

**Material Safety Data Sheet:
Cationic Bitumen Emulsion**

1. Identification of Substance and of the Company.

- 1.1 Identification of Substance: Cationic and Polymer Modified Bitumen Emulsion.
- 1.2 Intended or recommended uses: Cationic and Polymer modified Bitumen emulsions may be used in a variety of applications including as a surface dressing binder in road maintenance applications.
- 1.3 Company Identification:
Tennants Bitumen, 9 Airport Road West, Belfast, BT3 9ED.
Email info@ctni.co.uk
- 1.4 Emergency Telephone
 - Normal Hours 02890455135
 - Fax: 02890460077
 - Emergency Number: out of office hours: 02890455135

2. Hazards Identification

The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments

Health effects	The product contains emulsifiers of amine type. Long or repeated contact can cause skin or eye irritation. Especially among sensitive individuals.
Environmental impact	The main effect of spillage of the product in water or on soil is adsorption to ground material, which causes physical fouling.
Physico-chemical hazards	Storage and handling of the product at high temperature (50-80 °C) may cause burns.
Product Classification	The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments.

3. Composition / Information on Ingredients.

Cationic bitumen emulsions consist of specified quantities of bitumen emulsified in water. The amounts of additional ingredients, which are required to emulsify the bitumen, do not present any hazard at the concentrations used.

Product Name	Nominal Binder Content (%)
<i>Cationic 70</i>	70
<i>Cationic 60</i>	60
<i>Cationic 40</i>	40

Substance / Mixture: Mixture

Chemical Name	CAS No	EC Number	%	Classification
Bitumen	8052-42-4	232-490-9	40 to 70	Not Classified
Water	7732-18-5	231-791-2	30 to 50	
Hydrochloric Acid	7647-01-0	231-595-7	<1	C; R34 Xi; R37
Calcium Chloride	10043-52-4	233-140-8	<1	Xi; R36
Kerosene	8008-20-6	232-366-4	<0.5	Xn; R65 Xi; R38 N; R51/53
Amine	68123-27-3		<0.1	Xn; R22 C; R34 N; R50/53

Hazardous ingredients: There is no single ingredient present in sufficient concentration to warrant hazardous classification under current EU guidelines.

4. First Aid Measures.

Exposure Route	Symptom	Treatment
Inhalation	Irritation of the respiratory system.	Remove to fresh air. If irritation persists, get medical attention
Eye contact	Irritation, Burning.	Immediately rinse with water for several minutes. Get medical attention if symptoms persist.
Skin Contact	Irritation, Burning.	Immediately rinse with water for several minutes. Get medical attention if symptoms persist. Remove contaminated clothing & shoes. Do not use solvents to remove product.
Ingestion	Nausea, vomiting, abdominal pains.	Do not induce vomiting. Do not give anything by mouth. Take the injured to hospital if serious coughing or vomiting has occurred, or if the person has swallowed more than a slight quantity.

5. Fire Fighting Measures

The product is non-flammable.

Container explosion may occur under fire conditions or when heated. Closed containers exposed to fire should be cooled with water.

6. Accidental Release Measures

Personal Protection	Avoid contact with skin and eyes.
After spillage/leakage	Prevent entry into sewers \ drainage systems.
Spill cleanup methods	<ul style="list-style-type: none"> - Contain and collect the spilled product with sand or other absorbent material. - Start immediately to clean up the product and contaminated soil. Small quantities can be absorbed with absorbent material (earth, sand etc). If spill is large, call for rescue service.

7. Handling and Storage

Handling:

Suitable PPE to be worn when handling hot product to reduce risk of burns.

Storage:

Do not store at a temperature over 100 degrees C.

Store above freezing temperatures.

8. Exposure Controls / Personal Protection required:

Hand: Neoprene or PVC gloves

Eye: Chemical eye protectors (goggles or side walled spectacles).

Skin: PVC overalls and boots if handling large quantities in open containers.

Always wash thoroughly after handling product.

Avoid prolonged contact with skin.

