

TOPTec® הציפוי בבטון

פריט מס': 2591

מוסף על ולעד, דחייה ועמיד למים, עומד בתקן EN 934-2 עבור משטחי בטון בעלי דרישות תובעניות

תחומי יישום

TOPTec® היא שיטה ומוצר - מוסף בתכונות על ולעד - הציפוי מונוליטי בבטון, איטום מים יעיל ביותר. נועד לדחיית מים ברמה מרבית ואופטימלית בפרויקטים תובעניים של בטון.

המוסף מתאים לבטון בעל דרישות הגנה מיוחדות לעמידות בתנאים בהם מתבקש ציפוי. המוסף מתאים במיוחד ליישומי הבטון הבאים:

- רצפות תעשייתיות וציבוריות
- רחבות ומסלולים בשדות תעופה
- בטון חשוף ואדריכלי
- מרכזים לוגיסטיים
- מנהרות ומבנים תת קרקעיים
- מתקני טיפול בשפכים
- מבני אצירת מים
- מבני ניקוז
- מבני בטון בסביבות ימיות
- חניונים ומרכזים לוגיסטיים

TOPTec® מפיק מנגנון הגנה אפקטיבי ביותר, המספק את היתרונות הבאים:

- הקטנת ספיגת מים
- שיפור עמידות בקיפאון והפשרה
- צמצום הקורוזיה בפלדה
- שיפור העמידות הכימית
- צמצום הנטייה לתפרחות בטון
- דחיית הדבקות של לכלוך ואבק

TOPTec® משפר את איכות הבטון ואת ביצועי לטווח הארוך ואף תורם לקיימות סביבתית.

מינון

טווח המינון המומלץ נע בין 0.2-1.0% משקלי מתכולת הצמנט.

שווה ערך ל- 2 עד 10 מ"ל לק"ג צמנט.
עקרון העבודה

TOPTec® מגיב היטב עם עיסת הצמנט במהלך תהליך ההידרציה וכך מפיק מרקם בטון צפוף והידרופובי.

כתוצאה מכך, מפחית את הספיגה הקפילרית ומקטין את יכולת ספיגת המים של הבטון.

נתונים טכניים

הומוגני	הומוגניות
לבן	צבע
נוזל	מצב צבירה
$0.96 \pm 0.02 \text{ g/cm}^3$	צפיפות
8.0 ± 1.0	pH
החל מ- $+5 \text{ }^\circ\text{C}$	עבירות
כשנה מתאריך הייצור כאשר מאוחסן בצורה נאותה	חיי מדף
לאחסן כשהוא מכוסה ומוגן מפני שמש ישירה וטמפרטורות קיצוניות.	תנאי אחסון

הוראות עיבוד

יש להוסיף את TOPTec® יחד עם מי המיהול במפעל הבטון המובא או למערבל באתר.

זמן הערבוב יהיה על פי התקנות שהוגדרו ב- EN 206-1.

יש לבצע בדיקות מקדימות, על מנת להבטיח התאמה למוספים אחרים.

מוצר זה מסווג כמסוכן על פי תקנות CLP. ראה גיליון נתוני בטיחות לקבלת נתונים נוספים.



מכיוון שאין לנו כל שליטה על היישום והעיבוד, במיוחד בשילוב עם חומרי בנייה אחרים, ההנחיות כאן אינן מהוות אחריות ביחס לתכונות המוצר או התאמתו למטרה הספציפית ואינן מהוות הוראות מלאות לשימוש. מידע זה, וכל המלצה אחרת בכתב או בעל פה אינן מחייבות ואינן מרמזות על אחריות משפטית או אחרת.

מכיוון שהמוצר עובר פיתוח כל הזמן, גיליון הנתונים הטכניים האחרון הוא התקף ויסופק על פי דרישה. כל ההזמנות יתקבלו בכפוף לתנאים הכלליים הנוכחיים שלנו.

מהדורה: 20 במאי 2020

אריזה

- מיכל 30 ליטר
- חבית 200 ליטר
- קונטיינר 1000 ליטר

הערות

המידע בגיליון זה מתאר את אפשרויות היישום והעיבוד של המוצר ועקרונות העבודה שלו בתנאים רגילים.

יש לבצע בדיקות התאמה ובדיקות מקדימות לפני היישום של תערובת הבטון!

DECLARATION OF PERFORMANCE

according to Annex III of the regulation EU No. 305/2011
amended by the delegated Regulation (EU) No. 574/2014

TOPTEC®

No. 2592

EN 934-2; T9 | Batch number: see packaging of the product

Water resisting admixture for concrete

NAME, REGISTERED TRADE NAME OR MARK & CONTACT ADDRESS OF THE MANUFACTURER

Ha-Be Betonchemie GmbH | Stüvestr. 39 | 31785 Hameln | Germany

SYSTEM OF ASSESSMENT & NOTIFIED BODY

System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V: System 2+

The notified body, Qualitätsgemeinschaft Deutsche Bauchemie, identification number 0921, performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control under system 2+ and issued:

a certificate of conformity of the factory production control 0921-CPR-2002

DECLARED PERFORMANCE

Essential characteristics	Performance	Harmonised technical specification
Chloride content	max. 0,10 % by mass	EN 934-2:2009 + A1:2012
Alkali content	max. 1,0 % by mass	
Corrosion behaviour	Current density < 10 $\mu\text{A}/\text{cm}^2$ acc. to EN 480-14	
Capillary absorption	complies	
Compressive strength	complies	
Air content in fresh concrete	complies	
Dangerous substances	see Safety Data Sheet	

DECLARATION

The performance of the product is in conformity with the declared performance. This declaration of performance is issued under the sole responsibility of Ha-Be Betonchemie GmbH.

