1 Identification

· Product identifier
  · Trade name: HTE 50
  · Container size: 16 fl. oz., 33 fl. oz., 5 gallon

· Relevant identified uses of the substance or mixture and uses advised against
  No further relevant information available.

· Application of the substance / the mixture
  Adhesive mortar for anchor and rebar fastenings

· Details of the supplier of the safety data sheet
  · Manufacturer/Supplier:
    Hilti, Inc.
    5400 South 122nd East Ave.
    US-Tulsa, OK 74146
    Phone: (800) 879-8000
    Fax: (800) 879-7000
    Español: (800) 879-5000

  · Information department: see section 16

· Emergency telephone number:
  Chem-Trec
  Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada)
  Tel.: 703 527 3887 (Other countries)

2 Hazard(s) identification

· Classification of the substance or mixture
  · Repr. 2
    H361 Suspected of damaging fertility or the unborn child.
  · STOT RE 2
    H373 May cause damage to organs through prolonged or repeated exposure.
  · Skin Corr. 1B
    H314 Causes severe skin burns and eye damage.
  · Eye Dam. 1
    H318 Causes serious eye damage.
  · Aquatic Acute 1
    H400 Very toxic to aquatic life.
  · Aquatic Chronic 1
    H410 Very toxic to aquatic life with long lasting effects.
  · Skin Sens. 1
    H317 May cause an allergic skin reaction.

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

· Hazard pictograms
  GHS05  GHS07  GHS08  GHS09

· Signal word
  Danger

· Hazard-determining components of labeling:
  4-nonylphenol, branched
  Bisphenol A-Diglycidylether polymer (mw<700)
  2-piperazin-1-ylethylamine
  Trimethylol Ethane Triglycidyl Ether

· Hazard statements
  H314 Causes severe skin burns and eye damage.
  H317 May cause an allergic skin reaction.
  H361 Suspected of damaging fertility or the unborn child.
  H373 May cause damage to organs through prolonged or repeated exposure.
  H400 Very toxic to aquatic life.
  H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements
  P260 Do not breathe dust/fume/gas/mist/vapors/spray.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
  P337+P313 If eye irritation persists: Get medical advice/attention.

(Contd. on page 2)
3 Composition/information on ingredients

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

- Dangerous components:

<table>
<thead>
<tr>
<th>Dangerous components A:</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>25085-99-8 Bisphenol A-Diglycidylether polymer (mw&lt;700)</td>
<td>30-60%</td>
</tr>
<tr>
<td>68460-21-9 Trimethylol Ethane Triglycidyl Ether</td>
<td>7-15%</td>
</tr>
<tr>
<td>107-21-1 ethane-1,2-diol</td>
<td>1-5%</td>
</tr>
<tr>
<td>14808-60-7 Quartz (SiO2)</td>
<td>30-60%</td>
</tr>
<tr>
<td>13463-67-7 titanium dioxide</td>
<td>1-5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dangerous components B:</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>84852-15-3 4-nonylphenol, branched</td>
<td>20-40%</td>
</tr>
<tr>
<td>140-31-8 2-piperazin-1-ylethylamine</td>
<td>15-30%</td>
</tr>
<tr>
<td>107-21-1 ethane-1,2-diol</td>
<td>0.1-1%</td>
</tr>
<tr>
<td>14808-60-7 Quartz (SiO2)</td>
<td>40-60%</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
    Take affected persons into fresh air and keep quiet.
  - 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
    Do not induce vomiting; immediately call for medical help.
4.1.3

Rinse out mouth and then drink plenty of water.

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: Wear self-contained respiratory protective device.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions: Inform respective authorities in case of seepage into water course or sewage system.

Methods and material for containment and cleaning up:

Pick up mechanically.

Dispose contaminated material as waste according to item 13.

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: The usual precautionary measures for handling chemicals should be followed.

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:

Keep in a cool, dry and dark place; 41 °F / 5 °C to 77 °F / 25 °C.

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

Further information about storage conditions: Protect from heat and direct sunlight.

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 has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

107-21-1 ethane-1,2-diol

TLV Long-term value: NIC-10* mg/m³

Ceiling limit value: (100) mg/m³

(H);* as inhalable fraction and vapor

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:** Not necessary if room is well-ventilated.
- **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 on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves:**
  Nitrile rubber, NBR
  Recommended thickness of the material: ≥ 0.4 mm
- **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.
- **Not suitable are gloves made of the following materials:**
  Leather gloves
  Strong gloves

- **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: Pasty
      - Color: Component A: white
        Component B: black
    - Odor: Amine-like
  - **pH-value:** Not applicable
  - **Change in condition**
    - Melting point/Melting range: Not determined.
    - Boiling point/Boiling range: undetermined
  - **Flash point:** >90 °C (>194 °F) (DIN 53213)
  - **Ignition temperature:** Not determined
  - **Decomposition temperature:** Not determined
  - **Auto igniting:** Product is not selfigniting.
  - **Danger of explosion:** Product does not present an explosion hazard.
  - **Explosion limits:**
    - Lower: 2.1 Vol %
    - Upper: 10.5 Vol %
  - **Vapor pressure:** Not applicable.
  - **Density at 20 °C (68 °F):** 1.4 g/cm³ (11.683 lbs/gal) (DIN 51757)
  - **Solubility in / Miscibility with Water:** Insoluble

(Contd. on page 5)
4.1.3 Other information
No further relevant information available.

