SAFETY DATA SHEET
KR3 SAFETY FLOOR CLEANER

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name KR3 SAFETY FLOOR CLEANER

Internal identification C408

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

Identified uses Cleaning agent.

Uses advised against Use only for intended applications.

1.3. Details of the supplier of the safety data sheet

Manufacturer

ARROW SOLUTIONS
RAWDON ROAD
MOIRA
SWADLINCOTE
DERBYSHIRE
DE12 6DA
TEL: +44 (0)1283 221044
FAX: +44 (0)1283 225731
sales@arrowchem.com

1.4. Emergency telephone number

Emergency telephone +44 (0) 777 8505 330 (24 hrs). +44 (0) 1865 407333 (24 hrs). MEDICAL AND ENVIRONMENTAL EMERGENCIES ONLY.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Dam. 1 - H318

Environmental hazards Not Classified

Classification (67/548/EEC or 1999/45/EC) Xi;R41.

2.2. Label elements

Pictogram

Signal word Danger

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Hazard statements	H315 Causes skin irritation. H318 Causes serious eye damage.
Precautionary statements	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER/ doctor. P280 Wear protective gloves, eye and face protection. P501 Dispose of contents/ container in accordance with national regulations.
Contains	(C9-11) ALKYL ALCOHOL ETHOXYLATE
Detergent labelling	5 - < 15% non-ionic surfactants, < 5% amphoteric surfactants

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

(C9-11) ALKYL ALCOHOL ETHOXYLATE **5-10%**

CAS number: 68439-45-2

Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302 Eye Dam. 1 - H318	Xn;R22. Xi;R41.

2-AMINOETHANOL **1-5%**

CAS number: 141-43-5 EC number: 205-483-3 REACH registration number: 01-2119486455-28

Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Corr. 1B - H314 Eye Dam. 1 - H318 STOT SE 3 - H335	C;R34 Xn;R20/21/22

COCO AMIDO PROPYL BETAINE **1-5%**

CAS number: 61789-40-0 EC number: 931-296-8 REACH registration number: 01-2119488533-30-xxxx

Classification	Classification (67/548/EEC or 1999/45/EC)
Eye Dam. 1 - H318 Aquatic Chronic 3 - H412	Xi;R41.

tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate **<1%**

CAS number: 51981-21-6 EC number: 257-573-7 REACH registration number: 01-2119493601-38-XXXX

Classification	Classification (67/548/EEC or 1999/45/EC)
Not Classified	-

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The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Show this Safety Data Sheet to the medical personnel.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Ingestion Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention if any discomfort continues.

Skin contact Wash skin thoroughly with soap and water. Get medical attention if symptoms are severe or persist after washing.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse. Get medical attention immediately.

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

Inhalation Coughing, chest tightness, feeling of chest pressure.

Ingestion Gastrointestinal symptoms, including upset stomach.

Skin contact Causes skin irritation.

Eye contact Causes serious eye damage.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Ammonia or amines. Carbon monoxide (CO). Carbon dioxide (CO_2). Nitrous gases (NOx).

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Do not touch or walk into spilled material. Avoid contact with skin, eyes and clothing. Take care as floors and other surfaces may become slippery. Avoid contact with contaminated tools and objects. Wash thoroughly after dealing with a spillage.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

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Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear protective gloves, eye and face protection. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Do not use in paint spraying equipment. Do not empty into drains. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store at temperatures between 4°C and 40°C.

Storage class Chemical storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

2-AMINOETHANOL

Long-term exposure limit (8-hour TWA): WEL 1 ppm(Sk) 2.5 mg/m3(Sk)
Short-term exposure limit (15-minute): WEL 3 ppm(Sk) 7.6 mg/m3(Sk)
Sk

WEL = Workplace Exposure Limit
Sk = Can be absorbed through skin.

Ingredient comments WEL = Workplace Exposure Limits

2-AMINOETHANOL (CAS: 141-43-5)

DNEL
Industry - Dermal; Long term systemic effects: 1 mg/kg/day
Industry - Inhalation; Long term systemic effects: 3.3 mg/kg/day
Industry - Inhalation; Long term local effects: 3.3 mg/kg/day
Consumer - Dermal; Long term systemic effects: 0.24 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 2 mg/kg/day
Consumer - Inhalation; Long term local effects: 2 mg/kg/day
Consumer - Oral; Long term systemic effects: 3.75 mg/kg/day

PNEC
- Fresh water; 0.085 mg/l
- Marine water; 0.0085 mg/l
- Intermittent release; 0.025 mg/l
- Sediment (Freshwater); 0.425 mg/kg
- Sediment (Marinewater); 0.0425 mg/kg
- Soil; 0.035 mg/kg
- STP; 100 mg/l

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COCO AMIDO PROPYL BETAINE (CAS: 61789-40-0)

DNEL

Industry - Dermal; Long term systemic effects: 12.5
Consumer - Dermal; Long term systemic effects: 7.5 mg/kg/day
Industry - Inhalation; Long term systemic effects: 44 mg/m³

