SAFETY DATA SHEET
according to Regulation (EC) No. 453/2010
Dental Use

Thermo Clone™ Tray Adhesive

SECTION 1 : Identification of the substance/preparation and of the company/undertaking

1.1. Product identifier

Product code : 4074
Product name : Thermo Clone™ Tray Adhesive
Product description : Impression Tray Adhesive

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : Professional Dental Impression Tray Adhesive

1.3. Details of the supplier of the safety data sheet

Manufacturer
Ultradent Products, Inc.
505 W. 10200 S.
South Jordan, UT 84095

Distributor
Ultradent Products GmbH
Am Westhover Berg 30
51149 Cologne Germany
Email: infoDE@ultradent.com
Emergency Phone : +49(0)2203-35-92-0

1.4. Emergency telephone number

CHEMTREC (NORTH AMERICA) : (800) 424 - 9300
INTERNATIONAL : +1(703) 527 - 3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation(EC) No 1272/2008 [CLP]

Health : Skin Irritation, Category 2
Eye Irritation, Category 2
Target Organ Toxicity (Single exposure), Category 3

Physical : Flammable Liquids, Category 3

2.2. Label elements

Hazardous components which must be listed on the label: ethyl acetate

Classification according to Regulation(EC) No 1272/2008 [CLP]

Hazard pictogram(s) :

Exclamation mark Flame

Signal Word : WARNING

Hazard statement(s) :
H226: Flammable liquid and vapour.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
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Precautionary statement(s)


Storage: P273: Avoid release to the environment.


2.3. Other hazards

Immediate concerns: Highly Flammable

SECTION 3: Composition / information on ingredients

3.1. Substances

Not Applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS</th>
<th>EINECS No.</th>
<th>Wt.%</th>
<th>Classification according to Regulation(EC) No 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Acetate</td>
<td>141-78-6</td>
<td>205-500-4</td>
<td>25 - 50</td>
<td>Flam. Liq., Cat. 2; Eye Irr., Cat. 2; STOT SE, Cat. 3; H225; H319; H336</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>215-535-7</td>
<td>5 - 10</td>
<td>Acute Tox. (D), Cat. 4; Acute Tox. (I), Cat. 4; Skin Irr., Cat. 2; Flam. Liq., Cat. 3; H226; H312; H315; H332</td>
</tr>
<tr>
<td>Ethyl Benzene</td>
<td>100-41-4</td>
<td>202-849-4</td>
<td>≤ 5</td>
<td>Flam. Liq., Cat. 2; Acute Tox. (I), Cat. 4; Asp. Haz., Cat. 1; STOT RE, Cat. 2; Aquatic Chronic, Cat. 3; H225; H332; H304; H373; H412</td>
</tr>
<tr>
<td>Butyl Titanium IV</td>
<td>5593-70-4</td>
<td>227-006-8</td>
<td>≤ 5</td>
<td>Flam. Liq., Cat. 3; Skin Irr., Cat. 2; EYE DMG., Cat. 1; H226; H315; H318</td>
</tr>
</tbody>
</table>

For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Following eyes: Flush eyes with water for 5 minutes. Get medical attention if irritation develops or persists.

Following skin: Wash with soap and water.
Thermo Clone™ Tray Adhesive

Following ingestion: If swallowed rinse mouth with water. Have victim drink large quantities of water and seek medical attention immediately.

Following inhalation: If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

4.2. Most important symptoms and effects, both acute and delayed

<table>
<thead>
<tr>
<th>Eyes</th>
<th>Irritating to eyes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Has de-greasing effect on the skin.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May damage lungs if swallowed.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Harmful if inhaled</td>
</tr>
</tbody>
</table>

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician: Not Applicable

SECTION 5: Fire fighting measures

5.1. Extinguishing media

Extinguishing media: Carbon dioxide(CO2), Sand, Extinguishing powder

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products: Special hazards arising from the substance or mixture
In case of fire and/or explosion do not breathe fumes. Vapours may form explosive mixtures with air.

5.3. Advice for firefighters

Fire fighting procedures: General: Evacuate all personnel; use protective equipment for fire-fighting. Use self-contained breathing apparatus when the product is involved in fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General procedures: Remove all sources of ignition. Wear personal protective equipment.

6.2. Environmental precautions

Water spill: Do not empty into drains or the aquatic environment.

6.3. Methods and material for containment and cleaning up

Large Spill: Wipe up with absorbent material (eg cloth, fleece) Do not rinse down with water.

6.4. Reference to other sections

Reference to other sections: Not Applicable

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling: Advice on safe handling
Use only in well-ventilated areas. Keep away from sources of ignition. No smoking. Keep container tightly closed and in a well-ventilated place.
Advice on protection against fire and explosion.
Take precautionary measures against static discharges.
Further information on handling: Provide fresh air.
Thermo Clone™ Tray Adhesive

Storage: Keep container tightly closed and in a well-ventilated place. Protect against heat.

