

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/22/2022

Reviewed on 06/22/2022

* 1 Identification

- **Product identifier**
- **Trade name:** Ottalin Duacid
- **Article number:** 2042
- **Application of the substance / the mixture**
Neutralizing agent for spinner washers and automated washing systems.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
- **Manufacturer:**
Chemische Fabrik Kreussler & Co. GmbH
Postfach 120454
D-65082 Wiesbaden
- **Supplier:**
Kreussler Inc., 6103 Johns Road Suit 7, Tampa, FL 33634,
Phone 813-884-1499, Fax 813-884-1599,
Internet: www.kreussler.com, e-mail: office-tampa@kreussler.com
- **Information department:**
Department T-PS
+49 (0) 611 9271-0
msds-tc@kreussler.com
- **Emergency telephone number:** +49 (0) 611 9271-0

2 Hazard(s) identification

- **Classification of the substance or mixture**
Corrosive to Metals 1 H290 May be corrosive to metals.
Skin Corrosion 1A H314 Causes severe skin burns and eye damage.
Eye Damage 1 H318 Causes serious eye damage.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard statements**
May be corrosive to metals.
Causes severe skin burns and eye damage.
- **Precautionary statements**
Wear protective gloves / eye protection.
If on skin: Wash with plenty of soap and water.
If in eyes: 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.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 0
Reactivity = 0

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· HMIS-ratings (scale 0 - 4)

HEALTH	3	Health = 3
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

· Other hazards

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

- **Description:** Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:

7664-93-9	sulphuric acid	Corrosive to Metals 1, H290; Skin Corrosion 1A, H314	15-30%
77-92-9	citric acid	Eye Irritation 2A, H319	5-15%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

· Description of first aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Rinse with warm water.
If skin irritation continues, consult a doctor.
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** Product itself does not burn.
- **Advice for firefighters**
- **Protective equipment:** Use normal protective clothing.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

* 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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- Use neutralizing agent.
- Dispose contaminated material as waste according to item 13.
- Ensure adequate ventilation.
- **Reference to other sections**
 - No dangerous substances are released.
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

• PAC-1:		
7664-93-9	sulphuric acid	0.20 mg/m ³
• PAC-2:		
7664-93-9	sulphuric acid	8.7 mg/m ³
• PAC-3:		
7664-93-9	sulphuric acid	160 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 - No special measures required.
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class:** 8 B
- **Specific end use(s):** No further relevant information available.

* 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
 - The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
 - At this time, the remaining constituent has no known exposure limits.

7664-93-9 sulphuric acid (15-30%)	
PEL	Long-term value: 1 mg/m ³
REL	Long-term value: 1 mg/m ³
TLV	Long-term value: 0.2* mg/m ³ *as thoracic fraction, A2

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Do not eat, drink, smoke or sniff while working.
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.

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- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

PVC or PE gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Not suitable are gloves made of the following materials:**

Strong gloves

Leather gloves

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

9 Physical and chemical properties

• Information on basic physical and chemical properties	
• General Information	
• Appearance:	
Form:	Fluid
Color:	Colorless
• Odor:	Characteristic
• Odor threshold:	Not determined.
• pH-value at 20 °C (68 °F):	1.7 (1%)
• Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
• Flash point:	Not applicable.
• Flammability (solid, gaseous):	Not applicable.
• Decomposition temperature:	Not determined.
• Auto igniting:	Product is not selfigniting.
• Danger of explosion:	Product does not present an explosion hazard.
• Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.

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· Vapor pressure:	Not determined.
· Density at 20 °C (68 °F):	1.21 g/cm ³ (10.1 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Water:	68.8 %
VOC (US)	0.00 %
	0.0 g/l / 0.00 lb/gal
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** Reacts with strong alkali.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

* 11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

· LD/LC50 values that are relevant for classification:		
7664-93-9 sulphuric acid		
Oral	LD-50	2,140 mg/kg (rat) (OECD TG 401)
77-92-9 citric acid		
Oral	LD-50	5,400 mg/kg (mouse) (OECD-Prüfrichtlinie 401)
	LC-50	11,700 mg/kg (rat)
Dermal	LD-50	>2,000 mg/kg (rat)
	LD-50 Intraperitoneal	940 mg/kg (mouse) 725 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive

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Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)		
7664-93-9	sulphuric acid	1
· NTP (National Toxicology Program)		
7664-93-9	sulphuric acid	K
· OSHA-Ca (Occupational Safety & Health Administration)		
None of the ingredients is listed.		

