

Material Safety Data Sheet

Savage Cement

Version 1.0

Effective date: 1th of July 2019

IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

Product identifier

Trade name: Savage Cement

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

Product use: ground structure reinforcement or protective liner.

Uses advised against: Not relevant.

Details of the Supplier of the safety data sheet Company:

Savage Cement
202 Main St. Suite 3
Westcliffe, CO 81252 USA
Office: +1-719-688-5016
Email: savagecement@gmail.com
www.savagecement.com

SAVAGE CEMENT is mechanically bonded composite, consisting of concrete mix, embedded and fixed between two layers of geo-textile.

Material Safety Data Sheet

Concrete Mix

Version 1.0

Effective date: 27th of September 2017

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name: Concrete Mix

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

Product use: filling SAVAGE CEMENT liner.

Uses advised against: Not relevant.

1.3 Details of the Supplier:

Lansky Global LLC
4800 Hale Pkwy.
Denver, CO 80220 USA
Phone: +1 (719) 688-5016
Email: lanskygloballlc@gmail.com
www.savagecement.com

1.4 Emergency Telephone Number: 911

Emergency Telephone Number: Chris Root +1 (719) 688-5020

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Skin Irrit. 2, H315

Eye Dam. 1, H318

STOT SE 3, H335

Additional information

Full text of the hazard statements and EU hazard statements is listed in Section 16. When cement/binding agent comes into contact with water or becomes damp, a strong alkaline solution is produced. Due to the high alkalinity, wet cements/binding agents may provoke skin and eye irritation.

2.2 Label Elements 1272/2008 C

Hazard pictograms:	
Signal word:	Danger

Hazard statements:	<p>H315 Causes skin irritation.</p> <p>H318 Causes serious eye damage.</p> <p>H335 May cause respiratory irritation.</p>
Precautionary Statements:	<p>P28 Wear protective gloves/protective clothing/eye protection.</p> <p>P305+P351+P338 and P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.</p> <p>P302+P352 and P333+P313 IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P261 and P304+ P340 and P312 Avoid breathing dust. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P501 Dispose of contents/container to suitable waste collection points.</p>

2.3 Other hazards

Cement/binding agent does not meet the criteria for PBT or vPvB in accordance with Annex XIII of the REACH Regulation (EC) No 1907/2006.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable, as these products are mixtures, not substances.

3.2 Mixtures

Constituent	Index number	CAS No.	EC No.	Concentration Range (M. %)	Classification according to (EC) No. 1272/2008 (CLP)	
Portland cement	-	65997-15-1	266-043-4	1-50	Eye Dam. 1 STOT SE 3 Skin Irrit. 2 Skin Sens. 1B	H318 H335 H315 H317
Sulfuric aluminate belit cement	-	65997-15-1	266-043-4	1-50	Eye Dam. 1 STOT SE 3 Skin Irrit. 2 Skin Sens. 1B	H318 H335 H315 H317

Portland cement clinker is, according to Art. 2.7(b) and Annex V.10 of EC Regulation 1907/2006 (REACH), exempt from the registration requirement.

The product contains chrome reducing additives, which causes the cement to not be classified as sensitizing (R43) - more info in 15.1 section

3.3 Additional information:

See full text of H-phrases in chapter 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

Following eye contact

Do not rub eyes dry, because mechanical stress may cause additional damage to the cornea. Where applicable, remove contact lenses and immediately rinse the eye, while open, under running water

for at least 20 minutes in order to remove all particles. If possible, use isotonic eye-cleansing solution (0.9 % NaCl). Always consult an occupational physician or ophthalmologist.

Following skin contact

Remove dry cement/binding agent and rinse abundantly with water. Rinse wet cement/binding agent with plenty of water. Remove contaminated clothing, footwear, watches, etc. and clean these thoroughly before re-using them. Seek medical treatment in all cases of irritation or burns.

Following inhalation

Seek fresh air. Dust should quickly be removed from throat and nose. Consult a physician, should symptoms such as discomfort, coughing or persistent irritation occur.

Following ingestion

Do not induce vomiting. If the person is conscious, wash out mouth with water and give plenty of water to drink. Get immediate medical attention or contact the poison control center.

4.2 Most important symptoms and effects, both acute and delayed

Eyes: Eye contact with cement/binding agent (dry or wet) may cause serious and potentially irreversible eye damage.

