1 Identification

- Product identifier
  - Trade name: U345
  - 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
    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.
    STOT SE 3 H335 May cause respiratory irritation.
    H227 Combustible liquid.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC
  - Irritant
    Irritating to eyes, respiratory system and skin.
    Harmful 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

- Signal word: Warning
  - Hazard-determining components of labeling:
    N,N-dimethylacrylamide
    isobornyl acrylate

(Contd. on page 2)
Trade name: U345

40.1.3 acrylic acid

Hazard statements
Combustible liquid.
Harmful if swallowed, in contact with skin or if inhaled.
Causes skin irritation.
Causes serious eye irritation.
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.
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.
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.
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.
If skin irritation 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.

Dangerous components:

<table>
<thead>
<tr>
<th>Substance ID</th>
<th>Chemical formula</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2680-03-7</td>
<td>N,N-dimethylacrylamide</td>
<td>10-&lt;25%</td>
</tr>
<tr>
<td>5888-33-5</td>
<td>isobornyl acrylate</td>
<td>10-&lt;20%</td>
</tr>
<tr>
<td>Monomer Diluent</td>
<td>N.A.</td>
<td>≤10%</td>
</tr>
<tr>
<td>79-10-7</td>
<td>acrylic acid</td>
<td>1-&lt;2.5%</td>
</tr>
<tr>
<td>162881-26-7</td>
<td>phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide</td>
<td>0.1-&lt;0.9%</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.
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
5 Fire-fighting measures

- **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.

- **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:**
    - **79-10-7 acrylic acid**
      - **REL**
        - Long-term value: 6 mg/m³, 2 ppm
        - Skin
      - **TLV**
        - Long-term value: 5.9 mg/m³, 2 ppm
        - Skin

- **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.
    - Avoid contact with the eyes and skin.
Trade name: U345

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

· Protection of hands:
  - Protective gloves
  - 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
  - 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 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: 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 %
  Other information No further relevant information available.

## 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>
<th>79-10-7 acrylic acid</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTP (National Toxicology Program)</td>
<td>None of the ingredients is listed.</td>
<td></td>
</tr>
<tr>
<td>OSHA-Ca (Occupational Safety &amp; Health Administration)</td>
<td>None of the ingredients is listed.</td>
<td></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: Harmful to fish
  · Additional ecological information:
    · General notes:
      Water hazard class 3 (Self-assessment): extremely hazardous for water
      Do not allow product to reach ground water, water course or sewage system, even in small quantities.
      Danger to drinking water if even extremely small quantities leak into the ground.
      Harmful to aquatic organisms
40.1.3 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.
- Uncleaned packagings
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information
- UN-Number
  - DOT: NA1993
  - IMDG, IATA: UN1760
- UN proper shipping name
  - DOT: COMBUSTIBLE LIQUID, N.O.S
  - IMDG, IATA: CORROSIVE LIQUID, N.O.S.
- Transport hazard class(es)
  - DOT: Void
  - IMDG, IATA: Class 8 Corrosive substances
  -包装组: 8 Corrosive substances
  - Environmental hazards: III
  - Marine pollutant: No
  - Special precautions for user: Warning: Corrosive substances
  - Danger code (Kemler): 8
  - EMS Number: F-A.S-B
  - Segregation groups: Acids
  - Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.
  - UN "Model Regulation": UN1760, Corrosive liquids, n.o.s., 8, 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):
    - 79-10-7 acrylic acid
  - TSCA (Toxic Substances Control Act):
    - All ingredients are listed.
  - 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:
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)

<table>
<thead>
<tr>
<th>Chemical</th>
<th>TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>79-10-7 acrylic acid</td>
<td>A4</td>
</tr>
<tr>
<td>77-58-7 dibutyltin dilaurate</td>
<td>A4</td>
</tr>
</tbody>
</table>

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
isobornyl acrylate
acrylic acid

Hazard statements
Combustible liquid.
Harmful if swallowed, in contact with skin or if inhaled.
Causes skin irritation.
Causes serious eye irritation.
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.
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.
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.
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.
If skin irritation 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.

- **Department issuing SDS:** Product Safety Department
- **Date of preparation / last revision** 06/26/2015 / 3
- **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)
  - * Flammable liquids, Hazard Category 4
  - Acute Tox. 4: Acute toxicity, Hazard Category 4
  - Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
  - STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- * Data compared to the previous version altered.