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flooring and drainage

Food-Cove™

Heavy Duty Polyurethane Resin Coving System.

Description
FOOD-COVE™ is a lightweight trowel applied cove grade material based upon a liquid polyurethane resin system. Designed specifically for use with polyurethane flooring in order to maintain the same standards of resistance to abrasion and chemical contact.

Composition
Water dispersed polyurethane resin system combined with graded silica aggregates.

Appearance
A finely textured smooth aggregate surface of uniform colour.

Durability
Highest order of durability, resistances to abrasion, impact and chemical attack. Stable to steam cleaning.

Thickness
Typical 2mm to 10mm.

Typical Installations
FOOD-COVETM is used to form chemically resistant coving, fillets and gulleys in conjunction with the polyurethane resin flooring systems. It is to be used from 25mm up to approximately 300mm high to form the required detail. It is used in combination with FOOD-CRETE™ to provide totally seamless “box” finish floor/coving systems within high hygienic sterile process areas. When used in wet environments or high pressure washing is used, FOOD-COVE™ can be sealed with 1 to 2 coats of an appropriate protective sealer.

Substrates For Installation
In combination with FOOD-PRIME™ epoxy primer, FOOD-COVE™ will adhere well to concrete, granolithic concrete, brick/block, plyboard, pvc and mild steel.

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1) Surface preparation
To be assured of maximum adhesion and properties from KDH resin products the correct surface preparation is essential. A sawn cut rebate within the polyurethane resin flooring system approximately 50mm away from the perimeter edge is advised to "tuck" the new coving detail in to so forming a seamless system.

2) Application conditions
5-30°c - Maximum moisture content of substrate 75% RH.

3) Priming
Priming of all surfaces should be undertaken with:
FOOD-PRIME™ epoxy primer and then application of the FOOD-COVE™ should be effected into the tacky (uncured) primer in order to maintain and ensure a sound adhesive bond.

4) Mixing
Pre-mixing of the coloured liquid component is recommended to ensure any light settlement is reincorporated. Thoroughly drain the contents of the liquid colour component into the brown hardener component and mix for a minimum of 1 minute or to provide a homogeneous mix.
The resultant mixture should then be loaded into a rotary drum mixer and the aggregate component added in stages, mixing until a lump free mix is obtained.

5) Application Techniques
Apply material by plasterers float or appropriate specialist coving trowel directly into tacky FOOD-PRIME™ and form coved detail as required. Do not allow the primer to cure to a tack free state as this could lead to application/adhesion problems.

6) Coverage Rates
Density of mixed product – typically 1.98 – 1.98Kg is required per 1mm thickness per m2.

7) Specification Detail
FOOD-PRIME™ at approx. 275g/mtr2.
FOOD-COVE™ at 1.98Kg/m2 per 1mm build.

8) Maintenance
Regular cleaning of the applied system is recommended in order to maintain durability properties and cosmetics. Normal proprietary cleaning agents in combination with pressure washing/steam cleaning may be employed.

9) Cure Schedule

Usable life of full unit/mix at 20°C	- 20 mins
Initial film gel time at 20°C	- 20 mins
Cure time to light impact @ 20°C	- 8 - 12 hours
Cure time to heavy duty service @ 20°C	- 24 hours
Full cure @ 6mm @ 20°C	- 3 - 5 days

10) Chemical Resistance
Excellent resistances to organic and inorganic acids, alkalis, fuel and hydraulic oils, aromatic and aliphatic solvents. Best results are achieved when sealed with an appropriate protective sealer.

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11) Technical Data

Compressive strength to BS6319 Part 2 (N/mm2)	- 50.0
Tensile strength to BS2782:320D (N/mm2)	- 5.0
Flexural strength to A.S.T.M. d790-84a (N/mm2)	- 50.0
Impact 1Kg load/tup nose type	- 22cm
Surface spread of flame to BS476: Part 7	- Class 2

12) Colours Available

Standard Colours: Light Grey, Mid Grey, Dark Grey, Safety Red, Tile Red, SafetyYellow, Mustard Yellow, Light Green, Dark Green and Ocean Blue.
NOTE: Other colours are obtainable on request if covered by a BS4800 or RAL Nº but are classed as specials so an additional cost may be applicable.

13) Storage, Mixing & Application

The storage, mixing and application conditions can affect the quality of the finished product.

14) Health and Safety

Avoid contact of the material with skin and eyes.
Wear appropriate gloves, overalls and eye protection during use.
Please refer to Material Safety Data Sheet for additional
Information, for specific advice regarding any aspect of this
product, please consult our Technical Section.

