

**Health & Safety Data Sheet for: Cationic Slurry Seal Emulsion, K3, DK11 (Standard & Slow)**
**Data Sheet No: 02K**
**Revision: 15/01/15**
**Replaces: 06/01/15**

(REACH regulation (EC) n° 1907/2006 - n° 453/2010)

**SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**
**1.1. Product identifier**

Product name : CATIONIC SLURRY SEAL EMULSION - K3 - DK11

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Hydrocarbon binder used for road building and maintenance.

**1.3. Details of the supplier of the safety data sheet**

Registered company name : COLAS LIMITED

Address : Wallage Lane, Rowfant, Crawley, West Sussex RH10 4NF UK

Telephone : +44 1342711000 Fax : +44 1342 711199

info@colas.co.uk

http://www.colas.co.uk

**1.4. Emergency telephone number : +44 1342718346.**

Association/Organisation :

**SECTION 2 : HAZARDS IDENTIFICATION**
**2.1. Classification of the substance or mixture**
**In compliance with EC regulation No. 1272/2008 and its amendments.**

Carcinogenicity, Category 2 (Carc.2, H351).

Hazardous to the aquatic environment - Chronic hazard, Category 3 (Aquatic Chronic 3, H412)

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

**In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.**

Category 3 Carcinogen (Xn, R40 Carc.2, H351).

Aquatic environmental hazard, chronic toxicity: harmful (R 52/53).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

**2.2. Label elements**
**In compliance with EC regulation No. 1272/2008 and its amendments.**

Hazard pictograms



GHS08

 Signal Word :  
WARNING

 Product identifiers :  
649-224-00-6

FUELS, DIESEL GASOIL-UNSPECIFIED [A COMPLEX COMBINATION OF HYDROCARBONS PRODUCED BY THE DISTILLATION OF CRUDE OIL. IT CONSISTS OF HYDROCARBONS HAVING CARBON NUMBERS PREDOMINANTLY IN THE RANGE OF C9 THROUGH C20 AND BOILING IN THE RANGE OF APPROXIMATELY 163

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Hazard statements :

H412

Harmful to aquatic life with long lasting effects.

Precautionary statements - Prevention :

P273

Avoid release to the environment.

Precautionary statements - Disposal :

P501

Dispose of contents/container to a collection centre for hazardous or special waste.

**In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.**

Risk phrase :

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**2.3. Other hazards**

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC)  $\geq 0.1\%$  published by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>  
The mixture satisfies neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

Specific hazard :

- burns, splashing, inhalation, irritant dermal action

**SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1. Substances**

No substances fulfil the criteria set forth in annexe II section A of the REACH regulation (EC) n° 1907/2006.

**3.2. Mixtures**

**Composition :**

Identification	Name	Classification	%
CAS: 68607-29-4 EC: 271-762-1	QUATERNARY AMMONIUM COMPOUNDS, PENTAMETHYLTALLOW ALKYLTRIMETHYLENEDI-, DICHLORIDES	GHS07, GHS05, GHS09, Dgr C,N H:302-314.1B-410 R: 50/53-34-22	0 $\leq$ x % < 1

Identification	(EC) 1272/2008	67/548/EEC	Note	%
INDEX: 649-224-00-6 CAS: 68334-30-5 EC: 269-822-7  FUELS, DIESEL GASOIL-UNSPECIFIED [A COMPLEX COMBINATION OF HYDROCARBONS PRODUCED BY THE DISTILLATION OF CRUDE OIL. IT CONSISTS OF HYDROCARBONS HAVING CARBON NUMBERS PREDOMINANTLY IN THE RANGE OF C9 THROUGH C20 AND BOILING IN THE RANGE OF APPROXIMATELY 163	GHS08 Wng Carc. 2, H351	Xn Carc. Cat. 3;R40	[1] [2]	1.1000 %

**Information on ingredients :**

[1] Substance for which maximum workplace exposure limits are available.

[2] Carcinogenic, mutagenic or reprotoxic (CMR) substance.

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**Other data :**

Chemical nature

Cationic aqueous emulsion of bituminous binder

The continuous phase is made of bitumen. The phase separation obtained during use or occurring unintentionally is called breaking

**SECTION 4 : FIRST AID MEASURES**

As a general rule, in case of doubt or if symptoms persist, always call a doctor.  
NEVER induce swallowing by an unconscious person.

**4.1. Description of first aid measures****In the event of exposure by inhalation :**

In case of exposition to important vapors, fumes or aerosols concentration, bring the person to fresh air.

**In the event of splashes or contact with eyes :**

Wash immediately in copious amounts of water, keeping eyelids apart for at least 15 minutes and consult a specialist.  
In case of contact with the hot product, COOL THE EYE IMMEDIATELY AND COPIOUSLY WITH COLD WATER for 10 minutes, keeping the eye open if possible. Take the person to a specialised medical centre.

