
SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Trade name LOW-VOC BONDING ADHESIVE

Recommended use of the chemical and restrictions on use

<table>
<thead>
<tr>
<th>Details of the supplier of the safety data sheet</th>
<th>Emergency telephone number</th>
</tr>
</thead>
</table>
| American Hydrotech, Inc.  
303 East Ohio Street, Suite 2700  
Chicago, IL 60611  
www.hydrotechusa.com | (312) 337-4998 |

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
- Flammable liquids: Category 2
- Eye irritation: Category 2A
- Reproductive toxicity: Category 2
- Specific target organ systemic toxicity - single exposure: Category 3 (Respiratory system, Central nervous system)
- Specific target organ systemic toxicity - repeated exposure (Inhalation): Category 2 (Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision))

GHS Label element
- Hazard pictograms: ![pictograms]
- Signal Word: Danger
- Hazard Statements: Highly flammable liquid and vapor. Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.
May cause damage to organs (Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)) through prolonged or repeated exposure if inhaled.

Precautionary Statements

Prevention:
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.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal:
Dispose of contents/container to an approved waste disposal plant.

Other hazards
Static Accumulating liquid

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture
Chemical nature : Static Accumulator
Chemical nature : Defatter

### Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TERT-BUTYL ACETATE</td>
<td>540-88-5</td>
<td>Flam. Liq.; H225, Acute Tox. 4; H332, STOT SE 3; H335, H336</td>
<td>46.26</td>
</tr>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>Flam. Liq.; H225, Eye Irrit. 2A; H319, STOT SE 3; H336</td>
<td>21.77</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>108-88-3</td>
<td>Flam. Liq.; H225, Skin Irrit. 2; H315, Eye Irrit. 2A; H319, Repr. 2; H361, STOT SE 3; H336, STOT RE 2; H373, Asp. Tox. 1; H304</td>
<td>4.78</td>
</tr>
<tr>
<td>XYLENE</td>
<td>1330-20-7</td>
<td>Flam. Liq.; H226, Acute Tox. 4; H312, Skin Irrit. 2; H315, Eye Irrit. 2A; H319, STOT SE 3; H335, H336, Asp. Tox. 1; H304</td>
<td>2.16</td>
</tr>
</tbody>
</table>
SECTION 4. FIRST AID MEASURES

General advice:
- Move out of dangerous area.
- Call a POISON CENTRE or doctor/physician if exposed or you feel unwell.
- Show this safety data sheet to the doctor in attendance.
- Do not leave the victim unattended.

If inhaled:
- Move to fresh air.
- Keep patient warm and at rest.
- If unconscious place in recovery position and seek medical advice.
- Consult a physician after significant exposure.

In case of skin contact:
- Remove contaminated clothing. If irritation develops, get medical attention.
- If on skin, rinse well with water.
- Wash contaminated clothing before re-use.
- If on clothes, remove clothes.

In case of eye contact:
- Immediately flush eye(s) with plenty of water.
- Remove contact lenses.
- Protect unharmed eye.

If swallowed:
- Obtain medical attention.
- Do not give milk or alcoholic beverages.
- Never give anything by mouth to an unconscious person.
- If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed:
- This material (or a component) has produced hyperglycemia and ketosis following substantial ingestion.
- Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.
- Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
  - redness of the skin
  - stomach or intestinal upset (nausea, vomiting, diarrhea)
  - irritation (nose, throat, airways)
  - temporary changes in mood and behavior
  - effects on memory
  - Shortness of breath
confusion
irregular heartbeat
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure if inhaled.

Notes to physician: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media: High volume water jet

Specific hazards during firefighting: Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products: acrid smoke and fumes
carbon dioxide and carbon monoxide
hydrogen chloride
Carbon monoxide
Organic acids
Aldehydes
Alcohols
Hydrocarbons
phenols
magnesium oxide fumes

Specific extinguishing methods:
Product is compatible with standard fire-fighting agents.