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
- 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:
  - LD/LC50 values that are relevant for classification:

<table>
<thead>
<tr>
<th>140-31-8 2-piperazin-1-ylethylamine</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50 1470 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>Dermal LD50 866 mg/kg (rat)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>107-21-1 ethane-1,2-diol</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50 5840 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>Dermal LD50 9530 mg/kg (rbt)</td>
<td></td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - on the skin: Caustic effect on skin and mucous membranes.
  - on the eye: Strong caustic effect.
- Sensitization: Sensitization possible through skin contact.
- Additional toxicological information:
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  Harmful
  Corrosive
  Irritant
  Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- Carcinogenic categories
  NTP (National Toxicology Program)
  14808-60-7 Quartz (SiO2) K

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.
- Ecotoxic effects:
  - Remark: Toxic for fish
- Additional ecological information:
  - General notes:
    Must not reach bodies of water or drainage ditch undiluted or unneutralized.
    Also poisonous for fish and plankton in water bodies.
    Toxic for aquatic organisms
  - Results of PBT and vPvB assessment
    PBT: Not applicable.
    vPvB: Not applicable.

(Contd. on page 6)
13 Disposal considerations

- Waste treatment methods
  - Recommendation
    For disposal, local regulations issued by the authorities must be observed.
    After curing, the product can be disposed of with household waste.
    Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations.

- Uncleaned packagings:
  - Recommendation: Dispose of packaging according to regulations on the disposal of packagings.

14 Transport information

- UN-Number
  DOT, ADR, IMDG, IATA: UN3259

- UN proper shipping name
  DOT: Amines, solid, corrosive, n.o.s.
  ADR: UN3259 Amines, solid, corrosive, n.o.s., ENVIRONMENTALLY HAZARDOUS
  IMDG: AMINES, SOLID, CORROSIVE, N.O.S., MARINE POLLUTANT
  IATA: AMINES, SOLID, CORROSIVE, N.O.S.

- Transport hazard class(es)
  DOT
  - Class: 8 Corrosive substances
  - Label: 8

  ADR, IMDG
  - Class: 8 Corrosive substances
  - Label: 8

  IATA
  - Class: 8 Corrosive substances
  - Label: 8

- Packing group
  ADR, IMDG, IATA: II

- Environmental hazards:

  Marine pollutant: Symbol (fish and tree)
  Special marking (ADR): Symbol (fish and tree)

- Special precautions for user
  Warning: Corrosive substances
  EMS Number: F-A,S-B

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  Not applicable.
Trade name: HTE 50

- Transport/Additional information:
  - DOT
  - Hazardous substance: Corrosive solids, NOS (amonopiperazine, nonylphenol), Class 8, UN 1759, PG III
  - IMDG
  - Limited quantities (LQ) 1 kg
  - UN "Model Regulation": UN3259, Amines, solid, corrosive, n.o.s., ENVIRONMENTALLY HAZARDOUS, 8, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Section 355 (Extremely hazardous substances):
    None of the ingredients is listed.
  - Section 313 (Specific toxic chemical listings):
    107-21-1 ethane-1,2-diol
  - TSCA (Toxic Substances Control Act):
    All ingredients are listed.
  - Proposition 65:
    - Chemicals known to cause cancer:
      14808-60-7 Quartz (SiO2)
      13463-67-7 titanium dioxide
    - Cancerogenity categories
      - EPA (Environmental Protection Agency)
        None of the ingredients is listed.
      - TLV (Threshold Limit Value established by ACGIH)
        107-21-1 ethane-1,2-diol A4
        14808-60-7 Quartz (SiO2) A2
      - MAK (German Maximum Workplace Concentration)
        14808-60-7 Quartz (SiO2) 1
      - NIOSH-Ca (National Institute for Occupational Safety and Health)
        14808-60-7 Quartz (SiO2)
  - National regulations
  - Information about limitation of use: Employment restrictions concerning young persons must be observed.
  - Chemical safety assessment: not required.

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:
  Hilti Entwicklungsgesellschaft mbH
  Hiltistrasse 6
  D-86916 Kaufering
  Tel.: +49 8191 906310
  Fax: +49 8191 90176310
e-mail: anchor.hse@hilti.com
- Contact: Mechthild Krauter
- Date of preparation / last revision 05/18/2015 / -
- 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

(Contd. on page 8)
Trade name: HTE 50

ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

* Data compared to the previous version altered.