

Safety data sheet
According to Regulation n. 1907/2006 and Regulation 878/2020
Rh Sulphate Sol. 100 W/ additive 100 ml = 10 g Rh



Revision VIII – 11.09.2024
 Replaces revision. VII – 02.04.2024

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier**
 Commercial name Rh Sulphate Sol. 100 W/ additive 100 ml = 10 g Rh
 Product code 155
 Registration number A registration number is not available for this product as it is a mixture
 UFI code HHK5-UOM7-W007-HGGD
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
 Recommended uses Industrial use. Additive for electroplating
 Uses advised against None in particular
- 1.3 Details of the supplier of the safety data sheet**
 Name FAGGI ENRICO S.P.A.
 Address Via Majorana, 101/103 50019 Sesto Fiorentino FI
 Telephone number 055311861
 Fax number 055311791
 Competent person responsible for the safety data sheet lorenzo.magaldi@faggi.it
- 1.4 Emergency telephone number** 111 - Medical helpline operating in England, in Scotland (NHS 24) and in Wales (NHS Direct Wales)

2. HAZARDS IDENTIFICATION

2.1 Classification of the mixture according to Regulation (EC) n. 1272/2008

Hazard class	Category codes	Hazards indications
Skin corrosive	1 A	H314
Eye Dam.	1	H318
Muta.	2	H341
Aq. Acute	1	H400
Aq. Chronic	1	H410

2.2 Label elements

Pittogrammi



Signal word

DANGER

Hazard statements

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H341	Suspected of causing genetic defects
H410	Very toxic to aquatic life with long lasting effects.

Precautionary advice

P280	Wear protective gloves/protective clothing/eye protection/face protection.
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P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: get medical advice/attention.
P391	Collect spillage.

2.3 UFI code
Other hazards

HHK5-U0M7-W007-HGGD
 It does NOT contain PBT / vPvB substances according to Regulation (EC) 1907/2006, annex XIII.
 It does NOT contain substances that interfere with the endocrine system in accordance with Regulation (EC) 1907/2006 art.59 paragraph 1 and in accordance with the criteria established in Regulation (EU) 2017/2100 and Regulation (EU) 2018/605.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixure

Product identifier	Concentration %	Classification	
		Hazard classes Category codes	Hazard statements
Dirodium trisulfate	15 ≤ C ≤ 20	Met.Corr 1	H290
CAS 10489-46-0		Skin Corr. 1B	H314
CE: 234-014-5		Eye Dam. 1	H318
INDEX: not available		Aq. Acute 1	H400
REACH N °: exempt for quantity		Aq. Chronic 1	H410
STA: not applicable		Corrosive to respiratory tract	EUH071
M factor (acute): 1			
M factor (chronic): 1			
Sulfuric acid	7 ≤ C ≤ 15	Skin Corr. 1 A	H314
CAS 7664-93-9			
EC 231-639-5			
INDEX 016-020-00-8			
Reach No: 01-2119458838-20-XXXX			
ATE: not applicable			
Specific limits:			
Skin Corr. 1A: C ≥ 15%			
Skin Irrit. 2: H315 5% ≤ C <15%			

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- Eye Irrit. 2: H319 5% ≤ C <15%
M Factors: not applicable
- 4. FIRST AID MEASURES**
- 4.1 Description of first aid measures**
- | | |
|-------------------|---|
| Inhalation | Keep the injured person at rest in an airy and warm environment. In case of respiratory arrest, use artificial respiration methods |
| Ingestion | Do not induce vomiting. Drink plenty of water and consult a doctor |
| Contact with skin | Take off contaminated clothing immediately. Immediately wash skin with plenty of soap and water. Consult a physician |
| Contact with eyes | Immediately flush eyes with plenty of water while holding the eyelids apart. Do not use eye drops or ointments. Consult an ophthalmologist specialist |

Recommendations:

- Need to see a doctor immediately YES
- Possibility of delayed effects following exposure YES
- Move the exposed individual from the place of exposure to the open air YES
- Remove the clothing and shoes of the exposed individual YES
- How to handle contaminated clothing With gloves
- For first aiders, wear PPE YES

4.2 Most important symptoms and effects, both acute and delayed

Eye, nose and throat irritation, chest pain, choking, skin irritation, corneal burns, skin burn (after severe exposure), nausea, vomiting: Abundant and bleeding mucous secretions, bronchitis, pulmonary edema, corneal necrosis, tissue necrosis, perforation of the gastrointestinal tract.

