# 1 Identification

- **Product identifier**
- **Trade name:** VITA ENAMIC® STAINS LIQUID
- **Article number:** EENSTL20
- **Application of the substance / the mixture** Light-curing mixing liquid
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** VITA Zahnfabrik
  - H. Rauter GmbH & Co. KG
  - PO Box 1338
  - D 79704 Bad Säckingen
  - Tel.: +49 7761/562-0
  - Fax: +49 7761/562 299
  - **Information department:** VITA Zahnfabrik
  - Tel.: +49 7761 562-0
  - Fax: +49 7761 562 299
  - e-mail: info@vita-zahnfabrik.com
  - **Emergency telephone number:** Tel.: +49 761 19240

### 2 Hazard(s) identification

- **Classification of the substance or mixture**
  - GHS02 Flame
  - Flam. Liq. 2  H225  Highly flammable liquid and vapor.
  - GHS07 Health hazard
  - Repr. 2  H361  Suspected of damaging fertility or the unborn child.
  - GHS08 Health hazard
  - Skin Irrit. 2  H315  Causes skin irritation.
  - Eye Irrit. 2A  H319  Causes serious eye irritation.
  - Skin Sens. 1  H317  May cause an allergic skin reaction.
  - STOT SE 3  H335  May cause respiratory irritation.

- **Label elements**
  - **GHS label elements**
  - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
  - GHS02  GHS07  GHS08

- **Signal word** Danger

(Contd. on page 2)
Trade name: **VITA ENAMIC® STAINS LIQUID**

- **Hazard-determining components of labeling:**
  - methyl methacrylate
  - Diphenyl(2,4,6-trimethylbenzoyl)phosphinoxide
  - aromatic urethane acrylate

- **Hazard statements**
  - Highly flammable liquid and vapor.
  - Causes skin irritation.
  - Causes serious eye irritation.
  - May cause an allergic skin reaction.
  - Suspected of damaging fertility or the unborn child.
  - May cause respiratory irritation.

- **Precautionary statements**
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Store locked up.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
  - **NFPA ratings (scale 0 - 4)**
    - Health = 2
    - Fire = 3
    - Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**
    - HEALTH: Health = 2
    - FIRE: Fire = 3
    - REACTIVITY: Reactivity = 0

- **Other hazards**
  - **Results of PBT and vPvB assessment**
    - PBT: Not applicable.
    - vPvB: Not applicable.

**3 Composition/information on ingredients**

- **Chemical characterization:** Mixtures
- **Description:** Liquid based on methacrylate acid ester, containing an activator

- **Dangerous components:**
  - 80-62-6 methyl methacrylate 25-50%
  - aromatic urethane acrylate 25-50%
  - 75980-60-8 Diphenyl(2,4,6-trimethylbenzoyl)phosphinoxide ≤2.5%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

**4 First-aid measures**

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
  - Supply fresh air and to be sure call for a doctor.
Trade name: VITA ENAMIC® STAINS LIQUID

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:**
  Immediately wash with water and soap and rinse thoroughly.
  If skin irritation continues, consult a doctor.

- **After eye contact:**
  Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**
  Do not induce vomiting.
  Call a doctor immediately.

- **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:**
    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:**
    No special measures required.
  - **Additional information**
    Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Avoid contact with skin and eyes.
  Keep away from ignition sources
  Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:**
  Prevent seepage into sewage system, workpits and cellars.
  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).
  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.

- **Protective Action Criteria for Chemicals**
  - **PAC-1:**
    | 80-62-6 methyl methacrylate | 17 ppm |
  - **PAC-2:**
    | 80-62-6 methyl methacrylate | 120 ppm |
7 Handling and storage

Handling:

- Precautions for safe handling
  Avoid contact with skin and eyes.
  Ensure good ventilation/exhaustion at the workplace.
  Prevent formation of aerosols.

- Information about protection against explosions and fires:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.

- Conditions for safe storage, including any incompatibilities

  Storage:

  - Requirements to be met by storerooms and receptacles:
    Store between 15 °C and 30 °C in a dry and well ventilated place. Avoid temperatures exceeding
    50 °C or falling below 5 °C.
    Protect against sunlight.
    Store in a cool location.

  - Information about storage in one common storage facility: Not required.

  - Further information about storage conditions:
    Store in cool, dry conditions in well sealed receptacles.

- 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:

    80-62-6 methyl methacrylate

    - PEL: Long-term value: 410 mg/m³, 100 ppm
    - REL: Long-term value: 410 mg/m³, 100 ppm
    - TLV: Short-term value: 410 mg/m³, 100 ppm
    - Long-term value: 205 mg/m³, 50 ppm
    - DSEN

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

  - Exposure controls

  - Personal protective equipment:

  - General protective and hygienic measures:
    Keep away from foodstuffs, beverages and feed.
    Immediately remove all soiled and contaminated clothing.
    Wash hands before breaks and at the end of work.
    Avoid contact with the eyes and skin.

