1 Identification

- Product identifier
  - Trade name: U320
  - 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: 01-(352)-323-3500
  - US & Canada: 01-(800)-535-5053

2 Hazard(s) identification

- Classification of the substance or mixture
  - GHS06 Skull and crossbones
  - Acute Tox. 3 H301 Toxic if swallowed.
  - Acute Tox. 3 H311 Toxic in contact with skin.
  - Acute Tox. 3 H331 Toxic if inhaled.
  - GHS07
  - Eye Irrit. 2A H319 Causes serious eye irritation.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC
  - Harmful
  - Harmful if swallowed.

- 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

  - GHS06

- Signal word: Danger

- Hazard-determining components of labeling:
  - N,N-dimethylacrylamide

(Contd. on page 2)
· Hazard statements
  Toxic if swallowed, in contact with skin or if inhaled.
  Causes serious eye 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.
  Avoid breathing dust/fume/gas/mist/vapors/spray
  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 swallowed: Immediately call a poison center/doctor.
  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).
  Call a poison center/doctor.
  IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
  Call a poison center/doctor if you feel unwell.
  If eye irritation persists: Get medical advice/attention.
  Rinse mouth.
  If on skin: Wash with plenty of water.
  Take off immediately all contaminated clothing and wash it before reuse.
  Store locked up.
  Store in a well-ventilated place. Keep container tightly closed.
  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>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2680-03-7 N,N-dimethylacrylamide</td>
<td>50-100%</td>
<td></td>
</tr>
<tr>
<td>2530-85-0 3-trimethoxysilylpropyl methacrylate</td>
<td>2.5-%&lt;10%</td>
<td></td>
</tr>
<tr>
<td>162881-26-7 phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide</td>
<td>0.1-%&lt;0.9%</td>
<td></td>
</tr>
</tbody>
</table>

4 First-aid measures

· Description of first aid measures
  · General information:
    Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  · 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.
    Immediately call a 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.
- **Methods and material for containment and cleaning up:**
  - Dispose contaminated material as waste according to item 13.
  - 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:**
    - None.
  - **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.
    - **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

(Contd. on page 4)
Trade name: U320  

- **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:** Product does not present an explosion hazard.

#### Explosion limits:

- **Lower:** Not determined.
- **Upper:** Not determined.

- **Vapor pressure:** Not determined.
- **Density:** Not determined.
- **Relative density**
- **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**

## 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.
Trade name: U320

- **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**:
  - 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:

- **Harmful**

### Carcinogenic categories

| IARC (International Agency for Research on Cancer) | 119-61-9 benzophenone | 2B |
| 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**: 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:
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.

#### 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 | NA1993 |
| DOT | NA1993 |
| IMDG, IATA | UN3082 |
| UN proper shipping name | COMBUSTIBLE LIQUID, N.O.S |
| DOT | |
| IMDG, IATA | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
40.1.3 · Transport hazard class(es)
   - DOT, IMDG
     - Class 9 Miscellaneous dangerous substances and articles
   - IATA
     - Class 9 Miscellaneous dangerous substances and articles

· Packing group
   - DOT, IMDG, IATA
     - III

· Environmental hazards:
   - Marine pollutant: No
   - Special marking (IATA): Symbol (fish and tree)
   - Special precautions for user: Not applicable.
   - 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): 5L
  - Excepted quantities (EQ)
    - Code: E1
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 1000 ml
  - UN “Model Regulation”:
    - UN3082, Environmentally hazardous substances, liquid, n.o.s., 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):
  - 2680-03-7 N,N-dimethylacrylamide
  - 15206-55-0 methyl benzoylformate
  - 2530-85-0 3-trimethoxysilylpropyl methacrylate
  - 947-19-3 1-hydroxy-cyclohexyl-phenylketone
  - 10287-53-3 Ethyl-4-(dimethylamino)benzoate
  - 119-61-9 benzophenone
  - 82985-35-1 Bis[3-(trimethoxysilyl)propyl]amine
  - 162881-26-7 phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

· 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.
Safety Data Sheet
acc. to OSHA HCS

Trade name: U320

Carcinogenic categories

<table>
<thead>
<tr>
<th>Agency</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA (Environmental Protection Agency)</td>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td>TLV (Threshold Limit Value established by ACGIH)</td>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td>NIOSH-Ca (National Institute for Occupational Safety and Health)</td>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

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

GHS pictograms

GHS06

Signal word
Danger

Hazard-determining components of labeling:
N,N-dimethylacrylamide

Hazard statements
Toxic if swallowed, in contact with skin or if inhaled. Causes serious eye 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.
Avoid breathing dust/fume/gas/mist/vapors/spray
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 swallowed: Immediately call a poison center/doctor.
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).
Call a poison center/doctor.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a poison center/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
Rinse mouth.
If on skin: Wash with plenty of water.
Take off immediately all contaminated clothing and wash it before reuse.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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

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 / 1

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)
Acute Tox. 3: Acute toxicity, Hazard Category 3
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A