7.2. Conditions for safe storage, including any incompatibilities

Shelf life: See product labeling

7.3. Specific end use(s)

Specific end use(s): Professional Dental Impression Tray Adhesive

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Control parameters</th>
<th>CAS No</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure routes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td></td>
</tr>
<tr>
<td>dermal</td>
<td>ATE</td>
<td>1100 mg/kg</td>
</tr>
<tr>
<td>inhalative</td>
<td>ATE</td>
<td>11 mg/l</td>
</tr>
<tr>
<td>vapour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aerosol</td>
<td>ATE</td>
<td>1.5 mg/l</td>
</tr>
<tr>
<td>ethylbenzene</td>
<td>100-41-4</td>
<td></td>
</tr>
<tr>
<td>oral</td>
<td>LD50</td>
<td>3500 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>GESTIS</td>
</tr>
<tr>
<td>dermal</td>
<td>LD50</td>
<td>15400 mg/kg</td>
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<tr>
<td></td>
<td>Rabbit</td>
<td>GESTIS</td>
</tr>
<tr>
<td>inhalative (4 h)</td>
<td>LC50</td>
<td>17.2 mg/l</td>
</tr>
<tr>
<td>vapour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aerosol</td>
<td>ATE</td>
<td>1.5 mg/l</td>
</tr>
</tbody>
</table>

Additional information on tests
Preparation not tested. No data available

Further information
Harmful by inhalation and if swallowed.
After skin contact: Has de-greasing effect on skin.
Following eye contact: Irritant.
Harmful: may cause lung damage if swallowed.

8.2. Exposure controls
Engineering controls: Protective and hygiene measures
Avoid contact with skin, eye and clothing. Change contaminated clothing. Wash hands before breaks and at the end of work. Protect skin by using skin protective cream.

Eye/face protection: Framed glasses

Skin protection: Type of chemical protective gloves to choose depends on the concentration and quantity of dangerous substances as well as on work place specifications. Hand protection: Suitable material: Butyl rubber.

Respiratory protection: With correct and proper use, and under normal conditions, breathing protection is not required. Provide adequate ventilation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Liquid
Colour: Blue
Odour: Characteristic odor
Boiling temperature: > 77°C
Flash point: > -4°C
Vapor pressure: < 102 hPa at 20°C
Density: 1.05 - 1.1 g/cm³
Solubility in water: Practically insoluble
Auto-ignition temperature: > 400°C
Explosive properties:
Lower explosion limits: 2.1 vol %
Upper explosion limits: 11.5 vol %

9.2. Other information
Percent volatile: Formation of potentially explosive vapor/air mixture is possible.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity: Stable when stored and handled under recommended conditions.

10.2. Chemical stability
Chemical stability: Highly flammable. Vapors may form explosive mixtures with air.

10.3. Possibility of hazardous reactions
Hazardous polymerization: None

10.4. Conditions to avoid
Conditions to avoid: None by intended use.

10.5. Incompatible materials
Incompatible materials: None

10.6. Hazardous decomposition products
Thermo Clone™ Tray Adhesive

Hazardous decomposition products : None

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Notes : xylene: Exposure Route: Dermal Method: ATE Dose: 1100mg/kg Exposure Route: Inhalative vapour Method: ATE Dose: 11mg/l Exposure Route: Inhalative Aerosol Method: ATE Dose: 1.5mg/l
Ethyl Benzene: Exposure Route: Oral Method: LD50: 3500 mg/kg Species: Rat Source: GESTIS Exposure Routes: Dermal LD50: 15400mg/kg Species: Rabbit Source: GESTIS Exposure Route: Inhalative (4 h) vapour: LC50 17,2mg/l Species: Rat Exposure Route: Inhalative aerosol Method: ATE: 1,5mg/l Additional information on tests Preparation not tested. No data available.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity : ethylbenzene: Aquatic toxicity: Acute algae toxicity Method: Erc50 Dose: 3.6 mg/l h: 96 Source: GESTIS
Aquatic toxicity (acute) : Do not allow to enter sewers or drains that may lead to waterways.

12.2. Persistence and degradability

Persistence and degradability : Not Available

12.3. Bioaccumulative potential

Bioaccumulative potential : Partition coefficient n-octanol/water Ethyl Benzene Log Pow: 3.15

12.4. Mobility in soil

Mobility in soil : Not Available

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment : Not Available

12.6. Other adverse effects

General comments : Leakage into the environment must be prevented.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal : Advice on disposal
Do not remove with domestic waste. Do not empty into drains or the aquatic environment. Waste disposal according to official state regulations. Waste disposal number of waste from residues/unused products 180106 WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate health care): wastes from matal care, diagnosis, treatment of...
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prevention of disease in humans; chemicals consisting of or containing
dangerous substances.
Classified as hazardous waste.
Waste disposal number of used product
200399 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR
COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING
SEPARATELY COLLECTED FRACTIONS, other municipal wastes; municipal
wastes not otherwise specified
Contaminated packaging
Cleaned containers may be recycled.