Skin: Sustained contact with cement/binding agents may cause irritation on damp skin (due to sweating or humidity). Contact of cement/binding agents with damp skin may cause skin irritation, dermatitis or severe skin damage.

Inhalation: Repeated inhalation of large amounts of cement/binding agent dust over a long period of time increases the risk of developing lung diseases.

Environment: Under normal use, cement/binding agents are not hazardous to the environment.

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

Treat symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

5.1. Extinguishing media

Cement/binding agents are not flammable.

5.2. Special hazards arising from the substance or mixture

None

5.3. Advice for firefighters

No special measures are required, as cement/binding agents do not pose any fire-related hazards.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Wear protective equipment as described in Section 8. Follow the advice for safe handling and use given in Section 7.

6.1.2 For emergency responders

Emergency action plans are not required. However, respiratory protection is needed in situations with high dust levels.

6.2. Environmental precautions

Cement/binding agents should not penetrate the sewage water system, surface water or groundwater.

6.3. Methods and material for containment and cleaning up

Absorb spilled cement/binding agent and reuse, if possible. Where possible, use dry methods to clean, such as vacuum exhaust (portable devices with highly efficient filter systems (EPA and HEPA filters, EN 1822-1:2009) or equivalent techniques), which do not generate dust formation. Never use compressed air for cleaning. If dust is formed applying a dry cleaning method, personal protective equipment must be used. Avoid inhalation of cement/binding agent dust and skin contact. Place spilled material into a container for potential subsequent use.

6.4. Reference to other sections

See Sections 8 and 13 for further details.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Protective measures

Follow the recommendations as given in Section 8.

To clean up dry cement/binding agent, see Subsection 6.3.

Measures to prevent fire

Not applicable.

Measures to prevent aerosol and dust generation

Do not sweep. Where possible, use dry methods for cleaning, such as vacuum exhaust, which do not generate dust formation.

Measures to protect the environment

No special measures required.

7.1.2 Advice on general occupational hygiene

Do not eat, drink or smoke when working. Wear dust respirator and protective goggles in dusty environment. Use protective gloves to avoid skin contact.

7.2 Conditions for safe storage, including any incompatibilities

The product should be stored in ventilated, dry place protected against moisture, dirt and mechanical and chemical damage, as well as away from the fire. Opening the package should be carried out in accordance with the instructions. It is recommended that the equipment storage rooms in carbon dioxide fire extinguishers, foam and powder and sprinkler or sprinkler water.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Component	CAS No.	Value/unit
Dust of Portland cement and metallurgical cement	65997-15-1	
Todal dust	NDS	6 mg/m ³
Respirable dust	NDS	2 mg/m ³

DNEL / DMEL values are not available

PNEC values are not available

8.2 Exposure controls

To comply with occupational exposure limits, combinations of technical and/or individual protective measures are often required. If no adequate workplace measurements are available for exposure, an exposure assessment and selection of appropriate protective measures based on the MEASE tool (Reference 3) may be carried out. Engineering controls (Table in 8.2.1) and individual protective

measures (Table in 8.2.2) are recommended for the identified uses in the professional sector (Subsection 16.3). In this context, option A can only be combined with A, and B can only be combined with B. Furthermore, it must be taken into consideration that the indications apply to a continuous exposure of 8 hours per day and 5 days per week.

For the private end consumer applies that the products shall only be used outdoors or in well-ventilated rooms and that personal protective equipment shall be worn (general indications in Subsection 8.2.2).

8.2.1 Appropriate engineering controls

Use adequate ventilation in a closed room. Provide eye wash station.

8.2.2 Individual protection measures, such as personal protective equipment

General information:

Do not eat, drink or smoke when working. Avoid contact with eyes and skin. After work with cement/binding agent, workers should wash or shower and use skin care products. Clean contaminated clothing, footwear, watches, etc. thoroughly before re-using them.

Eye/face protection:

Use tight-fitting safety goggles according to EN ISO 4007:2012 and EN 166:2005.

Skin protection:

Wear waterproof, abrasion and alkali-resistant gloves. Leather gloves are not suitable due to their water penetrability, and can release chromate-containing compounds. For handling cement/binders, special gloves for chemicals (CAT. III) are not required. Investigations have proven

that nitrile impregnated cotton gloves (layer thickness of about 0,15 mm) provide sufficient protection over a period of 480 minutes. Change soaked gloves. Have spare gloves ready.

Skin protection according to EN 943-1:2005, EN 943-1:2005?AC:2006 and gloves according to EN 374-1:2005.

