

Safety Data Sheet
acc. to OSHA HCS

Printing date 09/23/2021

Reviewed on 09/23/2021

1 Identification

- **Product identifier**
- **Trade name:** *Thermo Clone™ Tray Adhesive*
- **Article number:** SDS 377-001.03, 4074
- **Application of the substance / the mixture** *Professional Dental Impression Tray Adhesive*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*Ultradent Products Inc.
505 W. Ultradent Drive (10200 S)
South Jordan, UT 84095-3942
USA
onlineordersupport@ultradent.com*
- **Information department:** *Customer Service*
- **Emergency telephone number:**
*CHEMTREC (NORTH AMERICA) : (800) 424-9300
(INTERNATIONAL) : +(703) 527-3887*

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.

GHS08 Health hazard

*Carc. 2 H351 Suspected of causing cancer.**STOT RE 2 H373 May cause damage to the hearing organs through prolonged or repeated exposure.*

GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.

GHS07

*Skin Irrit. 2 H315 Causes skin irritation.**STOT SE 3 H336 May cause drowsiness or dizziness.*

- **Label elements**
- **GHS label elements** *The product is classified according to the Globally Harmonized System (GHS)*
- **Hazard pictograms** *GHS02, GHS05, GHS07, GHS08*
- **Signal word** *Danger*

(Contd. on page 2)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/23/2021

Reviewed on 09/23/2021

Trade name: Thermo Clone™ Tray Adhesive

(Contd. of page 1)

· **Health Hazard-determining components of labeling:**

Ethyl Acetate

Ethylbenzene

· **Hazard statements**

Flammable liquid and vapor.

Causes skin irritation.

Causes serious eye damage.

Suspected of causing cancer.

May cause drowsiness or dizziness.

May cause damage to the hearing organs through prolonged or repeated exposure.

· **Precautionary statements**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a poison center/doctor.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P314 Get medical advice/attention if you feel unwell.

P362+P364 Take off contaminated clothing and wash it before reuse.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 3

Reactivity = 0

US

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/23/2021

Reviewed on 09/23/2021

Trade name: Thermo Clone™ Tray Adhesive

(Contd. of page 2)

3 Composition/information on ingredients

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

- **Dangerous components:**

141-78-6	Ethyl Acetate ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2A, H319; STOT SE 3, H336	≥20-<40%
1330-20-7	Xylene, mixture of isomers ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	≥0-<10%
100-41-4	Ethylbenzene ⚠ Flam. Liq. 2, H225; ⚠ Carc. 2, H351; STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H332	≥0.1-<10%
5593-70-4	Butyl Titanate (IV) ⚠ Flam. Liq. 3, H226; ⚠ Eye Irrit. 2A, H319	≥0-<10%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **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** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Fire-extinguishing powder
Sand
Carbon dioxide
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
Vapors may form explosive mixtures with air.
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:**
Wear fully protective suit.
Mouth respiratory protective device.

US

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/23/2021

Reviewed on 09/23/2021

Trade name: **Thermo Clone™ Tray Adhesive**

(Contd. of page 3)

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 Keep away from ignition sources
 Mount respiratory protective device.
 Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Use neutralizing agent.
 Dispose contaminated material as waste according to item 13.
 Ensure adequate ventilation.
- **Reference to other sections**
 No dangerous substances are released.
 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**
 Keep receptacles tightly sealed.
 Ensure good ventilation/exhaustion at the workplace.
 Open and handle receptacle with care.
 Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
 Keep ignition sources away - Do not smoke.
 Protect against electrostatic charges.
 Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 Protect from heat
 See product labelling.
 Keep receptacle tightly sealed.
- **Specific end use(s)** Professional Dental Impression Tray Adhesive

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 following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
 At this time, the remaining constituent has no known exposure limits.

141-78-6 Ethyl Acetate

PEL	Long-term value: 1400 mg/m ³ , 400 ppm
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(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/23/2021

Reviewed on 09/23/2021

Trade name: Thermo Clone™ Tray Adhesive

(Contd. of page 4)

REL Long-term value: 1400 mg/m³, 400 ppm

TLV Long-term value: 1440 mg/m³, 400 ppm

1330-20-7 Xylene, mixture of isomers

PEL Long-term value: 435 mg/m³, 100 ppm

REL Short-term value: 655 mg/m³, 150 ppm

Long-term value: 435 mg/m³, 100 ppm

TLV Short-term value: 651 mg/m³, 150 ppm

Long-term value: 434 mg/m³, 100 ppm

BEI

100-41-4 Ethylbenzene

PEL Long-term value: 435 mg/m³, 100 ppm

REL Short-term value: 545 mg/m³, 125 ppm

Long-term value: 435 mg/m³, 100 ppm

TLV Long-term value: 87 mg/m³, 20 ppm

BEI

· Ingredients with biological limit values:

1330-20-7 Xylene, mixture of isomers

BEI 1.5 g/g creatinine

Medium: urine

Time: end of shift

Parameter: Methylhippuric acids

100-41-4 Ethylbenzene

BEI 0.7 g/g creatinine

Medium: urine

Time: end of shift at end of workweek

Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific, semi-quantitative)

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Medium: end-exhaled air

Time: not critical

Parameter: Ethyl benzene (semi-quantitative)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Use skin protection cream for skin protection.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

Not necessary if room is well-ventilated.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

(Contd. on page 6)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/23/2021

Reviewed on 09/23/2021

Trade name: **Thermo Clone™ Tray Adhesive**

(Contd. of page 5)

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material is based on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Butyl rubber, BR

The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

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:	Blue
Odor:	Characteristic
Odor threshold:	Not determined.

