

SAFETY DATA SHEET

In accordance with 1907/2006 annex II and 1272/2008

(All references to EU regulations and directives are abbreviated into only the numeric term)

Issued 2023-09-14

Version number 1.0

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

1.1. Product identifier

Trade name EPSCement® EC350M

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

Identified uses Lightweight concrete
Uses that are advised against Constructions with a large load

1.3. Details of the supplier of the safety data sheet

Company EPSCement AB
Skyttevägen 17
186 91 Vallentuna
Sweden
Telephone 08-4491535
E-mail info@epscement.com

1.4. Emergency telephone number

Phone number for emergencies: 999 or 112. The numbers are available 24/7.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Skin Irrit. 2, H315
Eye Dam. 1, H318
STOT SE 3, H335
Repr. 2, H361d
STOT RE 1, H372
(See section 16)

2.2. Label elements

Hazard pictogram



Signal word

Danger

Hazard statements

H315

Causes skin irritation

H318

Causes serious eye damage

H335

May cause respiratory irritation

H361d

Suspected of damaging the unborn child

H372

Causes damage to organs through prolonged or repeated exposure

Precautionary statements

P101

If medical advice is needed, have product container or label at hand

P102

Keep out of reach of children

P260

Do not breathe dust

P271

Use only outdoors or in a well-ventilated area

P280

Wear protective gloves, eye or face protection

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

P405

Store locked up

P501

Dispose of contents and container to authorised waste disposal facility

Supplemental hazard information

Contains: CEMENT, PORTLAND, CHEMICALS, STYRENE

2.3. Other hazards

Cement does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH (Regulation (EC) No 1907/2006). When cement reacts with water, for instance when making concrete or mortar, or when the cement becomes damp, a strong alkaline solution is produced. Due to the high alkalinity, wet cement may provoke skin and eye irritation. Skin contact with wet cement, fresh concrete or mortar may cause irritation or corrosive burns. May cause damage of products produced of aluminum or other not noble metals. The product has been chromate reduced. This means that the content of water soluble chromium (VI) is less than 2 ppm. If the product is stored incorrectly or if the storage period is exceeded, the effect of the chromate reduction may wear off and the cement may cause an allergic skin reaction (H317).

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Note that the table shows known hazards of the ingredients in pure form. These hazards are reduced or eliminated when mixed or diluted, see Section 16d.

Constituent	Classification	Concentration
CEMENT, PORTLAND, CHEMICALS		
CAS No: 65997-15-1 EC No: 266-043-4	Skin Irrit. 2, Eye Dam. 1, STOT SE 3; H315, H318, H335	70 - 75 %
STYRENE		
CAS No: 100-42-5 EC No: 202-851-5 Index No: 601-026-00-0	Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Repr. 2, STOT RE 1; H226, H332, H315, H319, H361d, H372	5 - 10 %

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complements used in the calculation of the classification of this mixture, see Section 16b.

SECTION 4: First aid measures

4.1. Description of first aid measures

Generally

In case of concern, or if symptoms persist, call a doctor/physician.

First aid workers should avoid contact with wet cement or wet cement containing mixtures.

Never attempt to administer liquid, or anything else, to an unconscious person via the mouth.

Upon breathing in

Bring the injured person out into fresh air. Give artificial respiration if breathing has stopped. If breathing is difficult let trained personnel administer oxygen. Let the injured person rest in a warm place with fresh air and seek medical advice immediately.

Upon eye contact

If dust has come in contact with eyes, do not rub.

Eye contact with cement (dry or wet) may cause serious eye damage that may be permanent.

Flush immediately with luke-warm water for 15 - 20 minutes with wide-open eyes. Transport the injured person to a hospital immediately.

Important! Also flush during transport to hospital (eye specialist).

Upon skin contact

For dry flue dust, brush off and wash with soap and water. For wet/damp flue dust, remove wet clothing. Wash the affected area thoroughly with soap and plenty of water.

Wash contaminated clothing before reuse.

If symptoms occur, contact a physician.

Upon ingestion

Rinse mouth out thoroughly first with water, then SPIT OUT the rinse water. Drink at least half a litre of water and seek medical advice. DO NOT INDUCE VOMITING.

