Rinse agent

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 3/26/2025 Revision date: 3/26/2025 Version: 1.00

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

1.1. Product identifier

Product form	:	Mixture
Trade name	:	Rinse agent
UFI	:	45KD-KTCV-UJ18-7HF9
Article number	:	56.00.211
Type of product	:	Detergent
Other means of identification	:	Rinse aid tab

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

1.2.1. Relevant identified uses

Main use category	:	Professional use
Use of the substance/mixture	:	Rinse aid tab for all RATIONAL SelfCookingCenter® models without Efficient CareControl and CombiMaster® Plus models with automatic cleaning for professional users.

1.2.2. Uses advised against

Restrictions on use	:	All other uses not recommended above

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier
RATIONAL AG
Siegfried-Meister-Straße 1
86899 Landsberg am Lech
Deutschland
T +49 8191 327 387, F +49 8191 327 231
reinigung@rational-online.com, www.rational-online.com

Email competent person
sds@kft.de

1.4. Emergency telephone number

Emergency number	:	+49 (0)6132 84463 - GBK GmbH (24h 7d/w - 365d/a)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation, Category 2	H319
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Causes serious eye irritation. May cause respiratory irritation.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP)	:	Warning
Contains	:	citric acid

Hazard statements (CLP)	:	H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.
Precautionary statements (CLP)	:	P101 - If medical advice is needed, have product container or label at hand. 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.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	citric acid (77-92-9), Alcohols, C12-C15-branched and linear, ethoxylated propoxylated (120313-48-6), Silicon dioxide (112945-52-5)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	citric acid (77-92-9), Alcohols, C12-C15-branched and linear, ethoxylated propoxylated (120313-48-6), Silicon dioxide (112945-52-5)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

Component	
Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605	citric acid (77-92-9), Alcohols, C12-C15-branched and linear, ethoxylated propoxylated (120313-48-6), Silicon dioxide (112945-52-5)

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
citric acid substance with national workplace exposure limit(s) (DE)	CAS-No.: 77-92-9 EC-No.: 201-069-1 EC Index-No.: 607-750-00-3 REACH-no: 01-2119457026-42-xxxx	≥ 25 – < 50	Eye Irrit. 2, H319 STOT SE 3, H335
Alcohols, C12-C15-branched and linear, ethoxylated propoxylated	CAS-No.: 120313-48-6 EC-No.: 639-733-1	≥ 1 – < 2.5	Skin Irrit. 2, H315
Silicon dioxide (Nanoform)	CAS-No.: 112945-52-5 EC-No.: 231-545-4 REACH-no: 01-2119379499-16-XXXX	≥ 1 – < 2.5	Not classified

Full text of H- and EUH-statements: see section 16

Components - Nanoform

Silicon dioxide (112945-52-5)	
Additional information	No additional information available

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : In all cases of doubt, or when symptoms persist, seek medical attention. Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after eye contact : Eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon dioxide. Carbon monoxide.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Other information : Do not allow run-off from fire fighting to enter drains or water courses. Disposal must be done according to official regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid sub-soil penetration. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

Other information : Disposal must be done according to official regulations.

6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes. Use only outdoors or in a well-ventilated area. Avoid breathing dust.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed.

Storage temperature : 10 – 40 °C

Information about storage in one common storage facility : Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

citric acid (77-92-9)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Zitronensäure
AGW (OEL TWA)	2 mg/m³ (E)
Peak exposure limitation factor	2(I)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900

Silicon dioxide (112945-52-5)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Kieselsäuren, amorphe
AGW (OEL TWA)	4 mg/m³ E (mg/m3)
Peak exposure limitation factor	8(II)
Remark	DFG,2,Y
Regulatory reference	TRGS900

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:
Not required for normal conditions of use. In case of dust production: protective goggles. ISO 16321-1. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure

8.2.2.2. Skin protection

Skin and body protection:
Not required for normal conditions of use

Hand protection:
In case of contact with the skin : Chemically resistant protective gloves. Nitrile rubber. ISO 374-1. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear

8.2.2.3. Respiratory protection

Respiratory protection:
Not required for normal conditions of use. Dust production: dust mask with filter type P2. EN 143. . Breathing equipment is only to be used in order to handle the residual risk of short term jobs if all other risk minimizing measures have been carried out e.g. retention and/or local exhaust

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.
Other information:
Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Always wash hands after handling the product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	white.
Appearance	:	tablet.
Odour	:	characteristic.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not applicable
Boiling point	:	Not available
Flammability	:	Not available
Explosive properties	:	Product is not explosive. Dust may form explosive mixture in air.
Oxidising properties	:	Non oxidizing.
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Not available
pH	:	2.7
pH solution concentration	:	1 % Aqueous solution
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	Not applicable
Solubility	:	Water: completely soluble
Partition coefficient n-octanol/water (Log Kow)	:	Not available

Vapour pressure	:	Not applicable
Vapour pressure at 50°C	:	Not available
Density	:	Not available
Relative density	:	Not available
Relative vapour density at 20°C	:	Not applicable
Particle size	:	Not available

See section 3 for more information about nano properties.

