



CONCRETE CANVAS®

Concrete on a Roll



CCHYDRO™

Concrete Impregnated Containment

SDS



The Queen's Awards
for Enterprise:
International Trade
2019



Board of Trade
Winner
2018



Winner
Technical Innovation Award
2017



ICE Wales Cymru Project Awards
Innovation Award
ICE Wales Cymru Awards 2017



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Certified



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ISO 9001 Accreditation



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UTILITIES



DEFENCE



DESIGN



SHELTER

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

1.1. Product Name

Concrete Canvas® GCCM (CCT1™, CCT2™ and CCT3™) & CC Hydro™ GCCB (CCHT1™ and CCHT2™)*

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

Concrete Canvas® GCCM (CCT1™, CCT2™ and CCT3™):

For rapidly applied, durable and chemically resistant erosion control applications i.e. water channel lining, slope protection, bund lining, weed suppression, culvert repair, gabion reinforcement and pipe protection.

CC Hydro™ GCCB (CCHT1™, CCHT2™):

For use as a durable, chemically resistant, high impermeability liner for secondary containment applications i.e. Bund and berm lining, lagoon lining, contaminated medium channel lining and canal remediation.

1.3. Details of the supplier of the Safety Data Sheet

Concrete Canvas Ltd. Cowbridge Road, Talbot Green, Pontyclun, CF72 8HL, United Kingdom

E-mail: info@concretecanvas.com | Website: www.concretecanvas.com

1.4. Emergency telephone number

Telephone (UK): +44 (0) 345 680 1908 (1) Only available during the following office hours: 08:00 – 16:30

Section 2: Hazards Identification

2.1. Classification of the substance or mixture

This product does not meet the criteria for classification in any hazard class according to **EC regulation No. 1272/2008** on classification, labelling and packaging of substances and mixtures. A small amount of powder mix and/or dust may be released during normal handling (i.e. manipulating sections of un-set GCCM or when cutting unset or hydrated GCCM) – skin, eye and respiratory protection is advised if dust is generated.

In contact with water, an alkaline solution occurs (pH11-11.5) that may be irritant. However, in general practice, the volume of water required for the correct hydration of GCCM should mitigate any negative effects.

The concrete mix reacts chemically and hardens when mixed with water. The reaction is exothermic resulting in a temperature rise. There is no risk of thermal burns in normal outdoor application of CC.

2.2. Label Elements

In compliance with EC regulation No. 1272/2008 and its amendments. No labelling requirements for this substance.

2.3. Other Hazards

This product does not contain any substances classified as PBT or VPvB.

2.4. Precautionary Statements

Wear appropriate protective equipment.

Avoid breathing any dust.

Avoid breathing any fumes during heat welding.

Wash hands and exposed skin after handling.

Section 3: Composition/Information on Ingredients

3.1. Substances

N/A

3.2. Mixtures

Concrete Canvas® GCCM is composed of a cementitious powder, inert filler (silica sand), polyester fibres and PVC coating and or laminate and additives.

REACH-relevant information (in accordance to Article 33 of the REACH regulation):

Concrete Canvas® and CC Hydro™ are considered to be Articles as defined by the Reach Regulations.

The article does not contain, in a concentration above 0,1% (w/w), any of the substances included on the candidate list (status: January 13, 2010) set out according to article 59 (1,10) of the REACH regulation.

We provide this product information on the basis of our current knowledge and experience and can neither give any warranty nor assume any responsibility for factors outside our control or knowledge.

*Geosynthetic Cementitious Composite Mat & Geosynthetic Cementitious Composite Barrier

| Name | Identifier number (CAS) | Weight % content (or range) |
|----------------------------|-------------------------|-----------------------------|
| Cement, alumina, chemicals | 65997-16-2 | 70-100% |
| Silica sand (quartz) | 14808-60-7 | 30-80% |
| Polyvinyl Chloride | 9002-86-2 | 4-10% (8-18% for CCH) |

Section 4: First Aid Measures

4.1. First Aid Measures

General Notes:

As a general rule, in case of doubt or if symptoms persist, always call a doctor. NEVER induce swallowing by an unconscious person.

Following Inhalation:

Inhalation of vapours during heat welding may cause respiratory tract irritation.

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Following skin contact:

Watch out for any remaining product between skin and clothing, watches, shoes, etc. Wash with soap/cleanser and rinse with plenty of water.

Following eye contact

Wash thoroughly with soft, clean water for 15 minutes holding the eyelids open. If there is any redness, pain or visual impairment, consult an ophthalmologist.

Following ingestion:

DO NOT induce vomiting. Wash mouth with water and give plenty of clean water. Seek medical attention, showing this SDS.

Self-protection of the first aider:

First aider must follow general rules to avoid direct contact with any spillage powder and fibres. General PPE is suitable.

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

No data available.

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

No data available.

Section 5: Fire Fighting Measures

5.1. Extinguishing Media

Suitable extinguishing media – water, foam, carbon dioxide or dry powder.

