SAFETY DATA SHEET
KR7 COFFEE MACHINE CLEANER & DESCALER

According to Regulation (EC) No 1907/2006, Annex II, as amended.

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

1.1. Product identifier

Product name KR7 COFFEE MACHINE CLEANER & DESCALER

Internal identification C901

UFI UFI: HAVP-V059-P00A-TF1W

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

Identified uses Descaler.

Uses advised against Use only for intended applications.

1.3. Details of the supplier of the safety data sheet

Supplier

ARROW SOLUTIONS
RAWDON ROAD,
MOIRA,
SWADLINCOTE,
DERBYSHIRE,
DE12 6DA,
ENGLAND
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).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Eye Irrit. 2 - H319

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms

Signal word Warning

Hazard statements EUH208 Contains 1,3-DIBUTYL-2-THIOUREA. May produce an allergic reaction.
H319 Causes serious eye irritation.

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Precautionary statements P280 Wear protective gloves, eye and face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P501 Dispose of contents/ container in accordance with national regulations.

UFI UFI: HAVP-V059-P00A-TF1W

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

CITRIC ACID ANHYDROUS **10-30%**

CAS number: 77-92-9 EC number: 201-069-1 REACH registration number: 01-2119457002-64-XXXX

Classification
Eye Irrit. 2 - H319

OXYDIPROPANOL **<1%**

CAS number: 25265-71-8 EC number: 246-770-3 REACH registration number: 01-2119456811-38-XXXX

Classification
Not Classified

1,3-DIBUTYL-2-THIOUREA **<1%**

CAS number: 109-46-6 EC number: 203-674-6

Classification
Acute Tox. 4 - H312
Skin Sens. 1A - H317
STOT RE 1 - H372
Aquatic Chronic 2 - H411

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 If medical advice is needed, have product container or label at hand. Show this Safety Data Sheet to the medical personnel.

Inhalation Remove person to fresh air and keep comfortable for breathing.

Ingestion Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention.

Skin contact Rinse immediately with plenty of water.

Eye contact Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms are severe or persist after washing.

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

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Inhalation	Coughing, chest tightness, feeling of chest pressure.
Ingestion	Gastrointestinal symptoms, including upset stomach.
Skin contact	Prolonged contact may cause dryness of the skin. May cause skin sensitisation or allergic reactions in sensitive individuals.
Eye contact	Causes serious eye irritation.

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: Carbon monoxide (CO). Carbon dioxide (CO_2).

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	Ensure procedures and training for emergency decontamination and disposal are in place. No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Evacuate area. Avoid contact with skin, eyes and clothing. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Do not touch or walk into spilled material. Take care as floors and other surfaces may become slippery. Avoid contact with contaminated tools and objects. Do not handle broken packages without protective equipment. 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

Methods for cleaning up	Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Absorb spillage with non-combustible, absorbent 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. Clean contaminated objects and areas thoroughly, observing environmental regulations. Flush away spillage 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

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Usage precautions Observe any occupational exposure limits for the product or ingredients. Wear protective gloves, eye and face protection. Avoid contact with skin, eyes and clothing. Avoid release to the environment. Do not reuse empty containers. Wash skin thoroughly after handling. Do not empty into drains. Do not eat, drink or smoke when using this product. Avoid contact with contaminated tools and objects. Do not handle broken packages without protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

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

Storage class Miscellaneous hazardous material 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

CITRIC ACID ANHYDROUS

Short-term exposure limit (15-minute): WEL 10 mg/m³ dust only
Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ dust only
WEL = Workplace Exposure Limit.

CITRIC ACID ANHYDROUS (CAS: 77-92-9)

PNEC
- Fresh water; 0.44 mg/l
- marine water; 0.044 mg/l
- Sediment (Freshwater); 7.52 mg/kg
- Sediment (Marinewater); 0.752 mg/kg
- Soil; 29.2 mg/kg

OXYDIPROPANOL (CAS: 25265-71-8)

DNEL
Industry - Dermal; Long term : 84 mg/kg/day
Industry - Inhalation; Long term : 238 mg/m³
Consumer - Dermal; Long term : 51 mg/kg/day
Consumer - Inhalation; Long term : 70 mg/m³
Consumer - Oral; Long term : 24 mg/kg/day

PNEC
- Fresh water; 0.1 mg/l
- marine water; 0.01 mg/l
- Intermittent release; 1 mg/l
- STP; 1000 mg/l
- Sediment (Freshwater); 0.238 mg/l
- Sediment (Marinewater); 0.0238 mg/l
- Soil; 0.0253 mg/l