15) General Guidance

This Data Sheet is for general guidance purposes only and may
contain information that is inappropriate for certain conditions of use. Accordingly, all recommendations and suggestions are made without guarantee. Further information is available from our Technical Department.
Please consult our Sales Department to confirm that this Data Sheet is the current issue – details listed below.

NB. Due to the different blends of aggregates used in FOOD-COVE™ compared to other KDH products, a colour match is not possible if aesthetics are an issue. If this is a requirement then the FOOD-COVE™ will need overcoating with 1 to 2 costs of a suitable coloured polyurethane sealer.

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Food-Cove™

material data safety sheet (part A)

This data sheet provides the information required by the Chemicals (Hazard Information and Packaging) Regulations.

1. Identification of Substance/Supplier

Coloured resin polyol component.

Cemart Resins Ltd.
Unit 11 Hunslet Trading Estate
Severn Way
Leeds
LS10 1BL

2. Composition/Information on Ingredients

2.1. Chemical Description
Polyol component
2.2. Classification
Not applicable.

3. Hazards Identification

Not applicable.
3.1. Classification
This product requires no hazard labelling according to current legislation.

4. First Aid Measures

Eye Contact
Wash eyes immediately with clean water for at least 15 minutes.
Skin Contact
Wash the affected area thoroughly with soap and water. If irritation, pain or other skin trouble occurs, seek medical advice.
Ingestion
If symptoms persist consult a doctor.
Inhalation
If irritation occurs, move to fresh air. If nose or airways become inflamed seek medical advice.

5. Fire Fighting Measures

5.1. Extinguishing Media
Use fire extinguishing methods suitable for surrounding conditions.
5.2. Special Fire Fighting Procedures
Keep run-off water out of sewers and water sources. Dike for water control.

6. Accidental Release Measures

6.1. Personal Precautions
(See 8.3)
6.2. Environmental Precautions
Do not allow to enter drains, sewers or watercourses. Collect and dispose of spillage as indicated in section 13.
6.3. Method of Cleaning
Collect with absorbent material (sand, diatomite, sawdust and shovel into suitable containers.

7. Storage and Handling

7.1. Storage
Protect from frost.

7.2. Handling
No special methods required.

8. Exposure Controls

8.1. Workplace Exposure Limits (WEL's)
This product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
8.2. Recommended Protective Equipment
Respiratory Protection
Not required.
Hand and Skin Protection
Impermeable gloves.
Eye Protection
Splash proof goggles should be worn.

9. Physical/Chemical Properties

9.1. Physical Data

Physical state	Liquid
Colour	Various colours
Odour	Weak
Solubility	Difficult to mix with water
Relative Density	1.1 - 1.3 @ 20°C
Vapour Pressure	< 0.0001 @ 25°C
Viscosity	150 - 300 mPas @ 25°C
Flash Point	> 200 °C (closed cup)
Boiling Point	> 300 °C
Auto ignition Temp.	> 400 °C

10. Stability and Reactivity

Stable under normal conditions. No dangerous decomposition products known.

11. Toxicological Information

11.1 Short Term Effects
Eye Contact
Irritating to eyes.
Skin Contact
No irritating effect.
Inhalation
No irritating effect.
Ingestion
May cause discomfort if swallowed.
11.2 Chronic Effects

12. Ecological Information

12.1 Ecotoxicity
Slightly hazardous for water. Do not allow undiluted product or large quantities to reach ground water, water courses or sewage system.

13. Disposal Considerations

Dispose of waste and residues in accordance with local authority requirements. Do not allow runoff to sewer, waterway or ground.

14. Transport Information

Classification for conveyance: Not required.
Not a marine pollutant.

15. Regulatory Information

15.1. Chemicals (Hazard Information & Packaging) Regulations
Classification: Not classified.
15.4. Safety Phrases
• Wear suitable protective clothing and gloves.

16. Legislation and Other Information

• Health & Safety at Work Act 1974.
• Control of Substances Hazardous to Health (Regulations).
• HSE Guidance Note EH40 (Workplace Exposure Limits).
• Any authorised manual on First Aid by St. Johns/St. Andrews/Red Cross.
• Manual Handling Operations Regulations 1992.
• Environmental Protection Act.
• Dangerous Substances Directive 67/548/EEC.

17. Other Information

Revisions
None.
Revision Date
Not applicable.

HARMFUL

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Food-Cove™

material data safety sheet (part Bi)

This data sheet provides the information required by the Chemicals (Hazard Information and Packaging) Regulations.

1. Identification of Substance/Supplier

Brown liquid isocyanate component.

