

Safety Data Sheet

1. Identification of the substance / preparation and the company

Identification of the product: C60B4-4 Bitumen Emulsion

Product description: Cationic bitumen in water emulsion for use in highways maintenance and construction: slurry systems (slurry seals and microsurfacing)

Supplier: Kier Integrated Services Limited
Browick Road
Wymondham
Norfolk NR18 0RJ
Tel: 01953 602002

Emergency phone number: National Chemical Emergency Centre +44 1865 487333 (24 hours)

2. Hazards identification

The following classification and labelling is required by the Classification, Labelling and Packaging of Substances and Mixtures Regulation EC 1272/2008:

Pictogram: None

Signal word: None

Classification: Aquatic Chronic 3

Hazard statements: H412 Harmful to aquatic life with long lasting effects

Precautionary statements: P273 Avoid release to the environment - refer to special instructions / safety data sheet

P501 Dispose of contents / container as hazardous waste

3. Composition / information on ingredients

C60B4-4 bitumen emulsion comprises mainly of bitumen emulsified in water. Emulsifying agents and other additives are also present in small quantities

The following components are present in significant concentrations:

Chemical Name	EC No	Hazard Classification	Hazard Statement	Concentration
Bitumen	232-490-9	Not classified	None	58 - 62 %
Water	231-791-2	Not classified	None	38 - 42 %
Kerosene	Reach Reg 01- 2119485517- 27-005	Flam. Liq. 3 Skin Irrit. 2 Asp. Tox. 1 STOT SE 3 Aquatic Chronic 2	H226 Flammable liquid and vapour H315 Causes skin irritation H304 May be fatal if swallowed and enters airways H336 May cause drowsiness or dizziness H411 Toxic to aquatic life with long lasting effects	< 0.5 %

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N,N,N', N', N''- Pentamethyl-N-tallow alkyl-1,3-propane diammonium chloride	Reach Reg 01- 2119487003- 44 EC Number 271-762-1 CAS Number 68607-29-4	Acute Tox. 4 Skin Corr. 1B Eye Dam. 1 Aquatic Acute 1 Aquatic Chronic 1 M-factor (Acute): 10 M-factor (Chronic): 1	H302 Harmful if swallowed H314 Causes severe skin burns and eye damage H318 Causes serious eye damage H400 Very toxic to aquatic life H410 Very toxic to aquatic life with long lasting effects	< 0.4 %
Calcium chloride	233-140-8	Eye Irrit. 2	H319 Causes serious eye irritation	< 0.2 %
Hydrochloric acid (as dilute aqueous solution)	231-595-7	Met. Corr. 1 Skin Irrit. 2 Eye Irrit. 2 STOT SE 3	H290 May be corrosive to metals H315 Causes skin irritation H319 Causes serious eye irritation H335 May cause respiratory irritation	< 0.1 %

4. First-aid measures

Inhalation: No known hazard

Skin: Cold emulsion: wash with water, if irritation persists seek medical advice

Hot emulsion: rinse affected area with cold water, do not attempt to remove bitumen, seek medical advice

Eyes: Irrigate thoroughly with water, seek medical advice

Ingestion Do not induce vomiting, give water to drink, seek medical advice

5. Fire-fighting measures

Non-flammable water based emulsion

Dried film supports combustion

Use carbon dioxide, dry powder or foam extinguishers

6. Accidental release measures

Contain/absorb spillage with proprietary absorbent material, sand or earth

Transfer to waste site in sealed containers

Prevent entry into water courses or drains

Inform authorities if material enters drains or water courses

7. Handling and storage

Storage of bitumen emulsion should be in accordance with the Oil Storage Regulations:

- 200lt drum in drip tray with a capacity of 25% of the drum
- Storage tank: within impermeable bund with a capacity of not less than 110% of the volume of the storage tank

Protect from freezing conditions

Roll / invert containers before use and at regular intervals to prevent settlement

Bulk stores should be circulated / agitated before use

Hot emulsion must not be heated above 90°C (boiling / frothing hazard)

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8. Exposure controls and personal protection

Workplace Exposure Limits are listed in EH40 for bitumen (asphalt, petroleum fumes and hydrogen sulfide) and hydrochloric acid (gas / aerosol mists only) but these are not generated from C60B4-4 bitumen emulsion under normal storage and usage conditions

Asphalt petroleum fumes: LTEL 5 mg.m⁻³ STEL 10 mg.m⁻³

Hydrogen sulfide: LTEL 7 mg.m⁻³ STEL 14 mg.m⁻³

Hydrogen chloride: LTEL 2 mg.m⁻³ STEL 8 mg.m⁻³

Wear rubber / PVC gloves, eye protection and protective clothing, use barrier cream on hands

9. Physical and chemical properties

Formula:	n/a	Flammability:	non-flammable, dried film will support combustion
Appearance:	brown / black liquid	Flash point:	n/a
Density:	0.95-1.05	Boiling point:	~100 °C
Odour:	characteristic	Acidity/alkalinity:	pH 2 to 5

10. Stability and reactivity

Conditions to avoid: Do not heat above 90 °C as boiling/frothing will result
Do not store below 2 °C to avoid freezing

Materials to avoid: alkalis (will cause emulsion to coagulate)

11. Toxicological information

Inhalation: not considered hazardous

Skin contact: due to small quantities of emulsifying agents and emulsion pH, frequent or prolonged skin contact may cause skin sensitisation, hot emulsion can cause scalding

Eye contact: may irritate eyes

Ingestion: minimal toxicity expected

12. Ecological information

C60B4-4 bitumen emulsion contains components classified as dangerous for the environment:

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

H411 Toxic to aquatic organisms with long lasting effects

Air: water component will evaporate to air leaving a residual solid layer of bituminous binder

Water: emulsion will disperse in water and bituminous binder components will persist in environment for considerable period of time

Soil: will form a residual solid layer of bituminous binder on adsorption / evaporation of water component

13. Disposal considerations

C60B4-4 bitumen emulsion should be disposed of by a Registered Waste Disposal Contractor as hazardous waste HP14 – Ecotoxic using EWC Code 08 04 15*

14. Transport information

C60B4-4 bitumen emulsion is not classified as hazardous for road transport

Bulk supplies are to be labelled in accordance with Chemical Industries Association Black and White Marking Scheme:

Cold emulsion	(< 55 °C):	2Z BITUMEN EMULSION LOW HAZARD
Hot emulsion	55 – 100 °C):	2X BITUMEN EMULSION HOT LIQUID

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15. Regulatory information

Users are advised to refer to the following legislation for further information:

Retained CLP Regulation (EU) 1272 / 2008 as amended for Great Britain
The REACH etc. (Amendment) Regulations 2021
Control of Substances Hazardous to Health (Amendment) Regulations 2004
EH40 (UK) Workplace Exposure Limits 2005 (4th edition 2020)
Control of Pollution (Oil Storage) Regulations 2001
The Carriage of Dangerous Goods by Road Regulations (ADR) 2021
Chemical Industries Association Road Tankers Black and White Marking Scheme 2001

16. Other information

The above information is compiled on the basis of our best available knowledge in accordance with legislative requirements. It does not imply it is complete or accurate in all cases. It is the user's responsibility to satisfy themselves as to the application of this information / recommendations given for their own particular use.



Kier Integrated Services Limited

Browick Road, Wymondham, Norfolk, NR18 0RJ

Tel: 01953 602002 www.kier.co.uk