Further information: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Use a water spray to cool fully closed containers.
SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
- Evacuate personnel to safe areas.
- Remove all sources of ignition.
- Use personal protective equipment.
- Ensure adequate ventilation.
- Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions:
- Prevent product from entering drains.
- Prevent further leakage or spillage if safe to do so.
- If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up:
- Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Other information:
- Comply with all applicable federal, state, and local regulations.
- Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling:
- Open drum carefully as content may be under pressure.
- Avoid formation of aerosol.
- Provide sufficient air exchange and/or exhaust in work rooms.
- Do not breathe vapours/dust.
- Do not smoke.
- Container hazardous when empty.
- Take precautionary measures against static discharges.
- Avoid exposure - obtain special instructions before use.
- Avoid contact with skin and eyes.
- Smoking, eating and drinking should be prohibited in the application area.
- For personal protection see section 8.
- Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage:
- Keep container tightly closed in a dry and well-ventilated place.
- Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Observe label precautions.
No smoking.  
Electrical installations / working materials must comply with 
the technological safety standards.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>TERT-BUTYL ACETATE</td>
<td>540-88-5</td>
<td>TWA</td>
<td>200 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REL</td>
<td>200 ppm</td>
<td>NIOSH/GUID</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>950 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL</td>
<td>200 ppm</td>
<td>OSHA_TRA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>950 mg/m³</td>
<td>NS</td>
</tr>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>TWA</td>
<td>500 ppm</td>
<td>ACGIH</td>
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<tr>
<td></td>
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<td>STEL</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>REL</td>
<td>250 ppm</td>
<td>NIOSH/GUID</td>
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<td></td>
<td></td>
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<td>590 mg/m³</td>
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<td></td>
<td>PEL</td>
<td>1,000 ppm</td>
<td>OSHA_TRA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2,400 mg/m³</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>250 ppm</td>
<td>ACGIHLIS_P</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>750 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,800 mg/m³</td>
<td>Z1A</td>
</tr>
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<td></td>
<td></td>
<td>STEL</td>
<td>1,000 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2,400 mg/m³</td>
<td>Z1A</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>108-88-3</td>
<td>TWA</td>
<td>20 ppm</td>
<td>ACGIH</td>
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<td></td>
<td></td>
<td>REL</td>
<td>100 ppm</td>
<td>NIOSH/GUID</td>
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<td>375 mg/m³</td>
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<td>STEL</td>
<td>150 ppm</td>
<td>NIOSH/GUID</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>560 mg/m³</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
<td>OSHA/Z2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ceiling</td>
<td>300 ppm</td>
<td>OSHA/Z2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MAX. CONC</td>
<td>500 ppm</td>
<td>OSHA/Z2</td>
</tr>
<tr>
<td>XYLENE</td>
<td>1330-20-7</td>
<td>TWA</td>
<td>100 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL</td>
<td>100 ppm</td>
<td>OSHA_TRA</td>
</tr>
<tr>
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<td>435 mg/m³</td>
<td>NS</td>
</tr>
<tr>
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<td></td>
<td>REL</td>
<td>100 ppm</td>
<td>NIOSH/GUID</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>435 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
<td>NIOSH/GUID</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>655 mg/m³</td>
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</tr>
<tr>
<td>MAGNESIUM OXIDE</td>
<td>1309-48-4</td>
<td>TWA</td>
<td>10 mg/m³ [Inhalable fraction.]</td>
<td>PY OEL</td>
</tr>
<tr>
<td></td>
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<td>STEL</td>
<td>150 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>655 mg/m³</td>
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</tr>
</tbody>
</table>
### Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>acetone</td>
<td>Urine</td>
<td>Sampling time: End of shift.</td>
<td>50 mg/l</td>
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</tr>
<tr>
<td>Remarks:</td>
<td>Nonspecific</td>
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<td></td>
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</tr>
<tr>
<td>TOLUENE</td>
<td>108-88-3</td>
<td>o-Cresol, with hydrolysis</td>
<td>Creatinine in urine</td>
<td>Sampling time: End of shift.</td>
<td>0.3 mg/g</td>
<td></td>
</tr>
<tr>
<td>Remarks:</td>
<td>Background</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td>Blood</td>
<td>Sampling time: Prior to last shift of work week.</td>
<td>0.02 mg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XYLENE</td>
<td>1330-20-7</td>
<td>Methylhippuric acids</td>
<td>Creatinine in urine</td>
<td>Sampling time: End of shift.</td>
<td>1.5 g/g</td>
<td></td>
</tr>
</tbody>
</table>

**Engineering measures**: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.
Personal protective equipment

Respiratory protection: In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection

Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection: Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection: Wear as appropriate:
impervious clothing
Safety shoes
Flame-resistant clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures: Wash hands before breaks and at the end of workday. When using do not eat or drink. When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: liquid

Colour: yellow

Odour: No data available

Odour Threshold: No data available

pH: No data available

Melting point/freezing point: No data available

Boiling point/boiling range: 133 °F / 56 °C (1,013.232 hPa)
Calculated Phase Transition Liquid/Gas
Flash point: -4 °F / -20 °C
Evaporation rate: No data available
Flammability (solid, gas): No data available
Flammability (liquids): Static Accumulating liquid
Flammability (liquids): Upper explosion limit: 12.8 % (V)
GLP: Calculated Explosive Limit
Lower explosion limit: 1 % (V)
GLP: Calculated Explosive Limit
Vapour pressure: No data available
Relative vapour density: No data available
Relative density: 0.906 (77.00 °F)
Density: 0.906 g/cm³ (77.00 °F)

Solubility (ies):
Water solubility: No data available
Solubility in other solvents: No data available
Partition coefficient: n-octanol/water: No data available
Thermal decomposition: No data available
Viscosity:
Viscosity, dynamic: 2,500 mPa.s
Viscosity, kinematic: No data available
Oxidizing properties: No data available

SECTION 10. STABILITY AND REACTIVITY
Reactivity: No decomposition if stored and applied as directed.
Chemical stability: Stable under recommended storage conditions.
Possibility of hazardous reactions: Vapours may form explosive mixture with air.
Conditions to avoid: Heat, flames and sparks.

Incompatible materials: Acids, alkalis, Amines, Ammonia, chlorine trifluoride, halogens, nitrates, Oxidizing agents, peroxides, phosphorus pentachloride, Reducing agents, strong alkalis.

Hazardous decomposition products: carbon dioxide and carbon monoxide, Hydrocarbons.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
- Inhalation
- Skin contact
- Eye Contact
- Ingestion

Acute toxicity:
Not classified based on available information.

Components:
TERT-BUTYL ACETATE:
Acute oral toxicity: LD 50 (Rat, male): 4,100 mg/kg
Acute inhalation toxicity: LC 50 (Rat): 4211 ppm
Exposure time: 6 h
Test atmosphere: vapour
Assessment: The component/mixture is classified as acute inhalation toxicity, category 4.

Acute dermal toxicity: LD 50 (Rabbit): > 19,800 mg/kg

ACETONE:
Acute oral toxicity: LD 50 (Rat, female): 5,800 mg/kg
Acute inhalation toxicity: LC 50 (Rat, female): 76 mg/l
Exposure time: 4 h

Acute dermal toxicity: LD 50 (Rabbit): > 7,426 mg/kg

TOLUENE:
Acute oral toxicity: LD 50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity: LC 50 (Rat): 8000 ppm
Exposure time: 4 h

Acute dermal toxicity: LD 50 (Rabbit): 12,124 mg/kg

XYLENE:
Acute oral toxicity: LD 50 (Rat): 3,523 - 8,600 mg/kg
Acute inhalation toxicity: LC 50 (Rat): 6700 ppm
Exposure time: 4 h
Test atmosphere: vapour
Acute dermal toxicity: LD 50 (Rabbit): 1,700 mg/kg

MAGNESIUM OXIDE:
Acute oral toxicity: LD 50 (Rat): > 5,000 mg/kg

Skin corrosion/irritation
Not classified based on available information.

**Product:**
Result: Repeated exposure may cause skin dryness or cracking.

Remarks: May cause skin irritation in susceptible persons.

**Components:**
TERT-BUTYL ACETATE:
Result: Mildly irritating to skin

ACETONE:
Result: Mildly irritating to skin
Result: Repeated exposure may cause skin dryness or cracking.