Cemart Resins Ltd.
Unit 11 Hunslet Trading Estate
Severn Way
Leeds
LS10 1BL

2. Composition/Information on Ingredients

2.1. Chemical Description

Polymeric diphenylmethane diisocyanate
CAS No 9016-87-9 (60 - 100%)

2.2. Classification

Xn;R20. Xi;R36/37/38. R42/43.

3. Hazards Identification

Harmful by inhalation. Irritating to eyes, respiratory and skin. May cause sensitisation by inhalation and skin contact.

3.1. Classification

Xn;R20. R42/43. Xi;R36/37/38.

4. First Aid Measures

Eye Contact

Remove any contact lenses from the eyes before rinsing. Wash eyes immediately with clean water for at least 15 minutes and seek medical advice without delay.

Skin Contact

Wash the affected area thoroughly with soap and water before continuing. If irritation, pain or other skin trouble occurs, seek medical advice. Contaminated clothing should be removed and washed thoroughly before use. NOTE! Effects may be delayed.

Ingestion

Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Wash out mouth with water and give patient plenty of water or milk to drink.

Inhalation

If irritation occurs, move to fresh air. If nose or airways become inflamed seek medical advice.

5. Fire Fighting Measures

5.1. Extinguishing Media

Foam, carbon dioxide or dry powder. Larger fires: Water spray, fog or mist.

5.2. Special Fire Fighting Procedures

Keep run-off water out of sewers and water sources. Dike for water control. NOTE! Use air supplied respirators to protect against gases/fumes. Move container from fire area if it can be done without risk. If risk of water pollution occurs, notify appropriate authorities. Keep up-wind to avoid fumes.

5.3. Unusual Fire & Explosion Hazards

Prolonged exposure to heat may lead to formation of toxic gases.

5.4. Specific Hazards

Fire or high temperatures create toxic gases/vapours/ fumes of carbon monoxide (CO), carbon dioxide (CO2), hydrogen cyanide (HCN).

6. Accidental Release Measures

6.1. Personal Precautions

(See 8.3)

6.2. Environmental Precautions

Do not allow to enter drains, sewers or watercourses. Collect and dispose of spillage as indicated in section 13.

6.3. Method of Cleaning

Do not touch spilled material. Avoid contact with skin or inhalation of spillage, dust or vapour. Provide ventilation and confine spill. Do not allow runoff to sewer. Clean-up personnel should use respiratory and/or liquid contact protection. Collect with absorbent, non- combustible material into suitable containers. Shovel into dry containers. Cover and move the containers. Flush the area with water. Containers with collected spillages must be properly labelled with correct contents and hazard symbol.

7. Storage and Handling

7.1. Storage

Keep away from heat, sparks and open flame. Store at moderate temperatures in a dry, well ventilated area. Isocyanates react with water to liberate carbon dioxide. Any ingress of moisture into an isocyanate container, whether full or empty, can lead to pressure build up and subsequent explosion.

7.2. Handling

Avoid spilling, skin and eye contact. Ventilate well and avoid breathing vapours. Use approved respirator if air contamination is above acceptable level.
Wear full protective clothing for prolonged exposure and/or high concentrations. Do not use contact lenses. Avoid contact with water, alcohols, amines and other materials that may react with isocyanates.

8. Exposure Controls

8.1. Workplace Exposure Limits (WEL's)

Long term	0.02 mg/m3
Short term	0.07 mg/m3

Exposure limits quoted as NCO.

8.2. Engineering Control Measures

Provide adequate general and local exhaust ventilation. Provide eyewash station.

8.3. Recommended Protective Equipment

Respiratory Protection

Respiratory protection must be used if the general level exceeds the WEL. Use chemical cartridge protection with appropriate cartridge suitable for organic substances.

Hand and Skin Protection

Chemical resistant gloves required for prolonged or repeated contact or where there is a risk of direct contact or splashing. Use protective gloves made of nitrile or neoprene.

Eye Protection

Splash proof goggles should be worn. Contact lenses should not be worn when working with this chemical. Provide eyewash station.

9. Physical/Chemical Properties

9.1. Physical Data

Physical state	Liquid
Colour	Dark brown
Odour	Musty
Solubility	Organic solvents
Relative Density	1.1 - 1.3 @ 20°C
Vapour Density	8.5
Vapour Pressure	< 0.0001 @ 25°C
Viscosity	50 - 150 mPas @ 25°C
Flash Point	> 200 °C (closed cup)
Boiling Point	> 300 °C
Auto ignition Temp.	> 400 °C

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material data safety sheet (part Bii)

This data sheet provides the information required by the Chemicals (Hazard Information and Packaging) Regulations.