5.2. Special Hazards

The product has a limited combustibility in either packaged or installed (hydrated) form. However, some materials may burn (i.e. packaging or exposed PVC membrane). Under fire conditions, fumes can contain carbon monoxide (CO), carbon dioxide (CO₂), water vapour and also hydrogen chloride (HCl). Explosive mixtures can arise due to decomposition.

5.3. Advice for Firefighters

In case of fire: do not breathe decomposition products and fumes. Use approved self-contained breathing apparatus. Wear fire retardant clothing. Prevent runoff from fire control from entering waterways. Large fires should only be dealt with by trained personnel.

Section 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

There is possibility that some cementitious blend in the form of dust and powder, fibres and pieces of PVC membrane may be released locally in the case of accident.

6.1.1. For non-emergency personnel use suitable personal protective equipment (refer Section 8 for details).

6.2. Environmental precautions

Prevent release of large quantities of materials to drains and waterways.

6.3. Methods and material for containment and cleaning up

Retrieve material by mechanical means (sweeping, vacuuming). Avoid emission of dust. If any spilled material has been wetted: collect it before it begins to harden.

6.4. Reference to other sections

Refer to section 8 for more information about personal protective equipment and to section 13 for disposal guidelines.

Section 7: Handling and Storage

7.1. Precautions for safe handling

CC Bulk Rolls are individually wrapped and palletised on heat treated wooden pallets measuring 1.2m x 1.0m. CC Batched Rolls are similarly supplied, individually wrapped in airtight PE packaging and palletised. 13 Batched Rolls fit onto a standard 1.2m x 1.0m pallet.

Protective measures:

Advice on safe handling:

CC is available in three formats (roll sizes); Bulk Rolls, Wide Rolls or smaller, hand portable Batched Rolls:

- 7.1.1. Bulk Rolls weigh between 1.5T and 1.6T and are supplied on 6-inch cardboard cores which can be hung from a spreader beam and unrolled using suitable plant equipment.
- 7.1.2. Wide Rolls weigh up to 1.0T and are supplied on 5-inch HDPE cores which can be hung from a spreader beam and unrolled using suitable equipment.
- 7.1.3. Batched Rolls are supplied on 3 inch cardboard cores with carry handles designed as a 2 to 4-persons lift.

Incompatible materials

Contact with water or water vapour during storage will hydrate the product and affects its performance.

Fire preventions:

Prevent access by unauthorised personnel.

Aerosol and dust generation preventions:

Avoid generation of dust.

Environmental precautions:

Avoid any accidental damage to GCCM/GCCB and release of powder or other parts of it to drains and waterways.

Advice on general occupational hygiene:

- 7.1.3. Don't eat, drink and smoke in storage or working area.
- 7.1.4. Wash hands after use.
- 7.1.5. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

CC should be stored under cover in dry conditions.

Packaging materials:

There is no special packaging restriction with respect to safety but it's advised to store product within the manufacturers sealed packaging.

7.3. Specific end use(s).

See section 1.

Section 8: Exposure Controls/Personal Protection

8.1. Control parameters:

8.1.1. Occupational exposure limits:

Silica Sand

Long-term exposure limit (8-hour TWA): WEL 0,1 mg/m³

In all circumstances where there is a risk of exposure to dangerous concentrations of dust, such exposure must be reduced to as low a level as reasonably practicable by the application of occupational hygiene and appropriate techniques (see HSE Guidance note EH40 "Dust in the workplace").

In any case, exposure must not exceed the critical concentration limits published by the HSE in their guidance note EH40/2005.

Cement

UK / WEL (Workplace exposure limits, EH40/2005, 2007) : Total Dust TWA = 10mg/m³ Respirable dust TWA=4mg/m³

USA / OSHA PEL (Occupational Safety and Health Administration, Permissible Exposure Limits) : Respirable particals TWA = 5mg/m³

Total particals TWA=15mg/m³

ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) : Respirable particles TWA = 3 mg/m³

Inhalable particles TWA=10mg/m³

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Where reasonably practical, dust exposures should be controlled by engineering methods.

8.2.2. Personal protective equipment

- a) Personal protection measures, such as personal protective equipment pictogram(s) indicating the obligation of wearing personal protective equipment (PPE):
Use personal protective equipment that is clean and has been properly maintained.
Store personal protective equipment in a clean place, away from the work area.
Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using.
Ensure that there is adequate ventilation, especially in confined areas.
- b) Eye / face protection.
Avoid contact with eyes.
Before handling powders or dust emission, wear mask goggles in accordance with standard EN166.
- c) Hand protection
Wear suitable protective gloves in the event of prolonged or repeated skin contact.
- d) Body protection
Work clothing worn by personnel shall be laundered regularly.
After contact with the product, all parts of the body that have been soiled must be washed.
- e) Respiratory protection
Avoid breathing dust.
Type of FFP mask:
Wear a disposable half-mask dust filter in accordance with standard EN149.



