

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product name CTL CLEARCAST POLYURETHANE KIT – RESIN

Company CTL COMPONENTS
FALCONHOUSE
19 DEER PARK ROAD
LONDON
SW19 3UX
Tel: +44 (0) 20 85458700
FAX: +44 (0) 20 8540 0034
E-mail: info@ctl-components.com
Web site: www.ctl-components.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

Not applicable

3. HAZARDS IDENTIFICATION

Specific hazards No hazards resulting from material as supplied.

4. FIRST AID MEASURES

Skin contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. In the case of skin irritation or allergic reactions see a physician.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.

Inhalation Move to fresh air. Consult a physician after significant exposure.

Ingestion If swallowed, seek medical advice immediately and show this container or label. Drink plenty of water. Ingest immediately about 350 ml (5 ml/kg body weight) of activated charcoal slurry. Do not induce vomiting. Never give anything by mouth to an unconscious person. Note: To prepare activated charcoal slurry, mix thoroughly 50 g of activated charcoal in 400 ml (about 2 cups) water.

General advice If you feel unwell, seek medical advice (show the label where possible).

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Carbon dioxide (CO₂), foam, dry chemical, water spray

Specific hazards Burning produces irritant fumes.

Special protective equipment for firefighters In the event of fire, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Use personal protective equipment. Remove all sources of ignition. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

Environmental precautions Ensure adequate ventilation. Avoid subsoil penetration. Prevent product from entering drains. Do not allow material to contaminate ground water system.

Methods for cleaning up Remove mechanically; cover the remainder with wet, absorbent material (e.g. sawdust, chemical binder based on calcium silicate hydrate, sand). After approximately one hour transfer to waste container and do not seal (evolution of CO₂!).

7. HANDLING AND STORAGE

Handling Avoid contact with skin and eyes. Ensure adequate ventilation or exhaust ventilation in the working area. Do not smoke.

Storage Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Do not store together with food, feedstuffs, fertilizers and other sensitive materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures	Ensure adequate ventilation, especially in confined areas.
Occupational exposure controls	Keep away from food, drink and animal feeding stuffs.
Respiratory protection	Respiratory protection required in insufficiently ventilated working areas and during spraying. Wear respirator with dust filter during machining of slab.
Hand protection	Rubber gloves PVC or other plastic material gloves
Eye protection	face-shield tightly fitting safety goggles
Skin and body protection	Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

9. PHYSICAL AND CHEMICAL PROPERTIES

Description	Liquid
Colour	Beige
Odour	not significant

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Conditions to avoid	Heat, flames and sparks. Materials to avoid amines steam
Hazardous decomposition products	Carbon monoxide carbon oxides nitrogen oxides (NOx) isocyanides hydrogen cyanide (hydrocyanic acid)

11. TOXICOLOGICAL INFORMATION

Sensitisation	May cause Sensitisation of susceptible persons by skin contact.
Repeated or prolonged exposure	Prolonged skin contact may cause skin irritation.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects	No data is available on the product itself.
Persistence and degradability	Not inherently biodegradable.

13. DISPOSAL CONSIDERATIONS

General Information	Can be incinerated, when in compliance with the Environment Protection Act 1990 (Process Guidance Note IPR5/1)
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14. TRANSPORT INFORMATION

Further Information	Not classified as dangerous in the meaning of transport regulations.
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15. REGULATORY INFORMATION

None

16. OTHER INFORMATION

None

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

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Company CTL COMPONENTS
FALCONHOUSE
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LONDON
SW19 3UX
Tel: +44 (0) 20 85458700
FAX: +44 (0) 20 8540 0034
E-mail: info@ctl-components.com
Web site: www.ctl-components.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components diphenyl methane-4,4 diisocyanate, isomers, homologues:(MDI, polymer MDI) 90-100%
CAS: 9016-87-9
EINECS: 615-005-01-6
Xn;R20 Xi;R36 Xi;R37 Xi;R38 Xn;R42

3. HAZARDS IDENTIFICATION

Most important hazards Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation.

4. FIRST AID MEASURES

Skin contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Inhalation Move to fresh air. Consult a physician after significant exposure. Oxygen or artificial respiration if needed.

Ingestion If swallowed, seek medical advice immediately and show this container or label. Drink plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

General advice In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media dry chemical, dry powder, dry sand, alcohol-resistant foam, carbon dioxide (CO2)

Extinguishing media which must not be used for safety reasons high volume water jet

Specific hazards Fire may cause highly toxic or corrosive fumes to evolve.

Special protective equipment for firefighters In the event of fire, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Use personal protective equipment. Evacuate personnel to safe areas. Ensure adequate ventilation. Contaminated surfaces will be extremely slippery.

Environmental Precautions Avoid subsoil penetration. Do not allow material to contaminate ground water system. Prevent product from entering drains. Prevent further leakage or spillage. Do not contaminate surface water.

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Flush with plenty of water.