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1)	:	Not applicable
VOC content	:	< 3 %
Bulk density	:	1015 – 1215 kg/m³

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Protect from moisture.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	:	Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	:	Not classified (Based on available data, the classification criteria are not met) pH: 2.7
Serious eye damage/irritation	:	Causes serious eye irritation. pH: 2.7
Respiratory or skin sensitisation	:	Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	:	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	:	Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	:	Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	:	May cause respiratory irritation.

citric acid (77-92-9)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified (Not relevant)

Rinse agent	
Viscosity, kinematic	Not applicable

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long–term (chronic) : Not classified (Based on available data, the classification criteria are not met)

12.2. Persistence and degradability

Rinse agent	
Persistence and degradability	Readily biodegradable. (OECD 301B method). The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

citric acid (77-92-9)	
Persistence and degradability	Readily biodegradable.
Biodegradation	100 % (19 d; (OECD 301E method))

Alcohols, C12-C15-branched and linear, ethoxylated propoxylated (120313-48-6)	
Persistence and degradability	Readily biodegradable.
Biodegradation	≥ 90 % (OECD 301E method)

Silicon dioxide (112945-52-5)	
Persistence and degradability	Not applicable for inorganic substances.

12.3. Bioaccumulative potential

citric acid (77-92-9)	
Partition coefficient n-octanol/water (Log Pow)	-1.8 – -1.55
Bioaccumulative potential	Bioaccumulation unlikely.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	citric acid (77-92-9), Alcohols, C12-C15-branched and linear, ethoxylated propoxylated (120313-48-6), Silicon dioxide (112945-52-5)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	citric acid (77-92-9), Alcohols, C12-C15-branched and linear, ethoxylated propoxylated (120313-48-6), Silicon dioxide (112945-52-5)

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Silicon dioxide (112945-52-5)	
Other information	Do not allow uncontrolled discharge of product into the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Disposal must be done according to official regulations. European waste catalogue. Do not discharge into drains or the environment. Do not dispose of with domestic waste.

Product/Packaging disposal recommendations : Recycle or dispose of in compliance with current legislation.

European List of Waste (LoW, EC 2000/532) : 20 01 29* - detergents containing dangerous substances

HP Code : HP5 - “Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:” waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.
HP4 - “Irritant – skin irritation and eye damage:” waste which on application can cause skin irritation or damage to the eye.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport
Not regulated

Transport by sea
Not regulated

Air transport
Not regulated

Inland waterway transport
Not regulated

Rail transport
Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Other information, restriction and prohibition regulations : Regulation (EC) No. 648/2004 of 31 March 2004 on detergents.

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	**Applicable on**
3(b)	Alcohols, C12-C15-branched and linear, ethoxylated propoxylated

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

VOC Directive (2004/42)

VOC content : < 3 %

Detergent Regulation (648/2004)

Labelling of contents	
Component	**%**
non-ionic surfactants	<5%

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Employment restrictions	:	Employment prohibitions or restrictions on the protection of young people at work according to § 22 JArbSchG in the case of formation of hazardous substances have to be observed.
National regulations	:	Detergent and Cleaning Agent Act (WRMG).
National Rules and Recommendations	:	TRGS 900: Occupational Exposure Limits. TRGS 400: Risk Assessment for Activities involving Hazardous Substances. TRGS 402: Identification and Assessment of the Risks from Activities involving Hazardous Substances: Inhalation Exposure. TRGS 510: Storage of hazardous substances in non-stationary containers. TRGS 520: Construction and operation of collection points and temporary storage for small amounts of hazardous waste.
Water hazard class (WGK)	:	WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).
Storage class (LGK, TRGS 510)	:	LGK 13 - Non-combustible solids.
Major Accidents Ordinance (12. BImSchV)	:	Is not subject to the Major Accidents Ordinance (12. BImSchV)
VOC content	:	< 3 %

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration

REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TLM	Median Tolerance Limit
vPvB	Very Persistent and Very Bioaccumulative

Data sources : European Chemicals Agency, http://echa.europa.eu/. Information provided by the manufacturer. MSDSs of the suppliers.

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Full text of H- and EUH-statements:	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Eye Irrit. 2	H319	Calculation method
STOT SE 3	H335	Calculation method

KFT SDS EU 11 - Version 24.2

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.