8.2. Exposure controls

Protective equipment

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Appropriate engineering controls	Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. The following protection should be worn: Tight-fitting safety glasses.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. 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. 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. 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. When used with mixtures, the protection time of gloves cannot be accurately estimated. Protective gloves should have a minimum thickness of 0.15 mm. Glove thickness is not necessarily a good measure of glove resistance as the permeation rate will depend on the exact glove composition. The choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Repeated exposure to chemicals will degrade the ability of the glove to provide resistance to chemicals. Specific work environments and material handling practices may vary, therefore safety procedures should be developed for each intended application. Gloves made from the following material may provide suitable chemical protection: Nitrile rubber. Rubber (natural, latex). Neoprene.
Other skin and body protection	Provide eyewash station.
Hygiene measures	Wash hands thoroughly after handling. Wash contaminated clothing before reuse.
Environmental exposure controls	Store in a demarcated bunded area to prevent release to drains and/or watercourses. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Colourless
Odour	Detergent.
pH	pH (concentrated solution): ~ 1.5
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Other flammability	Not applicable.
Vapour pressure	Not determined.

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Relative density	~ 1.06 @ 25°C
Solubility(ies)	Completely soluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not applicable.
Viscosity	Not determined.
Explosive properties	There are no chemical groups present in the product that are associated with explosive properties.
Oxidising properties	There are no chemical groups present in the product that are associated with oxidising properties.
Comments	Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.

9.2. Other information

Other information	Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	The following materials may react with the product: Strong alkalis.

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	Reacts with alkalis and generates heat.

10.5. Incompatible materials

Materials to avoid	Avoid contact with the following materials: Strong alkalis.

10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation	Based on available data the classification criteria are not met.

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Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met. May cause sensitisation or allergic reactions in sensitive individuals.

Germ cell mutagenicity

Genotoxicity - in vitro Does not contain any substances known to be mutagenic.

Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic.

Reproductive toxicity

Reproductive toxicity - fertility Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation Coughing, chest tightness, feeling of chest pressure.

Ingestion Gastrointestinal symptoms, including upset stomach.

Skin contact Prolonged contact may cause dryness of the skin. May cause skin sensitisation or allergic reactions in sensitive individuals.

Eye contact Causes serious eye irritation.

Acute and chronic health hazards Defatting, drying and cracking of skin. Irritating to eyes. May cause sensitisation or allergic reactions in sensitive individuals.

Route of exposure Dermal Skin and/or eye contact

Target organs Eyes Skin

Medical symptoms Dry skin. Irritation of eyes and mucous membranes.

Medical considerations Skin disorders and allergies.

Toxicological information on ingredients.

CITRIC ACID ANHYDROUS

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,400.0
Species	Mouse
ATE oral (mg/kg)	5,400.0

Acute toxicity - dermal

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

OXYDIPROPANOL

Acute toxicity - oral

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

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	5,010.0
Species	Rabbit

1,3-DIBUTYL-2-THIOUREA

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,000.0
Species	Rat
ATE dermal (mg/kg)	2,000.0

Skin sensitisation

Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Sensitising. Local Lymph Node Assay (LLNA) - Mouse: Sensitising.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	LOAEL 6.25 mg/kg, Oral, Rat
Target organs	Thyroid

SECTION 12: Ecological information

Ecotoxicity Not regarded as dangerous for the environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish Not determined.

Chronic aquatic toxicity

Chronic toxicity - fish early life stage Not determined.

Ecological information on ingredients.

CITRIC ACID ANHYDROUS

Acute aquatic toxicity

Acute toxicity - fish	LC50, 48 hours: 440 mg/l, LC_{50}, 96 hours: 440 - 706 mg/l, Fish

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OXYDIPROPANOL

Acute aquatic toxicity

Acute toxicity - fish	LC50, >: > 5000 mg/l, Carassius auratus (Goldfish) LC50, >: > 1000 mg/l, Cyprinus carpio (Common carp)
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.

Partition coefficient Not determined.

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.

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)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

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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 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (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).

Guidance Workplace Exposure Limits EH40.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

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).
LOAEL: Lowest Observed Adverse Effect Level.
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
UN: United Nations.
vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations and acronyms
Acute Tox. = Acute toxicity
Aquatic Chronic = Hazardous to the aquatic environment (chronic)
Eye Irrit. = Eye irritation
Skin Sens. = Skin sensitisation
STOT RE = Specific target organ toxicity-repeated exposure

Classification procedures according to Regulation (EC) 1272/2008 Eye Irrit. 2 - H319, EUH208: Calculation method.

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

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Revision date	29/10/2021
Revision	2.0
Supersedes date	28/04/2017
SDS number	26293
Hazard statements in full	H312 Harmful in contact with skin. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H372 Causes damage to organs (Thyroid) through prolonged or repeated exposure if swallowed. H411 Toxic to aquatic life with long lasting effects. EUH208 Contains 1,3-DIBUTYL-2-THIOUREA. May produce an allergic reaction.