TOLUENE:
Result: Irritating to skin

XYLENE:
Result: Irritating to skin

MAGNESIUM OXIDE:
Result: Possibly irritating to skin

**Serious eye damage/eye irritation**
Causes serious eye irritation.

**Product:**
Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.
Causes serious eye irritation.

**Components:**
TERT-BUTYL ACETATE:
Result: Mildly irritating to eyes

ACETONE:
Result: Irritating to eyes

TOLUENE:
Result: Irritating to eyes

XYLENE:
Result: Irritating to eyes

MAGNESIUM OXIDE:
Result: Possibly irritating to eyes

Respiratory or skin sensitisation
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Components:
TERT-BUTYL ACETATE:
Species: Guinea pig
Assessment: Did not cause sensitisation on laboratory animals.
Method: Buehler Test

Germ cell mutagenicity
Not classified based on available information.

Components:
TERT-BUTYL ACETATE:
Genotoxicity in vitro
: Test Type: Ames test
  Test species: Salmonella typhimurium
  Metabolic activation: with and without metabolic activation
  Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
  Result: negative

: Test Type: Chromosome aberration test in vitro
  Test species: Human lymphocytes
  Metabolic activation: with and without metabolic activation
  Method: OECD Test Guideline 473
  Result: negative

Genotoxicity in vivo
: Test Type: in vivo assay
  Test species: Rat (male and female)
  Cell type: Bone marrow
  Application Route: Inhalation
  Result: negative

Carcinogenicity
Not classified based on available information.

Reproductive toxicity
Suspected of damaging fertility or the unborn child.

Components:
TOLUENE:
Reproductive toxicity - Assessment
: Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

STOT - single exposure
May cause respiratory irritation.
May cause drowsiness or dizziness.

**Components:**

- **TERT-BUTYL ACETATE:**
  - Exposure routes: Ingestion
  - Target Organs: Central nervous system
  - Assessment: May cause drowsiness or dizziness.

  Exposure routes: Inhalation
  Target Organs: Respiratory Tract
  Assessment: May cause respiratory irritation.

- **ACETONE:**
  - Exposure routes: Inhalation
  - Target Organs: Nervous system
  - Assessment: May cause drowsiness or dizziness.

- **TOLUENE:**
  - Exposure routes: Inhalation
  - Target Organs: Central nervous system
  - Assessment: May cause drowsiness or dizziness.

- **XYLENE:**
  - Assessment: May cause respiratory irritation., May cause drowsiness or dizziness.

**STOT - repeated exposure**
May cause damage to organs (Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)) through prolonged or repeated exposure if inhaled.

**Components:**

- **TOLUENE:**
  - Exposure routes: Inhalation
  - Target Organs: Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)
  - Assessment: May cause damage to organs through prolonged or repeated exposure.

**Aspiration toxicity**
Not classified based on available information.

**Product:**
No aspiration toxicity classification

**Components:**

- **ACETONE:**
  - May be harmful if swallowed and enters airways.

- **TOLUENE:**
  - May be fatal if swallowed and enters airways.

- **XYLENE:**
  - May be fatal if swallowed and enters airways.

**Further information**

**Product:**
Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.
Carcinogenicity:
IARC
Group 2B: Possibly carcinogenic to humans

ETHYL BENZENE
100-41-4

TALC
14807-96-6

OSHA
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:
TERT-BUTYL ACETATE:
Toxicity to fish:
LC50 (Oncorhynchus mykiss (rainbow trout)): 240 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates:
EC50 (Water flea (Daphnia magna)): 350 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae:
ErC50 (Pseudokirchneriella subcapitata (microalgae)): 16 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

NOEC (Pseudokirchneriella subcapitata (microalgae)): 2.3 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

ACETONE:
Toxicity to fish:

LC 50 (Rainbow trout, donaldson trout (Oncorhynchus mykiss)): 4,740 - 6,330 mg/l
Exposure time: 96 h
Test Type: static test

LC 50 (Fathead minnow (Pimephales promelas)): 8,733 - 9,482 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to algae:

NOEC (Microcystis aeruginosa): 530 mg/l
Exposure time: 8 d
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC (Daphnia magna (Water flea)): 2,112 mg/l
Exposure time: 28 d
Test Type: flow-through test

TOLUENE:

Toxicity to fish:

LC 50 (Oncorhynchus kisutch (coho salmon)): 5.5 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates:

EC 50 (Water flea (Ceriodaphnia dubia)): 3.78 mg/l
Exposure time: 48 h
Remarks: Mortality

Toxicity to algae:

EC 50 (Pseudokirchneriella subcapitata (microalgae)): > 433 mg/l
End point: Growth inhibition
Exposure time: 96 h