SECTION 14: Transport information

14.1. UN number

UN number : 3295

14.2. UN proper shipping name

UN proper shipping name : Hydrocarbons, liquid, n.o.s(mixture of Ethyl Acetate, Xylene, Ethyl Benzene, Butyl Titanate)

14.3. Transport hazard class(es)

Hazard classification : 3

14.4. Packing group

Packing group : II

14.5. Environmental hazards

Marine pollutant #1 : NAP

14.6. Special precautions for user

ADR - road : NAP
RID - rail : NAP
IMDG - sea : Marine Transport (IMDG)
  14.1. UN number: 3295
  14.2. UN proper shipping name: Hydrocarbons, liquid, n.o.s(mixture of Ethyl Acetate, Xylene, Ethyl Benzene, Butyl Titanate)
  14.3. Transport hazard class(es): 3
  14.4. Packing group: II
  Hazard label: 2
  Special Provisions: -
  Limited Quantity: 1L
  EmS: F-E, S-D
  Other applicable information (marine transport)
  E2

IATA - air : IATA-packing instructions- Passenger: 353
  IATA-max. quantity - Passenger: 5L
  IATA-packing instructions - Cargo: 364
  IATA-max. quantity - Cargo: 60 L
  Other applicable information (air transport)
Thermo Clone™ Tray Adhesive

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk : NAP

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

RoHS General Information : Please refer to Medical Devices Directive 93/42/EEC

SECTION 16: Other information

Relevant H-statements (number and full text)

- Acute Tox. (D), Cat. 4: Acute Toxicity (Dermal), Category 4
- Acute Tox. (I), Cat. 4: Acute Toxicity (Inhalation), Category 4
- Aquatic Chronic, Cat. 3: Chronic Hazards to the Aquatic Environment, Category 3
- Asp. Haz., Cat. 1: Aspiration Hazard, Category 1
- EYE DMG., Cat. 1: Eye Damage, Category 1
- Eye Irr., Cat. 2: Eye Irritation, Category 2
- Flam. Liq., Cat. 2: Flammable Liquids, Category 2
- Flam. Liq., Cat. 3: Flammable Liquids, Category 3
- STOT RE, Cat. 2: Target Organ Toxicity (Repeated exposure), Category 2
- STOT SE, Cat. 3: Target Organ Toxicity (Single exposure), Category 3
- Skin Irr., Cat. 2: Skin Irritation, Category 2
- H225: Highly flammable liquid and vapour.
- H226: Flammable liquid and vapour.
- H304: May be fatal if swallowed and enters airways.
- H312: Harmful in contact with skin.
- H315: Causes skin irritation.
- H318: Causes serious eye damage.
- H319: Causes serious eye irritation.
- H332: Harmful if inhaled.
- H336: May cause drowsiness or dizziness.
- H373: May cause damage to organs.
- H412: Harmful to aquatic life with long lasting effects.

Prepared by : Anu Kattoju

Revision summary : This SDS replaces the 08/28/2015 SDS. Revised: Section 1: Date-Revised, MSDS No. Section 5: EXPLOSION HAZARDS, EXTINGUISHING MEDIA, FIRE EXPLOSION, FIRE FIGHTING EQUIPMENT, SENSITIVE TO STATIC DISCHARGE, SENSITIVITY TO IMPACT. Section 8: ENGINEERING CONTROLS, PERSONAL PROTECTIVE EQUIPMENT (EYES AND FACE, RESPIRATORY). Section 9: DENSITY. Section 10: STABLE. Section 12: CHEMICAL FATE INFORMATION, DISTRIBUTION, SECTION 12: Ecological information. Section 14: ROAD AND RAIL (ADR/RID) - PROPER SHIPPING
Thermo Clone™ Tray Adhesive

NAME VESSEL (IMO/IMDG) - MARINE POLLUTANT #1 ROAD AND RAIL (UK only) (CDG) - SPECIAL PROVISIONS SECTION 14: Transport information, UN number, ADR - road, IMDG - sea, IATA - air. Section 15: RoHS. Section 16: Revision Summary, GENERAL STATEMENTS.

General statements : NAP = Not Applicable
Additional SDS information : Revision #:1
Manufacturer disclaimer : FOR DENTAL USE ONLY: Use as directed. The information and recommendations are taken from sources (raw material SDS(s) and manufacturer’s knowledge) believed to be accurate; however, the manufacturer, makes no warranty with respect to the accuracy of the information or the suitability of the recommendation and assumes no liability to any user thereof. Each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.