PNEC

- Fresh water; 0.0135 mg/l
- STP; 300 mg/l
- Soil; 0.8 mg/kg
- Sediment (Marinewater); 0.1 mg/kg
- Sediment (Freshwater); 1 mg/kg
- Marine water; 0.00135 mg/l

tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate (CAS: 51981-21-6)

DNEL

Workers - Inhalation; Long term systemic effects: 7.3 mg/m³
Workers - Dermal; Long term systemic effects: 15,000 mg/kg/day
General population - Inhalation; Long term systemic effects: 1.8 mg/m³
General population - Dermal; Long term systemic effects: 7,500 mg/kg/day
General population - Oral; Long term systemic effects: 1.5 mg/kg/day

8.2. Exposure controls

Protective equipment

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 4 hours. The breakthrough time for any glove material may be different for different glove manufacturers. When used with mixtures, the protection time of gloves cannot be accurately estimated. For exposure up to 4 hours, wear gloves made of the following material: Nitrile rubber. Thickness: > 0.28 mm Neoprene. Thickness: > 0.46 mm Rubber (natural, latex). Thickness: > 0.48 mm Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected.

Hygiene measures

Wash hands thoroughly after handling. Take off immediately all contaminated clothing and wash it before reuse.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Clear liquid.

Colour Red.

Odour Detergent.

pH pH (concentrated solution): 10.9

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Relative density	1.02 @ 25°C
Solubility(ies)	Soluble in water.

9.2. Other information

Other information	Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not determined.

10.4. Conditions to avoid

Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion products may include the following substances: Ammonia or amines. Carbon monoxide (CO). Carbon dioxide (CO_2). Nitrous gases (NOx).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg)	9,761.75

Acute toxicity - dermal

ATE dermal (mg/kg)	41,163.04

Acute toxicity - inhalation

ATE inhalation (vapours mg/l)	411.63

Skin corrosion/irritation

Extreme pH	Moderate pH (> 2 and < 11.5).

Inhalation	Coughing, chest tightness, feeling of chest pressure.
Ingestion	Gastrointestinal symptoms, including upset stomach.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.

Toxicological information on ingredients.

(C9-11) ALKYL ALCOHOL ETHOXYLATE

Acute toxicity - oral

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Acute toxicity oral (LD_{50} mg/kg)	1,200.0
Species	Rat
Notes (oral LD_{50})	
ATE oral (mg/kg)	1,200.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,000.1
Species	Rat
ATE dermal (mg/kg)	2,000.1

2-AMINOETHANOL

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	1,089.0
Species	Rat
ATE oral (mg/kg)	1,089.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l)	11.0

COCO AMIDO PROPYL BETAINE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,000.0
Species	Rat

tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2,001.0
Species	Rat
ATE oral (mg/kg)	2,001.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,000.1
Species	Rat
ATE dermal (mg/kg)	2,000.1

SECTION 12: Ecological Information

Ecotoxicity Not regarded as dangerous for the environment.

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12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish Not determined.

Ecological information on ingredients.

2-AMINOETHANOL

Acute aquatic toxicity

Acute toxicity - fish	LC50, 96 hours: 349 mg/l, Cyprinus carpio (Common carp) LC50, 96 hours: 170 mg/l, Carassius auratus (Goldfish)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 65 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: 2.5 mg/l, Selenastrum capricornutum EC_{50}, 72 hours: 22 mg/l, Scenedesmus subspicatus
Acute toxicity - microorganisms	EC20, 30 minutes: > 1000 mg/l, Activated sludge EC_{50}, 3 hours <: 1000 mg/l, Activated sludge

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 0.85 mg/l, Daphnia magna

COCO AMIDO PROPYL BETAINE

Acute aquatic toxicity

Acute toxicity - fish	LC50, 96 hours: 1.11 mg/l, Pimephales promelas (Fat-head Minnow) LC50, 96 hours: 1.1 mg/l, Cyprinodon variegatus (Sheepshead minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 1.9 mg/l, Freshwater invertebrates EC_{50}, : 0.3 mg/l, Freshwater invertebrates EC_{50}, 48 hours: 21.5 mg/l mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 48 hours: 30.0 mg/l, Marinewater algae

tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate

Acute aquatic toxicity

Acute toxicity - fish	LC50, 96 hours: > 100 mg/l, Onchorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: > 100 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The product is expected to be biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

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12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

Special Provisions note

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Transport labels
No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

National regulations Control of Substances Hazardous to Health Regulations 2002 (as amended).

EU legislation Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Commission Regulation (EU) No 453/2010 of 20 May 2010.
Commission Regulation (EU) No 2015/830 of 28 May 2015.

Guidance Workplace Exposure Limits EH40.

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15.2. Chemical safety assessment

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstracts Service.
DNEL: Derived No Effect Level.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.
vPvB: Very Persistent and Very Bioaccumulative.
EC_{50}: 50% of maximal Effective Concentration.
NOEC: No Observed Effect Concentration.
UN: United Nations.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

27/03/2017

Revision

4.0

Supersedes date

04/11/2014

SDS number

24498

Risk phrases in full

Not classified.
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R22 Harmful if swallowed.
R34 Causes burns.
R37 Irritating to respiratory system.
R41 Risk of serious damage to eyes.

Hazard statements in full

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.