4.3 Indication of any immediate medical attention and special treatment needed

Consult a physician immediately. Emergency showers and eye washing systems must be available in the workplace.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media Water spray, carbon dioxide, foam.

Unsuitable extinguishing media None in particular

5.2 Special hazards arising from the substance or mixture

If involved in a fire it can develop sulfur oxides, toxic for inhalation.

5.3 Advice for firefighters

Prevent the water used to extinguish the fire from flowing into the sewer, groundwater or surface water. Cool containers at risk with water. Normal fire-fighting clothing, such as self-contained open-circuit compressed air breathing apparatus (EN137), flame retardant suit (EN469), flame retardant gloves (EN659) and firefighter boots (HOA29 or A30)

General information

Equipment

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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Move away from the contaminated area immediately and keep upwind.

6.1.2. For emergency responders

To wear:

Gloves for chemical risks compliant with EN420 EN374 Standards

Complete clothing compliant with the UNI EN 13034: 2006 standard

Semi-face masks with ABEK2P3 R filters conforming to EN14387: 2004 + A1: 2008

6.2 Environmental precautions

Prevent infiltration into the sewer, groundwater, and surface water

6.3 Methods and material for containment and cleaning up

6.3.1. Advice in order to contain a spill

Contain spill with appropriate absorbent material (sand, bentonite) and place in airtight container. Sprinkle the spill with baking soda to neutralize the acidity.

6.3.2. Advice in order to clean-up a spill

Wash the area with plenty of water.

6.3.3 Other information

None

6.4 Reference to other sections

None

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

7.1.1. Recommendations in order to manipulate the substance or the mixture in a safe manner, such as containment measures and prevention of fire and aerosol and powders formation

Keep in original sealed and labeled packaging

7.1.2. General recommendation on work hygiene

Do not eat, drink and smoke in work areas. Wash your hands after use. Remove contaminated clothing and protective equipment before entering eating areas

7.2. Conditions Safe storage, including any incompatibilities

Keep away from bases.

7.2.1. Risk management associated with explosive atmospheres, corrosive conditions, flammability hazards, incompatible substances or mixtures, evaporative conditions, potential ignition sources

Store in the original containers and close them immediately after use.

7.2.2. Containment of the effects of weather conditions, pressure, temperature, sunlight, humidity and vibrations

Store in a cool, dry place.

7.2.3. Conditions for keeping substances / mixtures intact

The packages must be well closed and labeled.

7.2.4. Provisions relating to ventilation, specific design of storage rooms or containers, quantitative limits in storage conditions, compatibility of packaging

Use PE and PP plastic packaging or other resistant materials. Keep the packages in a containment basin.

7.3. Specific end use(s)

Industrial use. Additive for electroplating

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

SULPHURIC ACID

DNEL

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Workers

Systemic effects for long-term exposure – inhalation: no hazard identified
Systemic effects for short-term exposure – inhalation: no hazard identified
Local effects for long-term exposure – inhalation: 0.05 mg/m³
Local effects for short-term exposure – inhalation: 0.1 mg/m³
Systemic effects for long-term exposure – dermal: no hazard identified
Systemic effects for short-term exposure – dermal: no hazard identified
Local effects for long-term exposure – dermal: high hazard (no derived threshold)
Local effects for short-term exposure – dermal: high hazard (no derived threshold)
Eye hazards: high risk (no derived threshold)

General population

Systemic effects for long-term exposure – inhalation: no hazard identified
Systemic effects for short-term exposure – inhalation: no hazard identified
Local effects for long-term exposure – inhalation: high hazard (no derived threshold)
Local effects for short-term exposure – inhalation: high hazard (no derived threshold)
Systemic effects for long-term exposure – dermal: no hazard identified
Systemic effects for short-term exposure – dermal: no hazard identified
Local effects for long-term exposure – dermal: high hazard (no derived threshold)
Local effects for short-term exposure – dermal: high hazard (no derived threshold)
Systemic effects for long-term exposure – oral: no hazard identified
Systemic effects for short-term exposure – oral: no hazard identified
Eye hazards: high hazard (no derived threshold)

PNEC

Fresh water: no hazard identified
Marine water: no hazard identified
Sewage treatment plant: no hazard identified
Sediment (fresh water): no hazard identified
Sediment (sea water): no hazard identified
Soil: no hazard identified

DIRHODIUM TRISULPHATE

DNEL: Not applicable

PNEC

Chronic Ecotoxic Reference Value (ERV): 46 µg Rh/L (P. subcapitata)(growth rate)
Acute Ecotoxic Reference Value (ERV): 290 µg Rh/L (D. magna)

8.2.