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

Generally

Cement may have an irritating effect on moist skin (due to sweat or humidity) after prolonged contact or may cause contact dermatitis after repeated contact. Prolonged skin contact with wet cement or wet concrete may cause serious burns because they develop without pain being felt (for example when kneeling in wet concrete even when wearing trousers).

Eye contact with cement (dry or wet) may cause serious and potentially irreversible injuries. Repeated inhalation of dust of Common cements over a long period of time increases the risk of developing lung diseases.

May cause damage to organs through prolonged or repeated exposure.

Suspected of damaging the unborn child.

Upon breathing in

May cause respiratory irritation.

Repeated inhalation of flue dust over a long period of time increases the risk of developing lung diseases.

Upon eye contact

Eye contact with cement (dry or wet) may cause serious eye damage that may be permanent.

Upon skin contact

Cement may irritate skin that is moist (due to sweat or humidity) after prolonged contact and can cause contact dermatitis after repeated contact. Prolonged contact with wet cement or wet concrete can cause serious burns as they develop without pain (for example, when kneeling in wet concrete, even if one is wearing pants).

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

Symptomatic treatment.

Upon contact with a doctor, make sure to have the label or this safety data sheet with you.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Recommended extinguishing agents

Extinguish with water mist, powder, carbon dioxide or alcoholresistant foam.

Unsuitable extinguishing agents

May not be extinguished with water dispersed under high pressure.

5.2. Special hazards arising from the substance or mixture

In case of fire, substances hazardous to health, or substances harmful in other respects, may be dispersed.

Cements are non-combustible and non-explosive and will not facilitate or sustain the combustion of other materials.

5.3. Advice for firefighters

Protective measures should be taken regarding other material at the site of the fire.

In case of fire use proper breathing apparatus.

Wear full protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep unauthorized and unprotected people at a safe distance.

Avoid inhalation and exposure to skin and eyes.

Avoid dust formation.

Ensure good ventilation.

Use recommended safety equipment, see section 8.

6.2. Environmental precautions

Avoid release to drains, soil or watercourses.

6.3. Methods and material for containment and cleaning up

Avoid dust formation and do not dry brush.

Dry concrete: Use sanitation methods such as vacuum sanitation and vacuum extraction (industrial portable units, equipped with highly efficient air filters (EPA and HEPA, EN 1822-1:2009) or equivalent technique) which do not lead to airborne dispersion. Never use compressed air. Alternatively clean up the dust by washing the area, wet vacuuming or by using water spray or hosing (a fine mist to avoid that the dust becomes airborne) and discard slurry. If this is not possible, discard by suspending in water (see wet concrete). When wet cleaning or vacuuming is not possible, and only dry cleaning with brush is possible, please ensure that the workers are using adequate personal protective clothing and avoid dispersing the dust. Avoid inhalation of and skin contact with the concrete. Put waste in a container. Solidify before disposal according to the description in section 13.

Wet concrete: Remove wet concrete and put it in a container. Let the substance dry and harden before disposal according to the description in section 13.

6.4. Reference to other sections

See section 8 and 13 for personal protection equipment and disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Take the necessary preventive and protective measures for safe handling.

Do not inhale dust and avoid contact with skin and eyes.

Avoid handling in a manner which will raise dust.

Work in order to avoid spillage. If spillage does occur, address it immediately in accordance with the directions specified in Section 6 of this safety data sheet.

Pregnant women should not be exposed to this product.

Store this product separately from food items and keep it out of the reach of children and pets.

Do not eat, drink or smoke in premises where this product is handled.

Wash your hands after using the product.

Remove contaminated clothing.

Wash contaminated clothing before reuse.

Keep away from incompatible products.

Use recommended safety equipment, see section 8.

Implement appropriate engineering controls if necessary, see Section 8.

7.2. Conditions for safe storage, including any incompatibilities

The product should be stored in a manner which prevents hazards to health and the environment. Avoid exposure to humans and animals and do not discharge the product in a sensitive environment.

Take the necessary preventive and protective measures for safe storage.

Keep out of reach for children.

Store separately from food and animal fodder, incl. utensils or surfaces which have been in contact with these things.

Store tightly, in original packaging.

Always use sealed and visibly labeled packages.

To reduce the risk of chromium allergy, the cement is chromate-reduced. Chromate reduction is considered effective for at least 6 months.