7. HANDLING AND STORAGE

Handling	Avoid contact with skin and eyes. Do not breathe vapours or spray mist. Do not smoke. Handle and open container with care. Keep away from open flames, hot surfaces and sources of ignition. Provide sufficient air exchange and/or exhaust in work rooms. wear personal protective equipment Take precautionary measures against static discharges.
Storage	Keep at temperatures between 15 and 25 °C. Keep container tightly closed in a dry and well -ventilated place. Do not store near acids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures	Ensure adequate ventilation, especially in confined areas.
Occupational exposure controls	Keep away from food, drink and animal feeding stuffs.
Respiratory protection	In case of insufficient ventilation wear suitable respiratory equipment.
Hand protection	rubber or plastic gloves
Eye protection	face-shield safety glasses with side-shields tightly fitting safety goggles
Skin and body protection	Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Rubber or plastic apron

9. PHYSICAL AND CHEMICAL PROPERTIES

Description	liquid
Colour	amber
Odour	Musty
Flash point	230°C
Relative density	1.23

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Conditions to avoid	Heat, flames and sparks. Exothermic reaction with strong acids
Materials to avoid	acids oxidising agents Incompatible with acids and bases. Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.
Hazardous decomposition products	Carbon monoxide carbon oxides isocyanides Ammonia hydrogen cyanide (hydrocyanic acid) nitrogen (NOx)

11. TOXICOLOGICAL INFORMATION

Acute toxicity	Harmful by inhalation, in contact with skin and if swallowed. Persons allergic to isocyanate, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanate. Chronic inhalation causes tiredness, headache and rhinitis. cough
Primary irritation	Irritating to respiratory system and skin. The product causes irritation of eyes, skin and mucous membranes. Causes burn.
Sensitisation	May cause Sensitisation by inhalation and skin contact. Causes sensitisation.
Repeated or prolonged exposure	Repeated or prolonged contact causes Sensitisation, asthma and eczemas.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects	Acute daphnia toxicity: EC50=1000mg/l 24H
Persistence and degradability	Not inherently biodegradable.

13. DISPOSAL CONSIDERATIONS

General Information	Can be incinerated, when in compliance with the Environment Protection Act 1990 (Process Guidance Note IPR5/1) Dispose of in accordance with local regulations.
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14. TRANSPORT INFORMATION

Further Information	Not classified as dangerous in the meaning of transport regulations.
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15. REGULATORY INFORMATION

Symbol(s):	Xn - Harmful 
R-phrases(s)	R20 - Harmful by inhalation. R36/37/38 - Irritating to eyes, respiratory system and skin. R42 - May cause sensitization by inhalation.
S-phrases(s)	S22 - Do not breathe dust. S23 - Do not breathe gas/fumes/vapour/spray. S45 - In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). S63 - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

16. OTHER INFORMATION

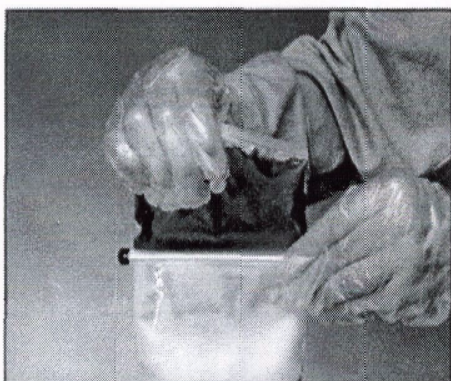
Text of R phrases mentioned in Section 2	R20 - Harmful by inhalation. R36 - Irritating to eyes. R37 - Irritating to respiratory system. R38 - Irritating to skin. R42 - May cause sensitization by inhalation
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CTL COLD-POUR TWO-PART RESIN



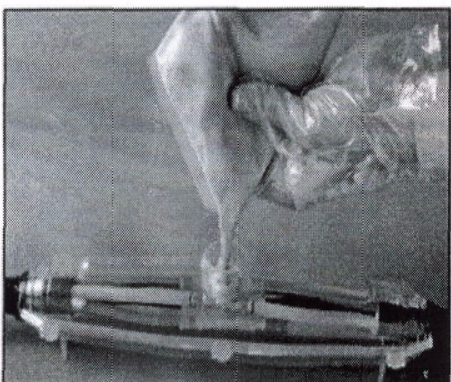
Features

- Two-part Polyurethane resin in hermetically sealed plastic film pouches. Protected in aluminum foil.
- Mixing is carried out in sealed conditions, transparent pack ensures visibility. Clean – no need for skin contact but safety gloves are provided.
- Clear mixing instructions on every pack.
- Controlled curing temperature designed to be compatible with PVC, XPLE, EPR, polythene and PILC cables.
- Full Health & Safety Labelling
- Batch number and use by date on every pack
- Designed to meet requirements of BS6910 and CENELEC HD 623 S1



Specification

Mixed properties	Packs designed to contain factory pre-arranged quantities of resin and hardener.
Specific Gravity (Density) g/ml	1.40 Resin, 1.22 Hardener
Colour	1.36 Mixed system
Gel Time	Cream (standard)
Peak exotherm	20 – 30 minutes @ 21°C for 200g mass
Complete cure time	54-75°C depending on volume and ambient temperature in compliance with BS6910
	@23°C – 24 hours
	@ 80°C – 1 hour
Shelf life	24 months when stored 5 – 15°C in compliance with BS 6910
Operating temperature	-40°C to + 100°C continuous, for cured product
Thermal conductivity	>0.4w/mK
Tensile strength	45 MPa
Electrical strength	20kV/mm
Health and Safety	Each pack contains mixing instructions and carries health and safety warnings in accordance with BS6910 HEALTH AND SAFETY (COSHH) Information Sheet available on Request.
Transportation	No special Labelling required for shipments by Air, Sea or Road.



TYPE	USABLE VOLUME OF PACK
CR0	180ml
CR1	350ml
CR2	825ml
CR4	1850ml
CR6	3000ml