  - Breathing equipment:
    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.
Protection of hands:

Protective gloves

Protective gloves should be changed regularly, especially after intensive contact with the product. For every workplace a suitable type of protective gloves must be selected. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves

Butyl rubber (0.7 mm) EN 374

As there are many different conditions in every day work these indications can only serve as an aid to orientation for the selection of suitable gloves for the handling of chemical products. By no means they can replace qualifying examinations by the end-user.


The selection of the 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 break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

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: Fluid
Color: Yellow tint
Odor: Characteristic
Odor threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 101 °C (213.8 °F)

Flash point: 10 °C (50 °F)

Flammability (solid, gaseous): Not applicable.
Trade name: VITA ENAMIC® STAINS LIQUID

- Ignition temperature: 430 °C (806 °F)
- 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 %
  - Upper: 12.5 Vol %
- Oxidizing properties: Not determined.
- Vapor pressure at 20 °C (68 °F): 47 hPa (35.3 mm Hg)
- Density at 20 °C (68 °F): 0.97 g/cm³ (8.09465 lbs/gal)
- 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:
  - Solids content: 0.0 %
  - Other information: No further relevant information available.

**10 Stability and reactivity**
- Reactivity: No dangerous reactions if used according to specifications
- Chemical stability: Stable if used according to specifications
- Thermal decomposition / conditions to be avoided: Protect from heat and direct sunlight. 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: Irritant to skin and mucous membranes.
    - on the eye: Irritating effect.
    - Sensitization: Sensitization possible through skin contact.
### 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**:  
  - 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.
  - Disposal must be made according to official regulations.

- **Uncleaned packagings**:
- **Recommendation**: Disposal must be made according to official regulations.

### 14 Transport information

- **UN-Number**
  - DOT, ADR, IMDG, IATA
  - UN1247

- **UN proper shipping name**
  - DOT, IMDG, IATA
  - METHYL METHACRYLATE MONOMER, STABILIZED, SOLUTION
#### ADR

<table>
<thead>
<tr>
<th>Transport hazard class(es)</th>
<th>DOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>3 Flammable liquids</td>
</tr>
<tr>
<td>Label</td>
<td>3</td>
</tr>
</tbody>
</table>

#### ADR, IMDG, IATA

| Class                      | 3 Flammable liquids |
| Label                      | 3   |

#### Packing group

**DOT, ADR, IMDG, IATA**

II

#### Environmental hazards:

**Marine pollutant:**

No

#### Special precautions for user

**Danger code (Kepler):**

339

**EMS Number:**

F-E,S-D

**Stowage Category**

B

**Stowage Code**

SW2 Clear of living quarters.

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

Not applicable.

#### Transport/Additional information:

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Excepted quantities (EQ)</strong></td>
<td><strong>Limited quantities (LQ)</strong></td>
</tr>
<tr>
<td>Code: E2</td>
<td>1L</td>
</tr>
<tr>
<td>Maximum net quantity per inner packaging: 30 ml</td>
<td>Maximum net quantity per outer packaging: 500 ml</td>
</tr>
<tr>
<td>Maximum net quantity per inner packaging: 30 ml</td>
<td>Maximum net quantity per outer packaging: 500 ml</td>
</tr>
</tbody>
</table>

**UN "Model Regulation":**

UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED, 3, II
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

  - Section 355 (extremely hazardous substances):
    None of the ingredient is listed.

  - Section 313 (Specific toxic chemical listings):
    80-62-6 methyl methacrylate

  - 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.

- Cancerogenity categories

  - EPA (Environmental Protection Agency)
    80-62-6 methyl methacrylate | E, NL

  - TLV (Threshold Limit Value established by ACGIH)
    80-62-6 methyl methacrylate | A4

  - MAK (German Maximum Workplace Concentration)
    None of the ingredients is listed.

- 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

  GHS02  GHS07  GHS08

- Signal word
  Danger

- Hazard-determining components of labeling:
  methyl methacrylate
  Diphenyl(2,4,6-trimethylbenzoyl)phosphinoxide
  aromatic urethane acrylate

- Hazard statements
  Highly flammable liquid and vapor.
  Causes skin irritation.
  Causes serious eye irritation.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
May cause respiratory irritation.

- **Precautionary statements**
  Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  Use explosion-proof electrical/ventilating/lighting/equipment.
  If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Store locked up.
  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.

- **Date of preparation / last revision** 07/24/2018 / 3
- **Abbreviations and acronyms:**
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - ICAO: International Civil Aviation Organisation
  - 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 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)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
  - 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
  - Flam. Liq. 2: Flammable liquids – Category 2
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  - Skin Sens. 1: Skin sensitisation – Category 1
  - Repr. 2: Reproductive toxicity – Category 2
  - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- * Data compared to the previous version altered.