



K1-40/K1-60 CATIONIC BITUMEN EMULSION

Issue 4 - November 2008

- Description:** K1-40 and K1-60 are cold applied, liquid bitumen emulsions, used in the construction and repair of pavements, driveways, roads and highways. Both products are water based, ready to use and conform to the requirements of BS 434: Part 1 and are applied in accordance with BS434:Part 2. In accordance with these standards both products are denoted by the prefix 'K' signifying a cationic emulsion. The '1' signifies a rapid breaking type of emulsion, while the number to the right of the hyphen indicates the bitumen content. Therefore K1-40 denotes rapid break, cationic emulsion with 40% normal bitumen content.
- Uses:** K1-40 is primarily used as a tack coat, to provide a bond between the existing surface and overlays e.g hot rolled asphalt, macadam and slurry seals, or between courses in road construction. It serves two purposes in this instance:-
1. Minimising the risk of spillage between the two courses.
 2. Ensuring that during laying of the new overlay, pushing and sliding are reduced, resulting in improved compaction.
- K1-40 is also used in mist spraying and concrete curing operations.
- K1-60, because of its higher bitumen content, is generally used for surface dressing, patching, retread and other similar applications.
- Standards:** Both grades conform to:-
1. BS434: Part 1: Specification for Bitumen Road Emulsions.
 2. BS3690: Bitumens for building and civil engineering.
- They should be applied in accordance with the relevant sections of BS434: Part 2: Code of Practice for Use of Bitumen Road Emulsions.
- Preparation:** All surfaces must be dry and free from dust, oil, grease, fuel spillage, mud, leaves, etc. In hot weather, it may be advisable to dampen the surface with water in order to retard the loss of water from the emulsion as it cures and to ensure better wetting of the surface by the emulsion. It is essential that the surface is free of standing water prior to and during application.
- Application Conditions:** Both grades must only be applied in dry, frost free conditions which will remain throughout the film drying period. Temperatures of between 5°C and 35°C should prevail.
- Application:** Before application drums should be well rolled to agitate contents before use. Cationic emulsions should be applied by brushing with hand broom or squeegee. Spread in one direction only and avoid scrubbing often. It is more practical to apply by spray as this provides a uniform distribution and even film. Spray equipment should conform to BS3136: Specification for Cold Emulsion Spraying Machines for Roads.
- Spray evenly to avoid ponding in hollows as this may cause localised "fattening up" of the subsequent courses.





General Precautions: Do not mix with anionic emulsions or with cationic emulsion from other manufacturers as this may cause co-agulation. This is particularly critical when spraying. If changing grade the following procedure should be followed:-

1. Drain spraying equipment completely.
2. Flush the machine (including the spray lance) by continuous circulation of kerosene.
3. Pump the waste solution into a waste receptacle and drain completely. Dispose of in accordance with regulations.

Breaks in spraying should be accompanied by periodic flushing of the lance with kerosene. At the end of each working period it is good practice to empty completely the contents of the container, flush with Kerosene by continuous circulation and then drain.

Use	Purpose	Emulsion to use	Spread rate Ltr/m ²
Tack Coat	Provision of an adhesive film between courses	K1-40	0.3 - 0.5
Mist Spraying	Rejuvenation of deteriorating surfaces	K1-40	0.4 - 0.45
Concrete Curing	Curing of pavement quality concrete	K1-40	0.5 - 0.9
Lean Mix Curing	Curing of lean mix & other cementitious bases	K1-40/K1-60	1.0 - 1.5
Full Grouting	In situ stabilisation of surfacings	K1-60	5.5 - 11.0
Semi Grouting	In situ stabilisation of surfacings	K1-60	3.0 - 8.0
Patching	General repairs	K1-60	8.0 - 1.0
Surface Dressing	Sealing and retexturing of surface.	K1-60	1.4 - 1.6
Sealing of Formation & Sub Bases	Means of maintaining moisture equilibrium	K1-60	0.9 - 1.8

Spillage: Split material must be mopped up immediately with an inert, absorbent material. Such as sand and disposed of in accordance with regulations.

Dispose of Containers: Do not leave on site where residue may be a hazard to children, animals or the environment. replace lids and remove containers to a central disposal point.

Cleaning of Tools: Clean while wet with water or, if just dried with Kerosene.

Storage Conditions: Keep containers sealed and under cover at temperatures between 5°C and 35°C. PROTECT FROM FROST.

Storage Life: 12 months under good storage conditions in original, unopened containers. Drums should be turned or inverted at least once a month to reduce settlement.

Containers: 25 litre + 200 litre drums



**Technical Data:**

Type Of Solvent:	Water
Approximate flashpoint:	None
Approximate Specific Gravity:	1.00
Service Temperature Limits:	Minus 10°C to plus 85°C
Application Temperature Limits:	5°C - 35°C
Chemical and Water Resistance:	Both grades are resistant to water, most inorganic/ organic acids, pollutions, alkalis in water solutions and water borne salts. They are not, however, resistant to mineral or vegetable oils, petroleum solvents and strong acids.
Drying Time:	24 hours under average drying conditions. Allow this period between coats.

Health & Safety: Please refer to Health and Safety Data Sheet on K1-40 & K1-60.

Further Information: In the event of further queries or problems concerning the use of this product, please contact the address below:-

All products should be sold in accordance with the manufacturer's instructions. The manufacturer cannot be held responsible where conditions of use are beyond our control. Cromar's products' are available for sale in accordance with Cromar's Standard Terms and Conditions of Sale, which are available upon request. Whilst any information contained herein is to the best of our knowledge true and accurate, no warranty is given or implied in connection with any recommendations or suggestions made by us, our Representatives, Agents, or Distributors, as the conditions of use, and any labour involved are beyond our control. Our warranty is therefore limited to the quality of supplied product.