Respiratory protection:

In case of work in the room, with insufficient ventilation, use respiratory protection respirator P1 or P2.

Respiratory protection according to EN 133:2005.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

(a) Appearance: gray powder

(b) Odor: Odorless

(c) Odor threshold: No odor threshold, odorless

(d) pH: 10-11

(e) Melting point / freezing point: > 1300 °C

(f) Initial boiling point and boiling range: Not applicable

(g) Flash point: Not applicable

(h) Evaporation rate: Not applicable

(i) Flammability (solid, gas): Not applicable

(j) Upper/lower flammability or explosive limits: Not applicable, as it is not gaseous

(k) Vapor pressure: Not applicable

(l) Vapor density: Not applicable

(m) Relative density: 1,6 (1 = water)

(n) Solubility(ies): Not applicable

(o) Partition coefficient: n-octanol/water: Not applicable

(p) Auto-ignition temperature: Not applicable

(q) Decomposition temperature: Not applicable

(r) Viscosity: Not applicable, as it is no liquid

(s) Explosive properties: Not explosive and not pyrotechnical. No gas development or self-sustaining exothermic chemical reactions.

(t) Oxidizing properties: Not applicable, as cement/binding agent has no oxidizing properties.

9.2 Other information

Not applicable

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:

Cement/binding agent is a hydraulic material. When mixed with water, an intended reaction takes place. As a result, cement hardens and forms a solid mass, which does not react with its environment.

10.2 Chemical stability:

Properly stored dry product is stable and can be stored with most other building materials.

10.3 Possibility of hazardous reactions:

Not applicable.

10.4 Conditions to avoid:

Moisture during storage can lead to lumping and loss of product quality.

10.5 Incompatible materials:

Not applicable.

10.6 Hazardous decomposition products:

Not applicable.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects

Acute toxicity:

Based on available data, classification criteria are not met.

Skin corrosion/irritation:

It irritates the skin.

Serious eye damage/irritation:

It irritates the eyes.

Respiratory or skin sensitisation:

Based on available data, classification criteria are not met.

Germ cell mutagenicity:

Based on available data, classification criteria are not met.

Carcinogenicity:

Based on available data, classification criteria are not met.

Reproductive toxicity:

Based on available data, classification criteria are not met.

Specific target organ toxicity - single exposure:

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure:

Based on available data, classification criteria are not met.

Aspiration hazard:

Based on available data, classification criteria are not met.

Effects of local health exposure:

Eye contact:

Irritation, redness, tearing, burning, conjunctivitis.

Skin contact:

Itching, local redness, drying, peeling, cracking, ulceration, primary and purulent osteitis, eczema.

Ingestion:

Damage to the gastrointestinal mucosa, vomiting and diarrhea may occur.

Inhalation of dust:

Can cause rhinitis, throat irritation, cough, dyspnoea. This product contains cement which can cause irritations, redness and even burns when in contact with damp skin and mucous membranes.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity:

This product does not show any hazardous properties for the environment.

12.2 Persistence and degradability:

No data available.

12.3 Bioaccumulative potential:

No data available.

12.4 Mobility in soil:

No data available.

12.5 Result of PBT and vPvB assessment:

Not applicable, as cement/binding agent is an inorganic mineral material. After hydration, residual cement/binding agents present no toxicological risk.

12.6 Other adverse effects:

No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Do not enter drains. Do not allow contamination of ground and surface water. Hardened product treated like construction rubble.

SECTION 14. TRANSPORT INFORMATION

Cement/binding agent is not subject to the international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID). Therefore, no dangerous goods classification is required.

14.1. UN numer

Not applicable.

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. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15. REGULATORY INFORMATION

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

Regulation (EC) 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization 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 76/796 / EEC and Commission Directive 91/155 / EEC, 93/67 / EEC and 2000/21 / EC (OJ L 396 of 30 December 2006) as amended.

Act of 25 February 2011 on chemical substances and their mixtures (OJ.2011.63.322).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on the classification, labeling and packaging of substances and mixtures.

Regulation of the Minister of Health of 10 August 2012 on the criteria and classification of chemical substances and mixtures thereof (OJ 2012.0.1018).

Regulation of the Minister of Health of 20 April 2012 on the labeling of packaging of dangerous substances and mixtures of dangerous substances and certain mixtures (OJ 2012.0.445).