Hameln, 28.01.2022


Ulrich Meyer | Managing Director



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.03.2022

Version number 2.00

Revision: 28.01.2022

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

- 1.1 Product identifier

- Trade name: **TOPTEC®**

- Article number: 2592

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

No further relevant information available.

- Application of the substance / the mixture

Hydrophobing agent/ water repellent
Construction chemicals

- 1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier:

Ha-Be Betonchemie GmbH
Stuevestrasse 39
31785 HAMELN, GERMANY

- Further information obtainable from: info@ha-be.com

- 1.4 Emergency telephone number:

0049 5151 587-0

Only available during office hours.

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008



environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Skin Irrit. 2 H315 Causes skin irritation.

- 2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

- Hazard pictograms



GHS07 GHS09

- Signal word Warning

- Hazard statements

H315 Causes skin irritation.

H411 Toxic to aquatic life with long lasting effects.

- Precautionary statements

P264 Wash thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves.

P302+P352 IF ON SKIN: Wash with plenty of water.

P321 Specific treatment (see on this label).

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

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

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P391 Collect spillage.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Additional information:

EUH208 Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

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

SECTION 3: Composition/information on ingredients

- 3.2 Chemical characterisation: Mixtures**- Description:** Mixture of substances listed below with nonhazardous additions.**- Dangerous components:**

CAS: 2943-75-1 EINECS: 220-941-2 Reg.nr.: 01-2119972313-39-xxxx	triethoxyoctylsilane ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	25-50%
CAS: 55965-84-9	reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) ⚠ Acute Tox. 3, H301; Acute Tox. 2, H310; Acute Tox. 2, H330; ⚠ Skin Corr. 1C, H314; Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sens. 1A, H317	≤2.5%

SECTION 4: First aid measures

- 4.1 Description of first aid measures**- After inhalation:**

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

Supply fresh air; consult doctor in case of complaints.

Take affected persons into fresh air and keep quiet.

- 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. If symptoms persist, consult a doctor.

- After swallowing:

Rinse out mouth and then drink plenty of water.

Call a doctor immediately.

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

No further relevant information available.

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

No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media**- Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fire with alcohol resistant foam.

Use fire extinguishing methods suitable to surrounding conditions.

- 5.2 Special hazards arising from the substance or mixture No further relevant information available.

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- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:**
 - Dilute with plenty of water.
 - Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Ensure adequate ventilation.
- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
 - **Requirements to be met by storerooms and receptacles:** No special requirements.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 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.
 - Do not inhale gases / fumes / aerosols.
 - Avoid contact with the eyes and skin.
- **Respiratory protection:**
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

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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

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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

- General Information

- Appearance:

Form: Fluid

Colour: White

- Odour: Characteristic

- Odour threshold: Not determined.

- pH-value at 20 °C: 7-9

- Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: 100 °C

- Flash point: Not applicable.

- Flammability (solid, gas): Not applicable.

- Decomposition temperature: Not determined.

- Explosive properties: Product does not present an explosion hazard.

- Explosion limits:

Lower: Not determined.

Upper: Not determined.

- Vapour pressure: Not determined.

- Density at 20 °C: 0.96 g/cm³

- Vapour density: Not determined.

- Evaporation rate: Not determined.

- Solubility in / Miscibility with

water: Partly miscible.

- Partition coefficient: n-octanol/water: Not determined.

- Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

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- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Possible in traces.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** LC50 (96h) = 2,6 mg/L (Oncorhynchus mykiss) (ECHA)
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must be specially treated adhering to official regulations.

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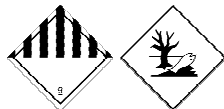
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Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleaning agents.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN3082
- **14.2 UN proper shipping name**
- **ADR** 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (triethoxyoctylsilane)
Void
- **IMDG, IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (triethoxyoctylsilane)
- **14.3 Transport hazard class(es)**
- **ADR, IATA**



- **Class** 9 Miscellaneous dangerous substances and articles.
- **Label** 9

- **IMDG**



- **Class** 9 Miscellaneous dangerous substances and articles.
- **Label** 9
- **14.4 Packing group**
- **ADR, IMDG, IATA** III
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **Special marking (ADR):** Symbol (fish and tree)
- **Special marking (IATA):** Symbol (fish and tree)
- **14.6 Special precautions for user** Warning: Miscellaneous dangerous substances and articles.
- **Hazard identification number (Kemler code):** 90
- **EMS Number:** F-A,S-F
- **Stowage Category** A
- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
- **Transport/Additional information:** Not dangerous according to the above specifications.
- **ADR**
- **Limited quantities (LQ)** 5L
- **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
- **Transport category** 3
- **Tunnel restriction code** (-)

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- IMDG

- Limited quantities (LQ)
- Excepted quantities (EQ)

5L

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

- UN "Model Regulation":

UN 3082 ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, LIQUID, N.O.S.
(TRIETHOXYOCTYLSILANE), 9, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

The above information describes exclusively the safety requirements of the product(s) and is based on our present-day knowledge. It does not represent a guarantee for the properties of the product(s) described in terms of the legal warranty regulations. Properties of the product are to be found in the respective product leaflet.

- Relevant phrases

- H301 Toxic if swallowed.
- H310 Fatal in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H330 Fatal if inhaled.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.

- Abbreviations and acronyms:

- Acute Tox. 3: Acute toxicity – Category 3
- Acute Tox. 2: Acute toxicity – Category 2
- Skin Corr. 1C: Skin corrosion/irritation – Category 1C
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Skin Sens. 1A: Skin sensitisation – Category 1A
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2