12 Ecological information

· Toxicity

· Aquatic toxicity:	
7664-93-9 sulphuric acid	
EC-50 48h	>100 mg/l (Daphnia magna) (OECD 202)
LC-50 96h	16-28 mg/l (Lepomis macrochirus)
77-92-9 citric acid	
LC-50 24 h	1,535 mg/L (Daphnia magna)
LC-50 48 h	440 mg/L (Leuciscus idus) (OECD-Prüfrichtlinie 203)
LC-50 16 h	>10,000 mg/L (Pseudomonas putida)
LC-50 168 h	425 mg/L (Scenedesmus quadricauda)

· **Persistence and degradability** No further relevant information available.

· **Other information:** The product is easily biodegradable.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

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.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

The product may not be released into the environment without control.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Dispose of in accordance with local, state, and federal Regulations.

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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

* 14 Transport information

· UN-Number	UN2796
· DOT, ADR, IMDG, IATA	
· UN proper shipping name	Sulfuric acid solution
· DOT	2796 SULPHURIC ACID solution
· ADR	SULPHURIC ACID solution
· IMDG, IATA	
· Transport hazard class(es)	
· DOT, ADR, IMDG, IATA	8 Corrosive substances
· Class	8
· Label	
· Packing group	II
· DOT, ADR, IMDG, IATA	
· Environmental hazards:	No
· Marine pollutant:	
· Special precautions for user	Warning: Corrosive substances
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	(SGG1a) Strong acids
· Stowage Category	B
· Segregation Code	SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 2796 SULPHURIC ACID SOLUTION, 8, II

* 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

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• Sara		
• Section 355 (extremely hazardous substances):		
7664-93-9	sulphuric acid	
• Section 313 (Specific toxic chemical listings):		
7664-93-9	sulphuric acid	
• TSCA (Toxic Substances Control Act):		
All components have the value ACTIVE.		
• Hazardous Air Pollutants		
None of the ingredients is listed.		
• Proposition 65		
• Chemicals known to cause cancer:		
None of the ingredients is listed.		
• Chemicals known to cause reproductive toxicity for females:		
None of the ingredients is listed.		
• Chemicals known to cause reproductive toxicity for males:		
None of the ingredients is listed.		
• Chemicals known to cause developmental toxicity:		
None of the ingredients is listed.		
• New Jersey Right-to-Know List:		
7664-93-9	sulphuric acid	
• Pennsylvania Right-to-Know List:		
7664-93-9	sulphuric acid	
• Carcinogen categories		
• EPA (Environmental Protection Agency)		
None of the ingredients is listed.		
• TLV (Threshold Limit Value)		
7664-93-9	sulphuric acid	A2
• MAK (German Maximum Workplace Concentration)		
7664-93-9	sulphuric acid	4
• NIOSH-Ca (National Institute for Occupational Safety and Health)		
None of the ingredients is listed.		
• Canadien Substances Listings:		
• Canadien Domestic Substances List (DSL):		
All ingredients are listed.		
• Canadian Non-Domestic Substances List (NDSL)		
None of the ingredients is listed.		
• Canadien Ingredient disclosure list (limit 0.1%)		
All ingredients are listed.		
• Canadien Ingredient disclosure list (limit 1%)		
7664-93-9	sulphuric acid	
77-92-9	citric acid	

• **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

• **Hazard pictograms**

GHS05

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- **Signal word** Danger
- **Hazard statements**
May be corrosive to metals.
Causes severe skin burns and eye damage.
- **Precautionary statements**
Wear protective gloves / eye protection.
If on skin: Wash with plenty of soap and water.
If in eyes: 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.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

* 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

The information of Items 4 through 8 and 10 through 12 partially refers not to the use and the proper application of the product (see Directions for Use/Product Information) but to the release of larger quantities in the case of accidents and irregularities.

The information exclusively describes the safety requirements of the product(s) and is based on the present state of our experience.

Non-ionic tensides can have varying characteristics and classifications despite same CAS-No.

- **Department issuing SDS:**
Department T-PS
Herr Heiko Schmidt
+49 (0) 611/9271-0
- **Contact:** Herr Heiko Schmidt
- **Date of preparation / last revision** 06/22/2022 / -
- **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Corrosive to Metals 1: Corrosive to metals – Category 1
Skin Corrosion 1A: Skin corrosion/irritation – Category 1A
Eye Damage 1: Serious eye damage/eye irritation – Category 1
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
- *** Data compared to the previous version altered.**

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