Exposure controls

8.2.1. *Appropriate engineering controls*

Use only under a fume hood. Emergency showers and eye washing system near the work area.

8.2.2. *Individual protection measures, such as personal protective equipment*

Eye/face protection

Splash goggles compliant with Directive 89/686 / EEC and standard EN166: 2001

Skin protection (hands)

Chemical gloves according to EN 420 EN 374

Glove material:

Fluorinated rubber

Material thickness: 0.5 mm

Penetration time: ≥ 60 min DIN EN374 method

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Skin protection (body)	Complete clothing compliant with the UNI EN 13034: 2006 standard
Respiratory protection	Semi-face masks with ABEK2P3 R filters conforming to EN14387: 2004 + A1: 2008
Thermal hazards	Information not available

8.2.3. Environmental exposure controls

Maintain suction in all environments using localized collection and ambient air exchange systems. Convey the aspirated volumes to an abatement system and then into the atmosphere. Do not use recirculating air suction systems. Avoid any spillage into the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Color	Dark brown
Odor	Pungent
Melting point / freezing point	About -1 ° C
Boiling point or initial boiling point and boiling range	About 105 ° C
Flammability	Not inflammable
Lower and upper explosive limits	Not explosive
Flash point	Not inflammable
Self-ignition temperature	Not inflammable
Decomposition temperature	The mixture does not decompose
pH	<2
Cinematic viscosity	Data not available
Solubility	Fully miscible in water

Production coefficient n-octanol / water (logarithmic value)	Not applicable
Vapor pressure	2.33 KPa at 20 ° C
Density and / or relative density	1.15 g / cm ³
Relative vapor density	Data not available
Characteristics of the particles	Not applicable

9.2. Other information

None

10. STABILITY AND REACTIVITY

10.1 Reactivity

The product exhibits strongly acidic behavior

10.2 Chemical stability

Stable under normal storage conditions

10.3 Possibility of hazardous reactions

It can generate flammable gases and ignite in contact with organic sulphides, elemental metals and strong reducing agents. It can generate toxic gases in contact with halogenated organic substances, sulphides, nitrides, nitriles, organophosphates and strong oxidizing agents.

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10.4	Conditions to avoid Overheating	
10.5	Incompatible materials Bases, organic substances	
10.6	Hazardous decomposition products Sulfur oxides	
11.	TOXICOLOGICAL INFORMATION	
11.1	Information on hazard classes as defined in Regulation (EC) No 1272/2008	
	Acute toxicity	Based on available data, the classification criteria are not met
	Skin corrosion / irritation	Corrosive to the skin and mucous membranes
	Serious eye damage/irritation	Strongly corrosive
	Respiratory or skin sensitization	Based on available data, the classification criteria are not met
	Germ cell mutagenicity	Suspected of causing genetic defects (DECOS (2002). Dutch Expert Committee on Occupational Standards, a committee of the Health Council of the Netherlands. Rhodium and compounds: Evaluation of the carcinogenicity and genotoxicity.)
	Carcinogenicity	Based on available data, the classification criteria are not met
	Reproductive toxicity	Based on available data, the classification criteria are not met
	STOT – single exposure	Based on available data, the classification criteria are not met
	STOT – repeated exposure	Based on available data, the classification criteria are not met
11.2	Information on other hazards None	
12.	ECOLOGICAL INFORMATION	
12.1	Toxicity	Dirhodium trisulphate LC 50 (fish) 96 h: 220 mg / L EC50 (Daphnia magna) 48 h: 290 µg / L Rh EC50 (algae) 72 h: 4.5 mg/L Rh
12.2	Persistence and degradability	Not persistent
12.3	Bioaccumulative potential	Not bioaccumulative
12.4	Mobility in soil	Undefined
12.5	Results of PBT and vPvB assessment	Not classified
12.6	Endocrine disrupting properties	None known
12.7	Other adverse effects	None known
13.	DISPOSAL CONSIDERATIONS	
13.1.	Waste treatment methods The substance and its packaging must be disposed of as hazardous waste by authorized companies.	
14.	TRANSPORT INFORMATION	
14.1	UN number or ID number	UN3264