10. Stability and Reactivity
Stable under normal conditions. Conditions to avoid: Heat, sparks, flames.
Hazardous decomposition products: Fire or high temperatures create toxic gases / vapours / fumes of carbon monoxide (CO), oxides of nitrogen, hydrogen cyanide (HCN), nitrous gases (NOx).
Special precautions: Avoid contact with water.
Materials to avoid: Acids, amines, bases, inorganic alkalis, alcohols, glycols, water, steam.

11. Toxicological Information
11.1 Short Term Effects
Eye Contact
Irritating to eyes.
Skin Contact
Irritating to skin. May cause sensitisation by skin contact.
Inhalation
Harmful by inhalation. May cause sensitisation by inhalation. Irritating to respiratory system.
Ingestion
May cause discomfort if swallowed.
11.2 Chronic Effects
This chemical can be hazardous when inhaled and/or touched. Prolonged inhalation and/or repeated exposure of high concentrations may cause chronic upper respiratory irritation, asthma and/ or pulmonary sensitisation. Recognised allergen. Irritating to skin. May cause severe irritation to eyes.
11.3 Medical Symptoms
Eyes and Mucous Membranes
Irritation, burning, lachrymation, blurred vision after liquid splash.
Respiratory System
Severe pulmonary irritation. General respiratory distress. Unproductive cough.
Skin
Severe skin irritation.
Digestive System
Nausea, vomiting, sever abdominal pain.
11.4 Medical Considerations
Skin disorders and allergies. Chronic respiratory and obstructive airway disease. Employees ought to be examined by a physician prior to work with diisocyanates. Allergic reactions may develop after inhalation of low concentrations and also several hours after exposure. Regular medical checks including lung function are recommended for long term and repeated use.

12. Ecological Information
12.1 Ecotoxicity
Not regarded as dangerous for the environment. Isocyanates react with water to form an insoluble polyurea which is chemically and biologically inert. The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

13. Disposal Considerations
Dispose of waste and residues in accordance with local authority requirements. Do not allow runoff to sewer, waterway or ground.

14. Transport Information
Classification for conveyance: Not required.
Not a marine pollutant.

15. Regulatory Information
15.1. Chemicals (Hazard Information & Packaging) Regulations
Classification: Harmful.
15.2 Contains
Polymeric diphenylmethane diisocyanate.
15.3. Risk Phrases
- Harmful by inhalation.
- Irritating to eyes, respiratory system and skin.
- May cause sensitisation by inhalation and skin contact.
- R20; R36/37/38; R42/43.

15.4. Safety Phrases
- Do not breath vapour/spray.
- In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
- Wear suitable protective clothing and gloves.
- This material and its container must be disposed of as hazardous waste.
- Contains isocyanates. See information supplied by the manufacturer.
- Do not allow ingress of moisture - risk of pressure build up.
- S23; S45; S36/37; S1/2; S60; P4; U5.

16. Legislation and Other Information
- Health & Safety at Work Act 1974.
- Control of Substances Hazardous to Health (Regulations).
- HSE Guidance Note EH40 (Workplace Exposure Limits).
- Any authorised manual on First Aid by St. Johns/St. Andrews/Red Cross.
- Manual Handling Operations Regulations 1992.
- Environmental Protection Act.
- Dangerous Substances Directive 67/548/EEC.
- Isocyanates toxic hazards and precautions EH16.

17. Other Information
Revisions
None.
Revision Date
Not applicable.

IRRITANT

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Food-Cove™

material data safety sheet (part Ci)

This data sheet provides the information required by the Chemicals (Hazard Information and Packaging) Regulations.

1. Identification of Substance/Supplier

An odourless white speckled powder mainly insoluble in water.

Cemart Resins Ltd.
Unit 11 Hunslet Trading Estate
Severn Way
Leeds
LS10 1BL

2. Composition/Information on Ingredients

2.1. Chemical Description

A blend of white Portland Cement and silica sands.

2.2. Hazardous Ingredients

The lime, calcium silicates and alkalis within the cement are partially and when mixed with water will give rise to a potentially hazardous alkaline solution.

3. Hazards Identification

When cement is mixed with water or when the cement becomes damp, a strong alkaline solution is produced. If this comes into contact with the eyes or skin it may cause serious burns and ulceration. The eyes are particularly vulnerable and damage will increase with contact time. The material may give rise to both irritant and allergic dermatitis.

4. First Aid Measures

Eye Contact
Wash eyes immediately with clean water for at least 15 minutes and seek medical advice without delay.