9. Physical and Chemical Properties

Appearance	Black liquid
Flammability	Non-Flammable
Odour	Characteristic
pH	2 to 4.
Explosive Properties	Not applicable.
Auto-Ignition Temp	>300 deg C (Bitumen)
Density	0.99 to 1.1 g\ cubic cm ³ (15dec C)
Solubility in water	Dispersible in water.

10. Stability and Reactivity

This product is stable.

Materials to avoid: Store away from oxidising materials and strong bases.

11 Toxicological Information

Acute toxicity: No specific acute toxicity data is available for the formulation but the product is expected to have low toxicity with skin contact, ingestion and inhalation.

Inhalation: Inhalation of fumes from warm product may lead to slight irritation of the upper respiratory tract.

Sensitization and irritation: The product is not known to be a skin sensitiser, although condensed bitumen fume is likely to slightly irritate the skin. The product contains amines which may could cause skin and eye irritation among sensitive individuals.

Chronic Toxicity: No testes have been performed on the product. According to the properties for the components the product is not expected to present a chronic toxic hazard.

Specific hazard: Bitumen is not classified as dangerous under EC criteria, but they do contain very low concentrations of PAC's. In undiluted bitumens these PACs are not considered bio-available. However, if paving grade bitumens are mixed with diluents it is believed that such materials may become bio-available if the product has a low viscosity at ambient

temperatures. Despite the known presence of PACs there is No evidence that exposure to undiluted bitumens, or their fumes is harmful.

For safety reasons it is recommended that skin contact with the product is minimised.

12. Ecological Information

This product contains environmentally hazardous components but is not classified as harmful to the environment. There is no specific acute or chronic eco-toxicity data for the product.

Mobility: In contact with water, the emulsion will dissipate across the surface and will be diluted, the bitumen phase will be dispersed. The bitumen phase may agglomerate in narrow channel (e.g. water filled ditches) and will normally sink to the sediment, however in circumstances where the bitumen is less dense it may float.

Degradability: Not expected to be biodegradable

Bioaccumulation:

Bitumen: Although all constituents of bitumen have low Kow in excess of 6 and hence, are potentially bio-accumulative, the low water solubility and high molecular weight make bio-availability to aquatic organisms limited.

Solvent: This product has a potential to bio-accumulate.

Emulsifying Agent: This product has a potential to bio-accumulate.

13. Disposal Considerations

Waste of Residues: Non-hazardous water. Recycling is recommended.
Dispose in accordance with local and national regulations.

Contaminated packaging: Through authorised contractor or collector.

European waste catalogue (EWC): 17 03 02 bituminous mixtures other than those mentioned in 17 03 01.

Hazardous Waste: Within the present knowledge of the supplier, this product is not regarded as hazardous waste as defined by EU directive 91/689/EEC.

4. Transport Information

International Transport Regulations.

Regulatory Information	UN Number	Proper Shipping Name	Class	PG*	Label	Additional Information
ADR / RID Class	Not regulated	--	--			--
IMDG / ADN R Class	Not regulated	--	--			--
IATA Class	Not regulated	--	--			--

15. Regulatory Information

Classification and labelling have been determined according to EU directives 67/548/EEC and 1999/458/EC (including amendments) and take into account intended product use.

Risk Phrases: This product is not classified according to EU legislation.

Product Use: Classification and labelling have been determined according to EU directives 67/548/EEC and 1999/458/EC (including amendments) and take into account intended product use – industrial applications.

16. Other Information

Risk Phrases:

- R22 Harmful if swallowed.
- R34 Causes burns
- R36 Irritating to eyes
- R37 Irritating to respiratory system.
- R38 Irritating to skin

- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- R66 Repeated exposure may cause skin dryness or cracking

Safety Phrases:

- S2 Keep out of the reach of children.
- S23 Do not breathe vapour
- S24 Avoid contact with skin
- S25 Avoid contact with eyes
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S29 Do not empty into drains
- S37/39 Wear suitable gloves and eye / face protection.
- S 61 Avoid release to the environment
- S62 If swallowed, do not induce vomiting; seek medical advice immediately and show the container or label

This information only concerns –cationic Bitumen emulsions. Revised to the requirements of EC Regulation 1907/2006 (Reach).

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