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14.2	Official UN shipping name	Corrosive, acidic inorganic liquid, n.o.s. (dirhodium trisulphate, sulfuric acid)
14.3	Transport hazard class	ADR/RID/IMDG/ICAO-IATA: Class: Class 8 ADR/RID/IMDG/ICAO-IATA: Label: Label 8 + mark environment hazard (E) ADR: Tunnel restriction code (E) IMDG - EmS: F-A,S-B
14.4	Packing group	I
14.5	Dangers for the environment	ADR/RID/ICAO-IATA: Yes IMDG: Marine Contaminant: Dangerous for the environment
14.6	Special precautions for user	Transport must be carried out by vehicles authorized for the transport of dangerous goods according to the provisions of the current edition of the A.D.R. Agreement. and the applicable national provisions. Transport must be carried out in the original packaging and, in any case, in packaging which is made of materials which cannot be attacked by the contents, and which are not likely to generate dangerous reactions. Those responsible for loading and unloading dangerous goods must have received appropriate training on the risks presented by the preparation and on any procedures to be adopted in the event of emergency situations.
14.7	Maritime transport in bulk according to IMO instruments	No bulk transport is foreseen

15.

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	Applicability
	Reg. (EC) 1907/2006 / EC Reach	YES
	Reg. (EC) 1272/2008 CLP and subsequent changes and additions	YES
	Reg. (CE) 2037/2000 "Substances that deplete the ozone layer"	NO
	Reg. (EC) 850/2004 "Persistent organic pollutants"	NO
	Reg. (EC) 689/2008 "export and import of dangerous chemicals"	NO
	Substance listed in Annex I of Dir. 2012/18 / EU so-called Seveso	NO
	Legislative Decree 81/2008 Consolidated Law on health and safety at work	YES
	Directive 2014/103 / EU "Adr"	YES
	Reg. (CE) 1907/2006/CE Reach art. 59 – Candidate List of Substances of Very High Concern (SVHC)	NO
	Reg. (CE) 1907/2006/CE Reach - Annex XIV – Authorisation List	NO
	Reg. (CE) 1907/2006/CE Reach - Annex XVII – Restriction List	Limited use
	https://echa.europa.eu/it/substances-restricted-under-reach	Item 3 - 75 (check link)
15.2	REGULATION (EU) 2019/1148 “Explosives precursors” Chemical safety assessment	YES

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16.

A chemical safety assessment was not carried out

OTHER INFORMATION

Changes compared to the previous edition

Changes to sections 2-3-8-12-14-16

Acronim and abbreviation legend

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

GHS: Globally Harmonized System of Classification and Labeling of Substances

EINECS: European Inventory of Chemical Substances

CAS: Chemical Abstract Service

STA: Acute Toxicity Estimate

PBT: Persistent, Bioaccumulative and Toxic.

vPvB: (very persistent and very bioaccumulative). Very persistent and very bioaccumulative

LD: lethal dose

PNEC: predicted no effect concentration

DNEL: derived no effect level

TLV (ceiling value): threshold limit value

STEL: short-term exposure limit

EU-OEL: European occupational exposure limit

TWA: time-weighted average

EC: effective concentration

NOAEL: no observed adverse effect level

LC: lethal concentration

NOEC: no observed effect concentration

LOEC: lowest observed effect concentration

Bw: body weight

Koc: organic carbon-water partition coefficient

Main references and data sources

ECHA's data bank on registered substances and soon to be registered substances:

<https://chem.echa.europa.eu/>

Indication, for mixtures, of which methods of evaluation of the information have been used for the purposes of classification

Classification

Skin corrosive 1A H314

Eye Damage 1 H318

Muta. 2 H341

Aq. Acute 1 H400

Aq. Chronic 1 H410

Classification procedure

According to 3.3.3.1.2 of Annex I to CLP

According to 3.3.3.1.2 of Annex I to CLP

calculation

calculation

calculation

Adequate training for workers in order to ensure the protection of human health and the environment

Chemical Risk Training pursuant to Legislative Decree 81/08 Title IX dangerous substances

PPE training