Engulfment hazard: To prevent engulfment or suffocation, do not enter a confined space, such as a silo, bin, bulk truck, or other storage container or vessel that stores or contains cement without taking the proper security measures. Cement can build-up or adhere to the walls of a confined space. The cement can release, collapse or fall unexpectedly.

Store in dry and cool area.

Protect from moisture.

Do not store close to incompatible materials (see section 10.5).

7.3. Specific end use(s)

See identified uses in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National limit values

CEMENT, PORTLAND, CHEMICALS

United Kingdom (EH40/2005)

Time-weighted-average exposure limit (TWA) 10 mg/m³ (Inhalable dust)

Time-weighted-average exposure limit (TWA) 4 mg/m³ (Respirable dust)

STYRENE

United Kingdom (EH40/2005)

Time-weighted-average exposure limit (TWA) 100 ppm / 430 mg/m³

Short term exposure limit (STEL) 250 ppm / 1080 mg/m³

DNEL

No data available.

PNEC

No data available.

8.2. Exposure controls

The risks posed by the product or its constituents must be considered in the task specific risk assessment, in accordance with current working environment legislation. The risk assessment should be reviewed regularly and updated if necessary. During work avoid kneeling in fresh mortar or concrete wherever possible. If kneeling is absolutely necessary then appropriate waterproof personal protective equipment must be worn. Do not eat, drink or smoke when working with cement to avoid contact with skin or mouth. Before starting to work with cement, apply a barrier creme and reapply it at regular intervals. Immediately after working with cement or cement-containing materials, workers should wash or shower or use skin moisturisers.

8.2.1. Appropriate engineering controls

The ventilation in the workplace must ensure an air quality that meets the requirements of the current working environment legislation. Local exhaust ventilation should be used to remove airborne contaminants at the source. Emergency showers and eye-rinsing facilities must be available at the workplace.

Eye/face protection

Use protective glasses with tight seals according to standard EN166.

Skin protection

Use suitable protective clothing.

Use protective gloves fulfilling the standard EN374 if there is a risk of direct contact.

During continuous contact use gloves with a minimum breakthrough time of at least 240 minutes, preferably over 480 minutes.

The most suitable protective glove should be chosen in consultation with the glove supplier, taking into account the risk assessment for the specific task and the properties of the chemicals involved. Note that the breakthrough time of the material is affected by the duration of the exposure, temperature conditions, abrasion, etcetera.

Use watertight, wear- and alkali-resistant protective gloves (eg nitrile soaked cotton gloves with CE marking) internally lined with cotton; boots; closed long-sleeved protective clothing as well as skin care products (eg barrier creams) to protect the skin from prolonged contact with wet cement. Particular care should be taken to ensure that wet cement does not enter the boots. For the gloves, respect the maximum wearing time to avoid skin problems. In some circumstances, such as when laying concrete or screed, waterproof trousers or kneepads are necessary.

Based on the chemical properties of the product, the following glove materials are recommended (EN 374):.

Glove material	Glove thickness	Breakthrough time
Nitrile coated cotton gloves	≥ 0,15 mm	≥ 240 min

Respiratory protection

Use proper protective breathing protection.

The most appropriate respiratory protective equipment should be decided in consultation with the appointed safety representative, taking into account the risk assessment for the specific task.

Based on the physical and chemical properties of the product, the following filter type(s) and/or filter combination(s) are recommended:.

– P3.

8.2.3. Environmental exposure controls

For limiting environmental exposure, see section 12.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a) Physical state	solid Form: Powder
(b) Colour	greyish white
(c) Odour	characteristic
(d) Melting point/freezing point	Not indicated
(e) Boiling point or initial boiling point and boiling range	Not indicated
(f) Flammability	Cured product: Non-flammable
(g) Lower and upper explosion limit	Not indicated
(h) Flash point	Not indicated
(i) Auto-ignition temperature	Not indicated
(j) Decomposition temperature	Not indicated
(k) pH	In working solution the pH value is: ≈ 12.5
(l) Kinematic viscosity	Not indicated
(m) Solubility	Solubility in water: Miscible
(n) Partition coefficient n-octanol/water (log value)	Not indicated
(o) Vapour pressure	Not indicated
(p) Density and/or relative density	$\approx 450 \text{ kg/m}^3$ as cured product
(q) Relative vapour density	Not indicated
(r) Particle characteristics	Not indicated

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Not indicated

9.2.2. Other safety characteristics

Not indicated

SECTION 10: Stability and reactivity

10.1. Reactivity

Cement reacts with water and forms calcium hydroxide which results in a high pH (12.5-13.5) and subsequent hardening.

