** Not determined.
  - **Density:** Not determined.
  - **Relative density**
  - **Vapour density**
  - **Evaporation rate** Not determined.
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 dangerous reactions known.
  
  - Conditions to avoid: No further relevant information available.
  
  - Incompatible materials: No further relevant information available.
  
  - Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    
    - Primary irritant effect:
      
      - on the skin: No irritant effect.
      
      - on the eye: No irritating effect.
      
      - 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

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
</tr>
</thead>
<tbody>
<tr>
<td>119-61-9 benzophenone 2B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NTP (National Toxicology Program)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OSHA-Ca (Occupational Safety &amp; Health Administration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

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.
    
    - Ecotoxic effects:
      
      - Remark: Toxic for fish
      
      - Additional ecological information:
        
        - General notes:
          Also poisonous for fish and plankton in water bodies.
          Toxic for aquatic organisms
          
          - Results of PBT and vPvB assessment
            
            - PBT: Not applicable.
            
            - vPvB: Not applicable.
13 Disposal considerations

- Waste treatment methods
  - Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
- DOT NA1993
- IMDG, IATA UN3082
- UN proper shipping name
  - DOT COMBUSTIBLE LIQUID, N.O.S
  - IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
    (Urethane Acrylate), MARINE POLLUTANT
  - IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
    (Urethane Acrylate)

- Transport hazard class(es)
  - DOT Class Void
  - IMDG, IATA

- Class
  - 9 Miscellaneous dangerous substances and articles

- Label
  - 9

- Packing group
  - DOT, IMDG, IATA III

- Environmental hazards:
  - Product contains environmentally hazardous substances: isobornyl acrylate, Urethane Acrylate
  - Marine pollutant: Yes
    - Symbol (fish and tree)

- Special marking (IATA):
  - Symbol (fish and tree)

- Special precautions for user
  - Warning: Miscellaneous dangerous substances and articles

- Danger code (Kemler): 90

- EMS Number: F-A,S-F

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

- Transport/Additional information:
  - IMDG
    - Limited quantities (LQ) 5 kg
    - UN "Model Regulation": UN3082, Environmentally hazardous substances, liquid, n.o.s.
      (Urethane Acrylate), 9, III

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):

- None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>5888-33-5</td>
<td>isobornyl acrylate</td>
</tr>
<tr>
<td>2680-03-7</td>
<td>N,N-dimethylacrylamide</td>
</tr>
<tr>
<td>885-77-9</td>
<td>2-hydroxyethyl methacrylate</td>
</tr>
<tr>
<td>15206-55-0</td>
<td>methyl benzoylformate</td>
</tr>
<tr>
<td>2530-85-0</td>
<td>3-trimethoxysilylpropyl methacrylate</td>
</tr>
<tr>
<td>947-19-3</td>
<td>1-hydroxy-cyclohexyl-phenylketone</td>
</tr>
<tr>
<td>10287-53-3</td>
<td>Ethyl-4-(dimethylamino)benzoate</td>
</tr>
<tr>
<td>119-61-9</td>
<td>benzophenone</td>
</tr>
<tr>
<td>82985-35-1</td>
<td>Bis[3-(trimethoxysilyl)propyl]amine</td>
</tr>
<tr>
<td>162881-26-7</td>
<td>phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide</td>
</tr>
<tr>
<td>5064-31-3</td>
<td>trisodium nitrilotriacetate</td>
</tr>
</tbody>
</table>

Proposition 65

- Chemicals known to cause cancer:
  - 119-61-9 benzophenone

- 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:
  - None of the ingredients is listed.

Carcinogenic categories

- EPA (Environmental Protection Agency)
  - None of the ingredients is listed.

- TLV (Threshold Limit Value established by ACGIH)
  - None of the ingredients is listed.

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

GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

- GHS07

Signal word: Warning

Hazard-determining components of labeling:

- N,N-dimethylacrylamide
- 2-hydroxyethyl methacrylate
- isobornyl acrylate
- Urethane Acrylate

Hazard statements:

- Combustible liquid.
- Harmful if swallowed, in contact with skin or if inhaled.
- Causes skin irritation.
- Causes serious eye irritation.
- May cause an allergic skin reaction.
- May cause respiratory irritation.

Precautionary statements:

- Keep away from flames and hot surfaces. – No smoking.

(Contd. on page 8)
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves / eye protection / face protection.
Wear protective gloves.
Wear protective gloves / protective clothing.
Wear eye protection / face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
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 swallowed: Call a poison center/doctor if you feel unwell.
If INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Rinse mouth.
In case of fire: Use for extinction: CO2, powder or water spray.
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.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Date of preparation / last revision 05/27/2015 / 2

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