Regulation of the Minister of Labor and Social Policy of 29 November 2002 on the highest permissible concentrations and intensities of agents harmful to health in the working environment (OJ 2002.217.1833) as amended.

Regulation of the Minister of Economy of 21 December 2005 on essential requirements for personal protective equipment (OJ 2005.259.2173).

Regulation of the Minister of Health of 30 December 2004 on occupational safety and health related to the occurrence of chemical agents in the workplace (OJ 2005.11.86) as amended.

Law of 19 August 2011 on the transport of dangerous goods (OJ.2011.227.1367).

Act of 27 April 2001 on waste (Dz.U.2001.62.628) as amended.

Act of 11 May 2001 on packaging and packaging waste (Dz.U.2001.63.638) as amended.

Ordinance of the Minister of the Environment of 27 September 2001 on the waste catalog (OJ 2001.112.1206).

Government Declaration of 26 July 2005 on the entry into force of amendments to Annexes A and B to the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) signed at Geneva on 30 September 1957 (OJ 2005.178.1481), as amended.

European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR Agreement 2011-2013).

Regulation of the Minister of Labor and Social Policy of 14 March 2000 (OJ No. 26, item 313) on occupational safety and health in manual transport work.

Regulation of the Minister of Health of 2 February 2011 on the measurement of factors harmful to health in the workplace (OJ 2011.33.166).

According to Annex XVII Paragraph 47 of EC Regulation 1907/2006 (REACH), the marketing and use of cements and cement-containing preparations is subject to restriction:

1. Cement and cement-containing mixtures shall not be used or placed on the market if they contain, whenhydrated, more than 0.0002% soluble Chromium(VI) of the total dry weight of the cement.

2. If reducing agents are used, then, without prejudice to the application of other Community provisions on the classification, packaging and labeling of dangerous substances and mixtures, suppliers shall ensure, before placing on the market, that the labeling of cement and cement-containing mixtures is clearly readable and durably indicating when the product was packaged and under what conditions and for how long it can be stored without the effect of the reducing agent decreasing and the content of soluble Chromium(VI) exceeding the limit value specified in Number 1.

3. By way of derogation, Numbers 1 and 2 shall not apply to the placing on the market with regard to wellcontrolled, closed and fully automated processes, and to use in processes, in which cement and cementcontaining mixtures are handled solely by machines and in which there is no possibility of contact with the skin.

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/ mixture by the suppli-er.

SECTION 16. OTHER INFORMATION

Relevant H-statements (number and full text) and acronyms of symbols, hazard classes and category codes listed in Section 3.:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
EUH203	Contains Chromium(VI). May produce an allergic reaction.
Eye Dam. 1	Serious eye damage / eye irritation, hazard category 1.
Skin Irrit. 2	Skin irritation, risk category 2.
STOT SE 3	Toxicity to target organs - single exposure, hazard category 3, respiratory irritations.
Skin Sens. 1B	Skin sensitization, risk category 1B.

Key literature references and sources for data”

Material Safety Data Sheet

Non-woven polypropylene

1. Identification of the product:

Composition / information on ingredients:

Component	CAS No	proporcional content
PP – (Poly) propylene	9003-07-0	98,8-99,4
Fatty acids and / or esters	mixture	0,4-0,8
Pigment: Tytanium carbon	13463-67-7	0,2-0,4

Identification of threats:

Not classified as dangerous or pose a danger during use. Rational use and handling of the product does not have any harmful effect on the human body. From the hygienic point of view, the product is safe for health and has been classified as harmless to humans according to EEC criteria

2. Potential health risks:

Skin - Not identified significant health risks. Particles or fibers, the fibers may cause slight discomfort similar to rub the skin with sand.

Eyes - Not identified significant health risks. Particles or fibers, the fibers may cause slight discomfort such as dust enters the eye.

Inhalation - does not provide for any impact under normal conditions of use. However, when high-temperature heat treatment may produce irritating fumes and vapors nose and throat.

The digestive system - not applicable.

3. First Aid

Leather - Exposed place with soap and water. If irritation persists, consult medical advice.

Eyes - In case of irritation flush eyes with running water for 15 minutes. If irritation persists, consult a physician.

Inhalation - If there are adverse effects associated with secreted vapors nonwovens during thermal processing, remove the victim from exposure, if irritation persists, consult a physician.

The digestive system - not applicable.

4. Firefighting

Major fire hazards - (Poly), propylene exposed to fire burn.