NOEC (Scenedesmus quadricauda (Green algae)): > 400 mg/l
End point: Growth inhibition
Exposure time: 7 d

Toxicity to fish (Chronic toxicity):

NOEC (Oncorhynchus mykiss (rainbow trout)): 1.39 mg/l
Exposure time: 40 d
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC (Water flea (Ceriodaphnia dubia)): 0.74 mg/l
Exposure time: 7 d

XYLENE:

Toxicity to fish:

LC 50 (Fathead minnow (Pimephales promelas)): 23.53 - 29.97 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates:

LC 50 (Water flea (Daphnia magna)): > 100 - < 1,000 mg/l
Exposure time: 24 h
Test Type: static test

Persistence and degradability

Components:
TERT-BUTYL ACETATE:
Biodegradability: aerobic
Result: Not readily biodegradable.
Biodegradation: 50 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

ACETONE:
Biodegradability: Result: Readily biodegradable
Biodegradation: 90.9 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

TOLUENE:
Biodegradability: Result: Readily biodegradable

XYLENE:
Physico-chemical removability: Remarks: The product evaporates readily.

MAGNESIUM OXIDE:
Biodegradability: Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential

Components:
TERT-BUTYL ACETATE:
Partition coefficient: n-octanol/water: log Pow: 1.76

ACETONE:
Partition coefficient: n-octanol/water: log Pow: -0.24

TOLUENE:
Bioaccumulation: Species: Ide, silver or golden orfe (Leuciscus idus)
Bioconcentration factor (BCF): 94
Exposure time: 3 d
Concentration: 0.05 mg/l
Method: Not reported

Partition coefficient: n-octanol/water: log Pow: 2.73

XYLENE:
Partition coefficient: n-octanol/water: log Pow: 3.16
octanol/water

Mobility in soil
Components: No data available
Other adverse effects: No data available

Product:
Additional ecological information: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
General advice: The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging: Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

<table>
<thead>
<tr>
<th>REGULATION</th>
<th>ID NUMBER</th>
<th>PROPER SHIPPING NAME</th>
<th>*HAZARD CLASS</th>
<th>SUBSIDIARY HAZARDS</th>
<th>PACKING GROUP</th>
<th>MARINE POLLUTANT / LTD. QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES</td>
<td>UN 1133</td>
<td>Adhesives</td>
<td>3</td>
<td></td>
<td>II</td>
<td></td>
</tr>
<tr>
<td>INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER</td>
<td>UN 1133</td>
<td>Adhesives</td>
<td>3</td>
<td></td>
<td>II</td>
<td></td>
</tr>
</tbody>
</table>
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO
UN  1133  Adhesives  3  II

INTERNATIONAL MARITIME DANGEROUS GOODS
UN  1133  ADHESIVES  3  II

TRANSPORT CANADA - INLAND WATERWAYS
UN  1133  ADHESIVES  3  II

TRANSPORT CANADA - RAIL
UN  1133  ADHESIVES  3  II

TRANSPORT CANADA - ROAD
UN  1133  ADHESIVES  3  II

U.S. DOT - INLAND WATERWAYS
UN  1133  Adhesives  3  II

U.S. DOT - RAIL
UN  1133  Adhesives  3  II

U.S. DOT - ROAD
UN  1133  ADHESIVOS  3  II

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant  no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
</table>

19 / 23
XYLENE | 1330-20-7 | 100 | 4608.719698

**SARA 311/312 Hazards**  
Fire Hazard  
Acute Health Hazard  
Chronic Health Hazard

**SARA 313 Component(s)**

<table>
<thead>
<tr>
<th>Compound</th>
<th>CAS Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOLUENE</td>
<td>108-88-3</td>
<td>4.78 %</td>
</tr>
<tr>
<td>XYLENE</td>
<td>1330-20-7</td>
<td>2.16 %</td>
</tr>
<tr>
<td>ETHYL BENZENE</td>
<td>100-41-4</td>
<td>0.63 %</td>
</tr>
</tbody>
</table>

**California Prop 65**

WARNING! This product contains a chemical known to the State of California to cause cancer.  
ETHYL BENZENE 100-41-4

