

Rhodium for bath

Date Prepared : 08.12.2023

Revision : 0

Revision date : -

SDS Number : GBF - 4732

1- IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

1.1- Product Identifier:

Product Name Ultrapure White Rhodium Concentrate 50ml or 100ml**UFI Code** No data available**Nanoform** The product does not contain nanoparticles.

1.2- Relevant identified uses of the substance advised against:

Identified uses Electroplating Solution**Used advised against** No data available

1.3- Details of the supplier of the safety data sheet:

Company Durston Tools**Address** Desborough Park Road, High Wycombe, Buckinghamshire, HP12 3DJ**Tel/Fax** +44 (0)1494 342 069**E-mail** support@durston.com

1.4- Emergency telephone number:

+44 (0)1494 342 069

2- HAZARDS IDENTIFICATION

2.1- Classification of the substance or mixture:

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

Causes severe skin burns and eye damage. Category 1A, H314

Suspected of causing genetic defects, Category 2, H341

Toxic to aquatic life with long-lasting effects, Category 2, H411

Notes: For the full text of the H sentences mentioned in this Section, see Section 16.

2.2- Label elements (according to EC 1272/2008):

GHS Pictograms**Signal word** Danger**Hazard statements**

H314 Causes severe skin burns and eye damage.

H341 Suspected of causing genetic defects.

H411 Toxic to aquatic life with long-lasting effects

Precautionary statements**Prevention**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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- P260 Do not breathe dust/fumes/gas/mist/vapours/spray.
P264 Wash ... thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

- 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/ 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.
P310 Immediately call a POISON CENTER or doctor/physician.
P321 Specific treatment (see ... on this label).
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.

Storage

- P405 Store locked up.

Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

Contains: Sulphuric Acid, Dirhodium Trisulphate

2.3- Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0.1%.
The product does not contain substances with endocrine disrupting properties in concentration \geq 0.1%.

3- COMPOSITION/INFORMATION ON INGREDIENTS

3.1- Substance

Not applicable

3.2- Mixture

Components:

Chemical Name	EC No.	CAS No.	%	Classification
Sulphuric Acid	231-639-5	7664-93-9	35-37.5	Skin Corr. 1A, H314
Dirhodium Trisulphate	234-014-5	10489-46-0	0.1-5.0	Met. Corr. 1, H290 Skin Corr. 1B, H314 Muta. 2, H341 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 M=1 EUH071

Notes: For the full text of the H sentences mentioned in this Section, see Section 16.

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4- FIRST AID MEASURES

4.1- Description of first aid measures

Eye contact	Wash immediately with plenty of water for several minutes, opening the eyelids fully. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin contact	Remove immediately all contaminated clothing and wash before reuse. Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
Ingestion	If swallowed, rinse the patient's mouth with clean water and then drink plenty of water or milk. Do not induce vomiting. Never give anything by mouth if unconscious. Consult physician.
Inhalation	Immediately remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not breathe vapor/spray. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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

Treat symptoms and eliminate overexposure.

5- FIRE FIGHTING MEASURES

5.1- Extinguishing Media

Foam, dry chemicals, carbon dioxide and water mist must be used. Care should always be taken to create an escape route in the fire.

5.2- Special hazards arising from the substance or mixture

Closed containers can burst violently when heated, due to excess pressure build-up. Combustion products include: Carbon monoxide, carbon dioxide, various hydrocarbon fragments as well as thick smoke. Oxides of Sulfur may also be formed.

5.3- Advice for firefighters

In case of a fire, use positive pressure air breathing apparatus and full protective clothing, suitable for use in closed areas.

6- ACCIDENTAL RELEASE MEASURES

6.1- Personal precautions, protective equipment and emergency procedures

Do not handle until all safety precautions have been read and understood. Do not attempt to interfere without proper protective equipment. Provide a good ventilation environment. Do not inhale dusts. Avoid contact with eyes, skin, and clothing.

6.2- Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6.3- Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Provide appropriate personal protection. Clean the spillage mechanically (vacuum cleaner etc.) or collect it with a non-flammable absorbent material (eg sand, earth, etc.) or similar absorbent material (Chemizorb, vermiculite, sand, diatomite or similar inert material). Wash the spill area with water. Dispose of collected material or solid waste according to local regulations.

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6.4- References to other sections

For information on safe handling see section 7, for information on personal protection equipment see section 8, for disposal-related information see section 13.

7- HANDLING AND STORAGE

7.1- Precautions for safe handling

Provide good ventilation in the workplace. Follow industrial hygiene standards and common rules to prevent inhalation, ingestion, exposure to the skin during use of chemicals. Remove contaminated clothing and wash before using again. Do not eat, drink or smoke when using this product. Do not get in contact with food, drinks or animal feed.

7.2- Conditions for safe storage, including any incompatibilities

Store in a well-ventilated, dry and cool places. Keep containers tightly closed. Protect containers from physical damage and keep them closed and upright. Keep it in its original package. Make sure that the packing cover is tightly closed. Comply with local regulations.

7.3- Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

8- EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1- Control parameters

Substance	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulphuric Acid	TWA: 0.2 mg/m ³	(Vacated) TWA: 1 mg/m ³ TWA: 1 mg/m ³	IDLH: 15 mg/m ³ TWA: 1 mg/m ³

DNEL Values

Substance	Community	Effects	Exposure	Value
Sulphuric Acid	Workers	Local effects	Long term / Inhalation	0,05 mg/m ³
Sulphuric Acid	Workers	Local effects	Acute / Inhalation	0,15 mg/m ³

PNEC Values

Substance	Layer	Value	Evaluation factor
Sulphuric Acid	No hazard identified.		

