

1 Identification

- **Product identifier**
- **Trade name:** **Hilti HFX**
- **Container size:** 10.0 fl. oz. / 296 ml
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** Building and construction work
- **Application of the substance / the mixture**
Adhesive mortar for anchor fastenings
Suitable for use in hollow masonry, solid masonry and concrete
- **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:**
anchor.hse@hilti.com
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. 1B | H360 | May damage fertility or the unborn child. |
| Aquatic Acute 1 | H400 | Very toxic to aquatic life. |
| 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. |
| Aquatic Chronic 3 | H412 | Harmful to aquatic life with long lasting effects. |
- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**

| | | |
|-------|-------|-------|
| | | |
| GHS07 | GHS08 | GHS09 |
- **Signal word** Danger
- **Hazard-determining components of labeling:**
Hydroxypropyl methacrylate
Boric acid
dibenzoyl peroxide
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H360 May damage fertility or the unborn child.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P262 Do not get in eyes, on skin, or on clothing.
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.
P302+P352 If on skin: Wash with plenty of water.

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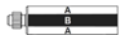
P405 Store locked up.

- **Classification system**
- **NFPA ratings (scale 0-4)**


 Health = 2
 Fire = 1
 Reactivity = 1

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

- **Additional information:**



Hilti HFX

- **Information pertaining to particular dangers for man and environment: A**

H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H360 May damage fertility or the unborn child.
 H317 May cause an allergic skin reaction.
 H412 Harmful to aquatic life with long lasting effects.

- **Information pertaining to particular dangers for man and environment: B**

H317 May cause an allergic skin reaction.
 H400 Very toxic to aquatic life.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:**
 Plastic-cartridge, contains:
 Methacrylate resin, inorganic filler
 Dibenzoyl peroxide, phlegmatized

Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

- **Dangerous components A:**

| | | |
|------------|--|--------|
| 27813-02-1 | Hydroxypropyl methacrylate | 10-15% |
| 24448-20-2 | (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate | 5-10% |
| 43048-08-4 | Tricyclodecane dimethanol dimethacrylate | 1-5% |
| 3290-92-4 | Trimethylolpropane trimethacrylate | 1-5% |
| 10043-35-3 | Boric acid | <1% |

- **Dangerous components B:**

| | | |
|---------|--------------------|-------|
| 94-36-0 | dibenzoyl peroxide | 5-10% |
|---------|--------------------|-------|

- **Additional information** For the wording of the listed risk 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**
 Seek medical treatment in case of complaints.
 Take affected persons into fresh air and keep quiet.
- **After skin contact** Immediately rinse with water.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing** Rinse out mouth and then drink plenty of water.

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- **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**
In case of fire, the following can be released:
Nitrogen oxides (NO_x)
Carbon monoxide (CO)
Carbondioxide (CO₂)
In certain fire conditions, traces of other toxic gases cannot be excluded.
- **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.
- **Environmental precautions:**
Do not allow to penetrate the ground/soil.
Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **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**
Expiry date: See label (month/year) Use of the cartridge after this date is not permissible.
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:** Store away from foodstuffs.
- **Further information about storage conditions:**
Store in a cool place.
Store in the dark.
Protect from heat and direct sunlight.
Keep receptacle tightly sealed.
- **Storage class** As per VCI (1991) storage classification concept.
- **Specific end use(s)**
Adhesive mortar for anchor fastenings
Suitable for use in hollow masonry, solid masonry and concrete

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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- **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.

3290-92-4 Trimethylolpropane trimethacrylate

| | |
|------|--|
| WEEL | Long-term value: 1 mg/m ³ Skin |
|------|--|

- **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.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Recommended filter device for short term use:** Filter AX
- **Protection of hands:**



Protective gloves.

EN 374 / EN 388

Avoid direct contact with the chemical/ the product/ the preparation by organizational measures.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.12 mm
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.
- **Penetration time of glove material**
The exact break through 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:**
Natural rubber, NR
Leather gloves
Strong gloves
- **Eye protection:**



Safety glasses

EN 166 / EN 170

- **Body protection:**



Protective work clothing.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - **Form:** Pasty
 - **Color:** Grey
 - **Odor:** Ester-like
 - **Odour threshold:** Not determined.
- **pH-value:** Not applicable.