**In the event of splashes or contact with skin :**

In case of burns :

Apply immediately and copiously cold water for at least 20 minutes

Never remove the product adhering to the skin.

Immediately transport to hospital.

**In the event of swallowing :**

Seek medical attention, showing the label.

Rinse out one's mouth with milk or water to relieve affected area. Do not induce vomiting to avoid any heartburn.

Transport to a specialized hospital immediately for emergency care.

**4.2. Most important symptoms and effects, both acute and delayed**

No data available.

**4.3. Indication of any immediate medical attention and special treatment needed**

No data available.

**SECTION 5 : FIREFIGHTING MEASURES**

Bituminous emulsions are non-flammable products.

**5.1. Extinguishing media****Suitable methods of extinction**

Cool containers with water spray.

**5.2. Special hazards arising from the substance or mixture**

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)

- carbon dioxide (CO<sub>2</sub>)

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**5.3. Advice for firefighters**

No data available.

**SECTION 6 : ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Consult the safety measures listed under headings 7 and 8.

**For fire-fighters**

Fire-fighters will be equipped with suitable personal protective equipment (See section 8).

**6.2. Environmental precautions**

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth

in drums for waste disposal.

Prevent any material from entering drains or waterways.

**6.3. Methods and material for containment and cleaning up**

- recovery : contain and collect the spilled product, sand the surfaces concerned if necessary.

- elimination : recover all wastes and dispose in compliance with current regulations.

**6.4. Reference to other sections**

No data available.

**SECTION 7 : HANDLING AND STORAGE**

Requirements relating to storage premises apply to all facilities where the mixture is handled.

**7.1. Precautions for safe handling**

Always wash hands after handling.

Engineering / preventive measures

- Workers exposure :

- if the product is sprayed with a hose, it is recommended to wear protective mask and clothes.

- Wear the protective equipments given in §8 before handling the product.

Reduce the risk of accidents by arranging machinery and equipment so as to prevent the hot product from spilling or leaking.

**Fire prevention :**

Prevent access by unauthorised personnel.

- never use solvent to help the process in case of blockage.

- never weld or cut if tanks or pipes are still containing gases.

In general, do not use an open flame in the proximity of hot bitumen without taking all necessary precautions

**Recommended equipment and procedures :**

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Precautions :

- avoid breathing vapors.

- do not eat, drink and smoke when the product is moved or used.

During product transfer :

- always transfer the product by drawing up. Never reverse in a flexible tubing to avoid any bursting.

- never decant with a flexible tubing through a manhole or unsuitable mouth.

- do not use free-fall or spray methods when filling containers to prevent foaming.

- do not fill the emulsion into any containers holding a product whose temperature exceeds 100°C.

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## ADVICES :

- Use only containers, pipes and joints resistant to hot bitumen and hydrocarbons.

**Prohibited equipment and procedures :**

No smoking, eating or drinking in areas where the mixture is used.

**7.2. Conditions for safe storage, including any incompatibilities**

No data available.

**Storage**

Tanks and facilities must comply with applicable regulations.

Avoid the use of any pumping devices likely to destabilise the emulsion.

- to be avoided : storage temperatures below 5°C or above 90°C.

NEVER heat a reservoir or tank if the heating elements are not adequately immersed (minimum 15 cm).

If the storage time exceeds 15 days, moderately mix the emulsion.

Do not heat the pumps or pipes using an open flame.

- The heating elements should have a surface power below 1 W/cm<sup>2</sup>

**Packaging**

Always keep in packaging made of an identical material to the original.

Suitable packaging materials :

Recommended : Steel, plastic

- for lab, use plastic or glass containers

Unsuitable packaging materials :

Avoid copper or aluminium alloys.

**7.3. Specific end use(s)**

No data available.

**SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters****Occupational exposure limits :**

- ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
8008-20-6	200 mg/m <sup>3</sup>	-	-	-	-

- USA / NIOSH REL (National Institute for Occupational Safety and Health, Recommended exposure limits) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
8008-20-6	100 mg/m <sup>3</sup>	-	-	-	-

**8.2. Exposure controls****Personal protection measures, such as personal protective equipment**

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate

ventilation, especially in confined areas.

**- Eye / face protection**

Avoid contact with eyes.

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Use eye protectors designed to protect against liquid splashes  
Before handling, wear safety goggles in accordance with standard EN166.

### **- Hand protection**

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Type of gloves recommended :

- Natural latex
- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVC (polyvinyl chloride)
- Butyl Rubber (Isobutylene-isoprene copolymer)

### **- Body protection**

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

## **SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1. Information on basic physical and chemical properties**

#### **General information :**

Physical state : viscous liquid.