Section 9: Physical and Chemical Properties

| | | | |
|----------------------------------|--------------|---|----------------|
| Appearance | : | cloth/ particulate | |
| Odour | : | not applicable | |
| pH | : | 11-11.5 when wet | |
| Melting Point | : | not applicable | |
| Initial Boiling Point | : | not applicable | |
| Flash Point | : | not applicable | |
| Evaporation rate | : | not applicable | |
| Flammability | : | partially combustible, doesn't support fire | |
| Explosive limits | : | not applicable | |
| Vapour Pressure | : | not applicable | |
| Vapour density | : | not applicable | |
| Bulk Density | : | 1500 kg/m ³ | |
| Specific Gravity | : | not applicable | |
| Solubility | Water | : | not applicable |
| | Other | : | not applicable |
| Partition Coefficient | : | not applicable | |
| Auto-ignition temperature | : | not applicable | |
| Decomposition temperature | : | >200°C | |
| Viscosity | : | not applicable | |
| Oxidising Properties | : | not applicable | |

Section 10: Stability and Reactivity

10.1. Reactivity

In a dry environment, the product is chemically stable. When mixed with water it reacts chemically and hardens, forming stable calcium aluminate hydrates. This reaction is exothermic and continues for up to 24h. Total heat released is < than 500J/kg. There are no hazardous decomposition products.

10.2. Chemical Stability

Under storage and use at normal ambient temperatures (-40°C to +40°C), the product is stable.

10.3. Possibility of hazardous reactions

None under normal conditions.

10.4. Conditions to avoid

Avoid:

- formation of dusts
- humidity

10.5. Incompatible materials

None, to our knowledge.

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

Section 11: Toxicological Data

11.1. Information on toxicological effects

No data available.

11.1.1. Substances

Acute toxicity:

CEMENT, ALUMINA, CHEMICALS (CAS: 65997-16-2)

Oral route: LD50 > 2000 mg/kg

Skin corrosion/skin irritation:

CEMENT, ALUMINA, CHEMICALS (CAS: 65997-16-2)

Corrosivity: No observed effect.

Serious damage to eyes/eye irritation:

Dust may cause slight irritation to the ocular mucous membranes due to the presence of a foreign body.

Respiratory or skin sensitisation:

In accordance with the requirements REACH Annex XVII, art. 47 does not contain quantities of hexavalent chromium > 2 ppm, measured according to EN 196-10

Specific target organ systemic toxicity - single exposure:

Dust from this product may cause irritation to the respiratory tract.

In the supplied form products contain negligible quantities of respirable silica dust.

Section 12: Ecological Information

After hydration (a few hours or days in moist conditions) the product is stable in soil and in water, with negligible mobility of its constituents.

| | |
|---|-------------------|
| 12.1. Toxicity: | Not classified |
| 12.2. Persistence and degradability: | Not established |
| 12.3. Bioaccumulative potential: | No data available |
| 12.4. Mobility in soil: | No data available |
| 12.5. Results of PBT and vPvB assessment: | No data available |
| 12.6. Other adverse effects: | No data available |

Section 13: Disposal Considerations

13.1. Waste treatment methods:

13.1.1. PRODUCT:

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

13.1.2. Packaging:

Dispose of as unused product in accordance with local and national regulations.

Section 14: Transport Information

| | |
|-------------------|---|
| ADR/RID: | Not Classified as hazardous for transport |
| IMDG: | Not Classified as hazardous for transport |
| Marine pollutant: | No |
| IATA: | Not Classified as hazardous for transport |

Section 15: Regulatory Information

Label Elements

No statutory safety labels are required for this material in accordance with the provisions of EC/1907/2006, EC/1272/2008 or 67/548/EEC as amended

Other Regulations

Health & Safety at Work etc. Act 1974

Control of Substances Hazardous to Health Regulations 2002 (as amended)

Chemicals (Hazard Information and Packaging for Supply) Regulations 2009

Classification, Labelling and Packaging of Substances and Mixtures Regulations 2008 (as amended)

EH40/2005 Workplace Exposure Limits (as amended)

Environmental Protection Act 1990

Hazardous Waste Regulations 2005 (as amended)

Particular provisions:

USA: CERCLA Hazardous substance (40CFR Part 302): all substances are not listed in the

CERCLA list USA State of California: All substances are not listed in the Proposition 65 list

US Toxic Substances Control Act

TSCA: All substances are listed in the EPA (Environment Protection Agency) TSCA inventory

USA SARA section 311/312 categorizations: None

Canada: Domestic Substance List (DSL): all substances are registered in the DSL inventory

WHMIS: none

German regulations concerning the classification of hazards for water (WGK):

WGK 1 (VwVwS vom 27/07/2005, KBws): Slightly hazardous for water.

Standardised American system for the identification of hazards presented by the product in view of emergency procedures (NFPA 704):

FPA 704, Labelling: Health=0 Inflammability=0 Instability/Reactivity=0 Specific Risk=none

Section 16: Other Information

General information

Technical Data Sheet

Key literature references and source for data

Health and Safety Executive Guidance Note EH40 (amended annually). Workplace Exposure Limits.

Revision History

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SDS Generated by: Marcin A. Kujawski, Research and Quality Manager

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