10.2. Chemical stability

The product is stable at normal storage and handling conditions.

10.3. Possibility of hazardous reactions

When cement reacts with water, e.g. when producing concrete or mortar, or when the cement gets moist, it forms a strong alkaline solution.

10.4. Conditions to avoid

Protect from moisture.

10.5. Incompatible materials

Acids, ammonium salts, aluminium or other non-noble metals. Uncontrolled use of aluminium powder in wet concrete should be avoided, as hydrogen gas is formed.

10.6. Hazardous decomposition products

None under normal conditions.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on possible health hazards are based on experience and / or toxicological properties of several components in the product.

Acute toxicity

The product is not classified as acutely toxic.

STYRENE

LC50 rat 4h: 24 mg/L Inhalation

LD50 rat 24h: 5000 mg/kg Orally

Skin corrosion/irritation

Irritant to skin.

Cement in contact with wet skin may cause thickening, cracking or fissuring of the skin. Prolonged contact in combination with abrasion may cause severe burns.

Serious eye damage/irritation

Direct contact with cement may cause corneal damage by mechanical stress, immediate or delayed irritation or inflammation. Direct contact by larger amounts of dry cement or splashes of wet cement may cause effects ranging from moderate eye irritation (e.g. conjunctivitis or blepharitis) to chemical burns and blindness.

Respiratory or skin sensitisation

The product is not classified as sensitising.

Some individuals may develop eczema upon exposure to wet cement dust, caused either by the high pH which induces irritant contact dermatitis after prolonged contact, or by an immunological reaction to soluble Cr (VI) which elicits allergic contact dermatitis. The response may appear in a variety of forms ranging from a mild rash to severe dermatitis and is a combination of the two above mentioned mechanisms. If the cement contains a soluble Cr (VI) reducing agent and as long as the mentioned period of effectiveness of the chromate reduction is not exceeded, a sensitising effect is not expected. There is no indication of sensitisation of the respiratory system.

Germ cell mutagenicity

The product is not classified as mutagen.

Carcinogenicity

The product is not classified as carcinogenic.

Reproductive toxicity

Suspected of damaging the unborn child.

STOT-single exposure

May cause irritation to the respiratory tract.

STOT-repeated exposure

Prolonged or repeated exposure causes organ damage.

Aspiration hazard

The product is not classified as being toxic for aspiration.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No information is available.

11.2.2. Other information

Not indicated.

SECTION 12: Ecological information

12.1. Toxicity

The product is not hazardous to the environment. Ecotoxicology tests with Portland cement and *Daphnia magna* and *Selenastrum coli* have proven insignificant toxicological effect. Therefore it has not been possible to establish values for LC50 and EC50. There are no indications for toxicity in the sediment phase. However, addition of large quantities of concrete to water can increase the pH and therefore the concrete could be toxic for aquatic organisms under certain conditions.

Prevent release on land, in water and drains.

12.2. Persistence and degradability

The methods used to test biodegradability is not applicable on inorganic compounds.

12.3. Bioaccumulative potential

There is no information regarding bioaccumulation.

12.4. Mobility in soil

Not relevant as concrete is an inorganic material. No toxicity risk is present after the concrete has cured.

12.5. Results of PBT and vPvB assessment

The criteria for PBT and vPvB do not apply to inorganic substances.

12.6. Endocrine disrupting properties

No information is available.

12.7. Other adverse effects

During large spills the pH can increase very significantly locally and cause toxic effects to organisms living in water.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste handling of the product

Avoid discharge into sewers.

Non-cured material is classified as hazardous waste. Cured material is not classified as hazardous waste.

Discarded products must be disposed of as hazardous waste in accordance with regulations.

Not completely emptied packaging can contain remnants of dangerous substances and should therefore be handled as hazardous waste according to the above. Completely emptied packaging can be recycled.