Skin Contact
Wash the affected area thoroughly with soap and water before continuing. If irritation, pain or other skin trouble occurs, seek medical advice. Contaminated clothing should be removed and washed thoroughly before use.

Ingestion
Do not induce vomiting. Wash out mouth with water and give patient plenty of water to drink.

Inhalation
If irritation occurs, move to fresh air. If nose or airways become inflamed seek medical advice.

5. Fire Fighting Measures

Material is not flammable and will not facilitate combustion with other materials.

6. Accidental Release Measures

6.1. Personal Precautions

(See 8.3)

6.2. Method of Cleaning

Recover the spillage in a dry state if possible. Minimise generation of dust. The product can be slurried by the addition of water but will subsequently set as a hard material. Keep children away from clean up operation.

7. Storage and Handling

7.1. Storage

Bags should be stored off ground in a dry environment and stacked in a safe and stable manner.

7.2. Handling

When handling, due regard should be paid to the risks outlined in the Manual Handling Operations Regulations. Some bags may have a small amount of cement on the outer surface. Appropriate personal protective clothing (see 8.3) should therefore be used whilst handling.

8. Exposure Controls

8.1. Workplace Exposure Limits (WEL's)

WEL's 8hr Time Weighted Average (TWA)

Total inhalable dust	10 mg/m3
Respirable dust	4 mg/m3

8.2. Engineering Control Measures

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

8.3. Recommended Protective Equipment

Respiratory Protection
Suitable respiratory protection should be worn to ensure that personal exposure is less than the WEL.

Hand and Skin Protection
Protective clothing should be worn which prevents cement or mixed product from coming into contact with the skin. Should mixed or wet material come into contact with the skin then this clothing should be immediately removed and the skin thoroughly washed as well as the protective clothing.

Eye Protection
Dust proof goggles should be worn whenever there is a risk of powder entering the eye.

9. Physical/Chemical Properties

9.1. Physical Data

Physical state	Powder
Odour	Not applicable (N/A)
pH	12 - 14 when wet
Viscosity	N/A
Freezing Point	N/A
Boiling Point	N/A
Flash Point	Not flammable
Explosive Properties	Not explosive
Density	2800 - 3200 kg/m3
Solubility	N/A

10. Stability and Reactivity

Conditions contributing to chemical instability: None.
Hazardous decomposition products: None.
Special precautions: None.

11. Toxicological Information

11.1 Short Term Effects

Eye Contact
Cement is a severe eye irritant. Mild exposure can cause soreness. Gross exposure or untreated mild exposures can lead to chemical burning and ulceration of the eye.

Skin
Cement powder or any cement/water mixture may cause irritant contact dermatitis, allergic dermatitis and/or burns.

Inhalation
Cement powder may cause inflammation of mucous membranes.

11.2 Chronic Effects
Repeated exposures in excess of the WEL have been linked with rhinitis and coughing. Skin exposure has been linked to allergic dermatitis. Allergic dermatitis more commonly arises through contact with cement/ water mixtures than dry cement.

12. Ecological Information

12.1 Aquatic Toxicity Rating

LC50 aquatic toxicity rating not determined. The addition of cements to water will, however, cause the pH to rise and may therefore be toxic to aquatic life in some circumstances.

12.2 Biological Oxygen Demand (BOD)

Not applicable.

13. Disposal Considerations

Dispose of empty bags or surplus product to a place authorised to accept builder's waste (non-hazardous materials landfill).

Keep out of reach of children.

This data sheet provides the information required by the Chemicals (Hazard Information and Packaging) Regulations.

14. Transport Information
Classification for conveyance: Not required.

15. Regulatory Information
15.1. Chemicals (Hazard Information & Packaging) Regulations
Classification: Irritant
15.2. Risk Phrases
• Risk of serious damage to eyes.
• Contact between cement powder and body fluids (e.g. sweat and eye fluid) may also cause skin and respiratory irritation, dermatitis or burns.
• R37/38/41/43.
15.3. Safety Phrases
• Avoid eye and skin contact by wearing suitable eye protection, clothing and gloves.
• Avoid breathing dust
• On contact with eyes or skin, rinse immediately with plenty of clean water. Seek medical advice after eye contact.
• S 2/22/24/25/26/37/39.

16. Legislation and Other Information
• CONIAC Health Hazard Information Sheet No 26, Cement.
• Health & Safety at Work Act 1974.
• Control of Substances Hazardous to Health (Regulations).
• HSE Guidance Note EH40 (Workplace Exposure Limits).
• Any authorised manual on First Aid by St. Johns/St. Andrews/Red Cross.
• Manual Handling Operations Regulations 1992.
• Environmental Protection Act.

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