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| | |
|---|--|
| · Change in condition | |
| Melting point/Melting range: | Not determined. |
| Boiling point/Boiling range: | 231 °C (448 °F) |
| · Flash point: | 101 °C (214 °F) (DIN 53213) |
| · Flammability (solid, gaseous) | Not determined |
| · Ignition temperature: | 355 °C (671 °F) |
| · Decomposition temperature: | Not determined. |
| · Auto igniting: | Product is not selfigniting. |
| · Danger of explosion: | Product does not present an explosion hazard. |
| · Explosion limits: | |
| Lower: | Not determined |
| Upper: | Not determined |
| · Vapor pressure: | Not determined |
| · Density at 20 °C (68 °F): | 1.7 g/cm ³ (14.187 lbs/gal) (DIN 51757) |
| · Relative density | Not determined |
| · Vapour density | Not determined |
| · Evaporation rate | Not determined |
| · Solubility in / Miscibility with Water: | Insoluble |
| · Partition coefficient (n-octanol/water): | Not determined |
| · Viscosity: | |
| dynamic: | Not applicable. |
| kinematic: | Not applicable. |
| · Solvent content: | |
| Organic solvents: | 0.0 % |
| Water: | Component B: ~ 30% |
| · 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:**

3290-92-4 Trimethylolpropane trimethacrylate

| | | |
|------------|---------|----------------------|
| Oral | LD50 | >5000 mg/kg (rat) |
| Dermal | LD50 | >3000 mg/kg (rabbit) |
| Inhalative | LC50/4h | N/A mg/l (-) |

10043-35-3 Boric acid

| | | |
|------|------|------------------|
| Oral | LD50 | 2660 mg/kg (rat) |
|------|------|------------------|

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.

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· **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:
Irritant

· **Carcinogenic categories**

· **NTP (National Toxicology Program)**

14808-60-7 | Quartz (SiO₂)

K

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

3290-92-4 Trimethylolpropane trimethacrylate

EC50/96h | 4.43 mg/l (Algae)

>9.22 mg/l (magna daphnia)

2 mg/l (fish)

· **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.

· **Ecotoxicological effects:**

· **Remark:** Harmful to fish

· **Additional ecological information:**

· **According to the formulation contains the following heavy metals and compounds from the EU guideline NO. 2006/11/EC:**

None

· **General notes:**

Do not allow product to reach ground water, water course or sewage system.

The product does not contain organically bounded halogens (AOX-free).

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.

Harmful to aquatic organisms

· **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**

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.

Hand over to hazardous waste disposers.

· **European waste catalogue:**

08 04 09* | waste adhesives and sealants containing organic solvents or other dangerous substances

20 01 27* | paint, inks, adhesives and resins containing dangerous substances

· **Uncleaned packagings:**

· **Recommendation:** Dispose of packaging according to regulations on the disposal of packagings.

14 Transport information

· **UN-Number**

· **DOT, ADR, ADN, IMDG, IATA** Void

· **UN proper shipping name**

· **DOT, ADR, ADN, IMDG, IATA** Void

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| | |
|--|--|
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. available oxygen content < 1 % |
| · UN "Model Regulation": | - |
| · HS-Code: | 3214 10 10: Glaziers' putty, grafting putty, resin cements, caulking compounds and other mastics |

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):**

None of the ingredients are listed.

 · **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

 · **Proposition 65:**

 · **Chemicals known to cause cancer:**

 14808-60-7 | Quartz (SiO₂)

 · **Carcinogenicity categories**

 · **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

 · **TLV (Threshold Limit Value established by ACGIH)**

 14808-60-7 | Quartz (SiO₂)

A2

10043-35-3 | Boric acid

A4

 · **MAK (German Maximum Workplace Concentration)**

 14808-60-7 | Quartz (SiO₂)

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 · **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.

 · **Relevant phrases**

H241 Heating may cause a fire or explosion.

H360 May damage fertility or the unborn child.

R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.

R7 May cause fire.

R36 Irritating to eyes.

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R43 May cause sensitisation by skin contact.

R36/38 Irritating to eyes and skin.

R50 Very toxic to aquatic organisms.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R60 May impair fertility.

R61 May cause harm to the unborn child.

· Department issuing SDS:

Hilti Entwicklungsgesellschaft mbH

Hiltistrasse 6

D-86916 Kaufering

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e-mail: anchor.hse@hilti.com

· Contact: Mechthild Krauter**· Date of preparation / last revision** 05/18/2015 / 7**· 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

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 Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Repr. 1B: Reproductive toxicity, Hazard Category 1B

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

· * Data compared to the previous version altered.