See directive 2008/98/EC on waste. Observe national or regional provisions on waste management.

Classification according to 2008/98/EC

Recommended LoW-code: 17 01 01 Concrete

SECTION 14: Transport information

Where not otherwise stated the information applies to all of the UN Model Regulations, i.e. ADR (road), RID (railway), ADN (inland waterways), IMDG (sea), and ICAO (IATA) (air).

14.1. UN number or ID number

Not classified as dangerous goods

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

14.8 Other transport information

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Not indicated.

15.2. Chemical safety assessment

Chemical safety report according to 1907/2006 Annex I is not required for this product.

SECTION 16: Other information

16a. Indication of where changes have been made to the previous version of the safety data sheet

Revisions of this document

This is the first version

16b. Legend to abbreviations and acronyms used in the safety data sheet

Full texts for Hazard Class and Category Code mentioned in section 3

Skin Irrit. 2	Skin corrosion/irritation, Hazard Category 2 - Skin Irrit. 2, H315 - Causes skin irritation
Eye Dam. 1	Serious eye damage/eye irritation, Hazard Category 1 - Eye Dam. 1, H318 - Causes serious eye damage
STOT SE 3	Specific target organ toxicity — Single exposure, Hazard Category 3, Respiratory tract irritation - STOT SE 3, H335 - May cause respiratory irritation
Flam. Liq. 3	Flammable liquids, Hazard Category 3 - Flam. Liq. 3, H226 - Flammable liquid and vapour
Acute Tox. 4	Acute toxicity (inhal.), Hazard Category 4 - Acute Tox. 4, H332 - Harmful if inhaled
Eye Irrit. 2	Serious eye damage/eye irritation, Hazard Category 2 - Eye Irrit. 2, H319 - Causes serious eye irritation
Repr. 2	Reproductive toxicity, Hazard Category 2 - Repr. 2, H361d - Suspected of damaging the unborn child
STOT RE 1	Specific target organ toxicity — Repeated exposure, Hazard Category 1 - STOT RE 1, H372 - Causes damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>

Explanations of the abbreviations in Section 14

ADR	European Agreement concerning the International Transport of Dangerous Goods by Road
RID	Regulations concerning the International Transport of Dangerous Goods by Rail
IMDG	International Maritime Dangerous Goods Code
ICAO	International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)
IATA	The International Air Transport Association

16c. Key literature references and sources for data

Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I, as updated to 2023-09-14.

Where such data was not available, alternative documentation used to establish the official classification was used, e.g. IUCLID (International Uniform Chemical Information Database). As a second alternative, information was used from reputable international chemical industries, and as a third alternative other available information was used, e.g. material safety data sheets from other suppliers or information from non-profit associations, where reliability of the source was assessed by expert opinion. If, in spite of this, reliable information could not be sourced, the hazards were assessed by expert opinions based on the known hazards of similar substances, and according to the principles in 1907/2006 and 1272/2008.

Full texts for Regulations mentioned in this Safety Data Sheet

1907/2006	REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC
1272/2008	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
2008/98/EC	DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on waste and repealing certain Directives

16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification

Hazard calculation for this mixture has been performed as a cumulative assessment with the aid of expert assessments in accordance with 1272/2008 Annex I, where all available information which may be significant to establishing the hazards of the mixture was assessed together, and in accordance with 1907/2006 Annex XI.

16e. List of relevant hazard statements and/or precautionary statements

Full texts for hazard statements mentioned in section 3

- H315 Causes skin irritation
- H318 Causes serious eye damage
- H335 May cause respiratory irritation
- H226 Flammable liquid and vapour
- H332 Harmful if inhaled
- H319 Causes serious eye irritation
- H361d Suspected of damaging the unborn child
- H372 Causes damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>

16f. Advice on any training appropriate for workers to ensure protection of human health and the environment

Warning for misuse

This product can cause injuries if not used properly. The manufacturer, the distributor or the supplier are not responsible for adverse effects if the product is not handled in accordance with its intended use.

Other relevant information

Not indicated

Editorial information



This material safety data sheet has been prepared and checked by KemRisk®, KemRisk Sweden AB, Platensgatan 8, SE-582 20 Linköping, Sweden, www.kemrisk.se