· **pH-value:** Not applicable (non-aqueous)

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	>70 °C

· **Flash point:** 3 °C

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** >400 °C

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower:	2.1 Vol %
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(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/23/2021

Reviewed on 09/23/2021

Trade name: Thermo Clone™ Tray Adhesive

(Contd. of page 6)

Upper:	11.5 Vol %
· Vapor pressure at 20 °C:	<102 hPa
· Density at 20 °C:	<1.1 g/cm ³
· Bulk density:	>574-<1,408 kg/m ³
· Relative density	Not determined
· Vapor 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:	<45 %
VOC content:	<45 %
	<495.0 g/l / <4.13 lb/gal
VOC (EC)	31-<45 %
· Solids content:	<68 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity Stable**
- **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** None
- **Incompatible materials:** None
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Dermal	LD50	>20,000-40,000 mg/kg (rabbit)
Inhalative	LC50/4 h	>73.3-183 mg/l

141-78-6 Ethyl Acetate

Oral	LD50	5,620 mg/kg (rabbit)
Inhalative	LC50/4 h	1,600 mg/l (rat)

1330-20-7 Xylene, mixture of isomers

Oral	LD50	4,300 mg/kg (rat)
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(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/23/2021

Reviewed on 09/23/2021

Trade name: Thermo Clone™ Tray Adhesive

(Contd. of page 7)

Dermal	LD50	2,000 mg/kg (rabbit)
100-41-4 Ethylbenzene		
Oral	LD50	3,500 mg/kg (rat)
Dermal	LD50	17,800 mg/kg (rabbit)
5593-70-4 Butyl Titanate (IV)		
Oral	LD50	3,122 mg/kg (rat)

· **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.

· **Sensitization:**

Vapors may cause drowsiness and dizziness.
Harmful by inhalation

· **Additional toxicological information:**

Hazard identification: Nausea & Headaches
May cause lung damage if swallowed.
Harmful if swallowed.

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

1330-20-7	Xylene, mixture of isomers	3
100-41-4	Ethylbenzene	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:**

- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even 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.

US

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/23/2021

Reviewed on 09/23/2021



Trade name: Thermo Clone™ Tray Adhesive

(Contd. of page 8)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Disposal should be in accordance with applicable regional, national and local laws and regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · DOT, IMDG, IATA 	UNI866
<ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG, IATA 	Resin solution RESIN SOLUTION
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	<div style="text-align: center;">  <p>3</p> </div>
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids 3
<ul style="list-style-type: none"> · IMDG, IATA 	<div style="text-align: center;">  <p>3</p> </div>
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids 3
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	II
<ul style="list-style-type: none"> · Environmental hazards: 	Not Applicable.
<ul style="list-style-type: none"> · Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category 	Warning: Flammable liquids 33 F-E, S-E B
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not Applicable.
<ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations 	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/23/2021

Reviewed on 09/23/2021

Trade name: **Thermo Clone™ Tray Adhesive**

(Contd. of page 9)

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|--|--|
| <ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) | <p style="margin: 0;"><i>1L</i></p> <p style="margin: 0;"><i>Code: E2</i></p> <p style="margin: 0;"><i>Maximum net quantity per inner packaging: 30 ml</i></p> <p style="margin: 0;"><i>Maximum net quantity per outer packaging: 500 ml</i></p> |
| <ul style="list-style-type: none"> · UN "Model Regulation": | <p style="margin: 0;"><i>UN 1866 RESIN SOLUTION, 3, II</i></p> |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

<i>1330-20-7</i>	<i>Xylene, mixture of isomers</i>
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<i>100-41-4</i>	<i>Ethylbenzene</i>
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- **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

- **Hazardous Air Pollutants**

<i>1330-20-7</i>	<i>Xylene, mixture of isomers</i>
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<i>100-41-4</i>	<i>Ethylbenzene</i>
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- **Proposition 65**

- **Chemicals known to cause cancer:**

<i>100-41-4</i>	<i>Ethylbenzene</i>
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- **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)**

<i>1330-20-7</i>	<i>Xylene, mixture of isomers</i>	<i>I</i>
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<i>100-41-4</i>	<i>Ethylbenzene</i>	<i>D</i>
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- **ACGIH Carcinogenicity (American Conference of Governmental Industrial Hygienists)**

<i>1330-20-7</i>	<i>Xylene, mixture of isomers</i>	<i>A4</i>
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<i>100-41-4</i>	<i>Ethylbenzene</i>	<i>A3</i>
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- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **Chemical safety assessment:** *A chemical safety assessment has not been carried out.*

US

(Contd. on page 11)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/23/2021

Reviewed on 09/23/2021

Trade name: Thermo Clone™ Tray Adhesive

(Contd. of page 10)

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:** Environmental, Health, and Safety
- **Contact:** Customer Service
- **Date of preparation / last revision** 09/23/2021 / -
- **Abbreviations and acronyms:**
 - IMDG: International Maritime Code for Dangerous Goods
 - DOT: US Department of Transportation
 - IATA: International Air Transport Association
 - 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)
 - NFPA: National Fire Protection Association (USA)
 - HMIS: Hazardous Materials Identification System (USA)
 - VOC: Volatile Organic Compounds (USA, EU)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - NIOSH: National Institute for Occupational Safety
 - OSHA: Occupational Safety & Health
 - TLV: Threshold Limit Value
 - PEL: Permissible Exposure Limit
 - REL: Recommended Exposure Limit
 - BEI: Biological Exposure Limit
 - Flam. Liq. 2: Flammable liquids – Category 2
 - Flam. Liq. 3: Flammable liquids – Category 3
 - Acute Tox. 4: Acute toxicity – Category 4
 - Skin Irrit. 2: Skin corrosion/irritation – Category 2
 - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
 - Carc. 2: Carcinogenicity – Category 2
 - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 - STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
 - Asp. Tox. 1: Aspiration hazard – Category 1

US