<table>
<thead>
<tr>
<th>Compound</th>
<th>CAS Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORMALDEHYDE</td>
<td>50-00-0</td>
<td></td>
</tr>
<tr>
<td>2-CHLORO-1,3-BUTADIENE</td>
<td>126-99-8</td>
<td></td>
</tr>
<tr>
<td>BENZENE</td>
<td>71-43-2</td>
<td></td>
</tr>
<tr>
<td>TRANS-1,4-DICHLOROBUT-2-ENE</td>
<td>110-57-6</td>
<td></td>
</tr>
<tr>
<td>LEAD OXIDE</td>
<td>1317-36-8</td>
<td></td>
</tr>
<tr>
<td>CADMIUM OXIDE</td>
<td>1306-19-0</td>
<td></td>
</tr>
</tbody>
</table>

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.  
TOLUENE 108-88-3

<table>
<thead>
<tr>
<th>Compound</th>
<th>CAS Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENZENE</td>
<td>71-43-2</td>
<td></td>
</tr>
<tr>
<td>LEAD OXIDE</td>
<td>1317-36-8</td>
<td></td>
</tr>
<tr>
<td>CADMIUM OXIDE</td>
<td>1306-19-0</td>
<td></td>
</tr>
</tbody>
</table>

**The components of this product are reported in the following inventories:**

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>On TSCA Inventory</td>
</tr>
<tr>
<td>DSL</td>
<td>All components of this product are on the Canadian DSL.</td>
</tr>
<tr>
<td>AUSTRAUSTR</td>
<td>Not in compliance with the inventory</td>
</tr>
<tr>
<td>ENCS</td>
<td>Not in compliance with the inventory</td>
</tr>
<tr>
<td>KECL</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
</tbody>
</table>
PICCS: Not in compliance with the inventory
IECSC: On the inventory, or in compliance with the inventory

Inventories
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information
Revision Date: 05/25/2015

<table>
<thead>
<tr>
<th>NFPA: Flammability</th>
<th>HMIS III:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>HEALTH 3</td>
</tr>
<tr>
<td>Health</td>
<td>FLAMMABILITY 3</td>
</tr>
<tr>
<td>Instability</td>
<td>PHYSICAL HAZARD 0</td>
</tr>
</tbody>
</table>

NFPA Flammable and Combustible Liquids Classification
Flammable Liquid Class IB

Full text of H-Statements referred to under sections 2 and 3.
H225 Highly flammable liquid and vapor.
H226 Flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

Sources of key data used to compile the Safety Data Sheet
Ashland internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet:

- ACGIH: American Conference of Industrial Hygienists
- BEI: Biological Exposure Index
- CAS: Chemical Abstracts Service (Division of the American Chemical Society)
- CMR: Carcinogenic, Mutagenic or Toxic for Reproduction
- FG: Food grade
- GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
- H-statement: Hazard Statement
- IATA: International Air Transport Association.
- IATA-DGR: Dangerous Goods Regulation by the “International Air Transport Association” (IATA).
- ICAO: International Civil Aviation Organization
- ICAO-TI (ICAO): Technical Instructions by the “International Civil Aviation Organization”
- IMDG: International Maritime Code for Dangerous Goods
- ISO: International Organization for Standardization
- logPow: octanol-water partition coefficient
- LCxx: Lethal Concentration, for xx percent of test population
- LDxx: Lethal Dose, for xx percent of test population.
- ICxx: Inhibitory Concentration for xx of a substance
- ECxx: Effective Concentration of xx
- N.O.S.: Not Otherwise Specified
- OECD: Organization for Economic Co-operation and Development
- OEL: Occupational Exposure Limit
- P-Statement: Precautionary Statement
- PBT: Persistent, Bioaccumulative and Toxic
- PPE: Personal Protective Equipment
- STEL: Short-term exposure limit
- STOT: Specific Target Organ Toxicity
- TLV: Threshold Limit Value
- TWA: Time-weighted average
- vPvB: Very Persistent and Very Bioaccumulative
- WEL: Workplace Exposure Level
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
- DOT: Department of Transportation
- FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act
- HMIRC: Hazardous Materials Information Review Commission
- HMIS: Hazardous Materials Identification System
- NFPA: National Fire Protection Association
- NIOSH: National Institute for Occupational Safety and Health
- OSHA: Occupational Safety and Health Administration
- PMRA: Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System