Fire hazards and toxic:

- Evolution of large quantities of smoke and heat radiation during the combustion process
- Noxious gaseous components of combustion products, mainly carbon monoxide and carbon dioxide
- Reduce the oxygen concentration in the areas where the fabric burn
- Loss of visibility in the areas covered by fire
- The threat of severe thermal burns, pours the molten product in the fire zone

Extinguishing Media:

- Stream of water (not for use directly on the molten material used fog water)
- Heavy foam

Extinguishing media to extinguish fires in the bud:

- Powders- Carbon dioxide extinguishers

Precautions:

- In the case of a large fire, use self-contained breathing apparatus and clothing protective
- In the case of poisoning during the action extinguishing equipment and materials used associated with carbon monoxide poisoning

5. Accidental release

Prevention:

- The remains of the material on the floor can cause slipping.

Workplace kept clean.

Environmental protection:

- Remnants of material should be disposed of according to clause 13 of the Charter Product Safety Data

6. Transport and Storage

The product should be stored in ventilated, dry place protected against moisture, dirt and mechanical and chemical damage, as well as away from the fire. Opening the package should be carried out in accordance with the instructions.

It is recommended that the equipment storage rooms in carbon dioxide fire extinguishers, foam and powder and sprinkler or sprinkler water.

7. Exposure controls and personal protection

With the use of the product under normal conditions of use does not require protection respiratory tract, eyes, hands and other parts of the human body. However, during the processing product using a heat treatment, gloves and protective clothing must be used.

Component	CAS No.	Exposure limits
PP – (Poly) propylene	9003-07-0	OSHA TOTAL DUST: 15 mg/m ³ (particulate NOC) OSHA RESPIRABLE DUST: 5 mg/m ³ (Particulate NOC) ACGIH TLV-TWA: 10mg/m ³ (total dust) (particulate NOC)
Fatty acids and / or esters	mixture	Exposure limits are not known
Pigment: carbon tytanu	13463-67-7	OSHA PEL: 15 mg/m ³ TOTAL DUST (data for substances in powder form)

8. Physical and chemical properties

Main ingredient: poly (propylene)

State of matter: solid

Color and odor: white, odorless

Density at 20C: 0.9 - 0.92 g / cm³

Boiling point: not applicable

Flash point: 440 C

Solubility in water: Insoluble

Temperature - softening point: 120 - 150 ° C

- Melting point: 160 - 168 C

- Ignition: 380 - 460 C

- Decomposition:> 300 ° C

-Explosive properties: no

9. Stability and reactivity

Dangerous reactions: None, stable under normal conditions of use Hazardous decomposition products: mainly hydrocarbons such as ethane, propane, penatn, 2-methlo-1-pentene, and toxic gases such as carbon monoxide, carbon dioxide.

10. Toxicological information

Products are not toxic, due to the presence of TiO₂, which is closed within the polymer, and not expected to release during normal processing conditions or in emergencies cases.

11. Ecological Information

Nonwovens are practically insoluble in water to which they pass negligible. Do not have an adverse effect on water quality and are non-toxic to fish and other animals. They do not cause any threat to land and natural bodies of water. In nature, are virtually non-woven degradable. However, under the influence of solar surface can be expected photodegradation. Waste resulting from nonwovens processing should be treated in accordance with the guidelines set out in the Section 13.

Polypropylene nonwovens are:

- Do not biodegrade
- Not contain heavy metal salts
- Do not contain pesticides and pentachlorofenoli

12. Disposal

Management options for uncontaminated materials include, recycling Mechanical and chemical or energy recovery. Flatwork through the swamp pits with the help of this waste, in some countries it is also permitted. In the case of contaminated materials management method remains the same even though the qualification is required. Disposal methods for all countries must be consistent with the state, in district and municipal local regulations. All management methods must be in compliance with the basic EU directives Regulation 91/156 / EEC, 91/689 / EEC and its subsequent amendments introduced in national laws and regulations as well as the European Union Directives on movement of the waste. Transboundary movement of waste must be consistent with the European Union by Council Regulation 259/93 and subsequent amendments to it.

13. Transport Information

- Acceptable is any kind of transport, provided that the fiber will be protected against moisture, dust, dirt and mechanical damage and chemical
- In accordance with national and international regulations for the transport by road, rail, air and shipping, the product is not dangerous

14. Regulatory Information

There are no local regulations associated with the product.

End of Safety Data Sheet
Prepared By.
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