#### **Important health, safety and environmental information**

pH : Not stated.  
slightly acidic.

Boiling point/boiling range : not relevant.

Flash point interval : not relevant.

Vapour pressure : not relevant.

Density : = 1

Water solubility : Dilutable.

Melting point/melting range : 0 °C.

Self-ignition temperature : not relevant.

Decomposition point/decomposition range : not relevant.

### **9.2. Other information**

Aspect :

- physical state : more or less viscous liquid depending on the temperature and the grade
- colour : black or brownish-black
- odour : characteristics

Physicochemical features

- ph : acid (2 to 5)

Specific temperatures

- boiling : 100°C
- solidification : < 0°C

Explosivity : not applicable

Density : 1000+/- 5 kg/m<sup>3</sup> @25°C

Solubility in water : dilutable

## **SECTION 10 : STABILITY AND REACTIVITY**

limited stability at usual storage, handling and use temperatures

### **10.1. Reactivity**

No data available.

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**10.2. Chemical stability**

This mixture is stable under the recommended handling and storage conditions in section 7.

**10.3. Possibility of hazardous reactions**

No data available.

**10.4. Conditions to avoid**

Avoid :

- frost

Emulsion stability is limited. If emulsion has been stored for more than a few days, it should be circulated before use

**10.5. Incompatible materials**

Products likely to destabilise the emulsion. Avoid all alkalis.

**10.6. Hazardous decomposition products**

The thermal decomposition may release/form :

- carbon monoxide (CO)

- carbon dioxide (CO<sub>2</sub>)

**SECTION 11 : TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

No data available.

**11.1.1. Substances**

No toxicological data available for the substances.

**11.1.2. Mixture**

No toxicological data available for the mixture.

**SECTION 12 : ECOLOGICAL INFORMATION**

Harmful to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

**12.1. Toxicity****12.1.1. Substances**

No aquatic toxicity data available for the substances.

**12.1.2. Mixtures**

No aquatic toxicity data available for the mixture.

**12.2. Persistence and degradability**

The emulsion is a product used for construction and the binder, after breaking, has a long life span.

**12.3. Bioaccumulative potential**

No data available on cationic emulsions. Bioaccumulation of binder compounds is very unlikely because of insolubility and high molecular weight.

**12.4. Mobility in soil**

The product has no soil mobility.

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Water : as the emulsion is dilutable and mobile in water, the binder could be conveyed on long distances.

### **12.5. Results of PBT and vPvB assessment**

No data available

### **12.6. Other adverse effects**

No data available.

## **SECTION 13 : DISPOSAL CONSIDERATIONS**

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

### **13.1. Waste treatment methods**

Do not pour into drains or waterways.

### **Waste :**

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company. Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

### **Soiled packaging :**

Empty container completely. Keep label(s) on container.  
Give to a certified disposal contractor.

## **SECTION 14 : TRANSPORT INFORMATION**

Exempt from transport classification and labelling.

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport  
(ADR 2015 - IMDG 2010 - ICAO/IATA 2012).

## **SECTION 15 : REGULATORY INFORMATION**

### **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

#### **- Classification and labelling information included in section 2:**

The following regulations have been used:

- Directive 67/548/EEC and its adaptations
- Directive 1999/45/EC and its adaptations
- EU Regulation No. 1272/2008 amended by EU Regulation No. 487/2013.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 758/2013.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 944/2013.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 605/2014.

#### **- Container information:**

No data available.

#### **- Particular provisions :**

No data available.

### **15.2. Chemical safety assessment**

No data available.

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**In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.**

Hazard symbols :



Harmful

Contains :

649-224-00-6

FUELS, DIESEL GASOIL-UNSPECIFIED [A COMPLEX COMBINATION OF HYDROCARBONS PRODUCED BY THE DISTILLATION OF CRUDE OIL. IT CONSISTS OF HYDROCARBONS HAVING CARBON NUMBERS PREDOMINANTLY IN THE RANGE OF C9 THROUGH C20 AND BOILING IN THE RANGE OF APPROXIMATELY 163

Risk phrase :

R 40

Limited evidence of a carcinogenic effect.

Safety phrase :

S 36/37

Wear suitable protective clothing and gloves.

S 60

This material and its container must be disposed of as hazardous waste.

**SECTION 16 : OTHER INFORMATION**

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current

level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

**Title for H, EUH and R indications mentioned in section 3 :**

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
R 10	Flammable.
R 22	Harmful if swallowed.
R 34	Causes burns.
R 38	Irritating to skin.
R 50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 65	Harmful: may cause lung damage if swallowed.

**Abbreviations :**

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

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