8.2- Exposure controls

Personal protective equipment/equipment:

Hand protection:

Use protective gloves.

It is sufficient to consider puncture resistance, permeability rates and deterioration in selection of gloves. Selected protective gloves must comply with EN 374 standards.



Eye protection:

Use safety goggles or face masks that have been tested and approved in accordance with standards as EN 166 (EU). Contact lenses should not be worn. Use face shields where there is a high risk of splashing and where there is a risk of direct contact with vapors.



Respiratory protection:

In case of insufficient ventilation, respiratory protection in accordance with proper EN standards should be used.

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Hygiene measures

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9- PHYSICAL AND CHEMICAL PROPERTIES

9.1- Information on basic physical and chemical properties

Physical State	Liquid
Colour	Dark red
Odour	Odourless
Odour threshold.	< 2
pH (solution)	Not available.
Melting Point	Not available.
Boiling Point	Not available.
Evaporation Rate (Water=1)	Not available.
Flammability, solid/gas	Not available.
Flash Point (°C)	> 60
Flammability Limits in Air, % vol.	
Lower Explosive Limit	Not available.
Upper Explosive Limit	Not available.
Auto-Ignition Temperature	Not available.
Vapour pressure.	Not available.
Vapour density (Air= 1)	Not available.
Relative Density	Not available.
Solubility	Soluble in water
Partition Coefficient (n-octanol/water)	Not available.
Decomposition Temperature	Not available.
Viscosity	Not available.

9.2- Other information:

9.2.1- Information with regard to physical hazard classes:

No data available

9.2.2- Other safety characteristics:

Explosive properties	No explosive properties.
Oxidising property	No oxidizing property.

10- STABILITY AND REACTIVITY

10.1- Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.
Contains SULPHURIC ACID: decomposes at 450°C.

10.2- Chemical stability

Stable under recommended handling and storage conditions.

10.3- Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

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10.4- Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

10.5- Incompatible materials

Contains SULPHURIC ACID: flammable substances, reducing substances, basic substances, metals, organic substances and water.

10.6- Hazardous decomposition products

Oxides of sodium and SO_x.

11- TOXICOLOGICAL INFORMATION

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

Acute toxicity

Sulphuric Acid (CAS# 7664-93-9)	
LD50 oral (rat)	2.140 mg/kg bw
LC50 inhalation (rat)	375 mg/m ³ , air

Skin corrosion/irritation

Causes severe skin burns damage.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory or Skin Sensitization

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity (Single Exposure)

Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity (Repeated Exposure)

Based on available data, the classification criteria are not met.

Aspiration Hazard

Based on available data, the classification criteria are not met.

11.2- Information on other hazards

11.2.1- Endocrine disrupting properties

No test data is available for the mixture.

11.2.2- Other information

No test data is available for the mixture.

12- ECOLOGICAL INFORMATION

12.1- Toxicity

Sulphuric Acid (CAS# 7664-93-9)	
LC50 Fish	> 16 - < 28 mg/l, 96 Hours (Lepomis macrochirus)

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Sulphuric Acid (CAS# 7664-93-9)

LC50 Aquatic invertebrates	> 100 mg/l, 48 Hours	(Daphnia magna)
EC50 Algae	> 100 mg/l, 72 Hours	(Desmodesmus subspicatus)

12.2- Persistence and degradability

No data available.

12.3- Bioaccumulative potential

No data available.

12.4- Mobility in soil

No data available.

12.5- Results of PBT and vPvB assessment

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

12.6- Endocrine disrupting properties

No data available.

12.7- Other adverse effects

No data available.

13- DISPOSAL CONSIDERATIONS

13.1- Waste treatment methods

Removal of wastes must comply with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional and national requirements and should be followed.

14- TRANSPORT INFORMATION

Land transport (ADR/RID)

14.1- UN number	UN3264
14.2- UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid, dirodium trisulphate)
14.3- Transport hazard class(es)	8
14.4- Packing Group	II
14.5- Environmental hazard	Yes
14.6- Maritime transport in bulk according to IMO instruments	Not applicable.
Limited Quantity (ADR/RID)	1 L
Exceptional amount (ADR/RID)	E2
Tank code (ADR/RID)	L4BN
Tunnel code	2 (E)
Orange plate	



80

3264


Sea transport (IMDG Code)

14.1- UN number	UN3264
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Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

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14.2-	UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid, dirodium trisulphate)	
14.3-	Transport hazard class(es)	8	
14.4-	Packing Group	II	
14.5-	Environmental hazard	Yes	
	Marine pollutant:	Yes	
14.6-	Maritime transport in bulk according to IMO instruments	Not applicable.	
	Limited Quantity (IMDG)	1 L	
	Exceptional amount (IMDG)	E2	
	EmS No (Fire)	F-A	
	N*FS (Spill)	S-B	

Air transport (ICAO-IATA/DGR)

14.1-	UN number	UN3264	
14.2-	UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid, dirodium trisulphate)	
14.3-	Transport hazard class(es)	8	
14.4-	Packing Group	II	
14.5-	Environmental hazard	Not hazardous.	
14.6-	Maritime transport in bulk according to IMO instruments	Not applicable.	

15- REGULATORY INFORMATION

- 15.1- Safety, health and environmental regulations/legislations specific for the substance or mixture**
- Regulation (EC) No 1907/2006, (REACH),
 - Commission Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006,
 - Regulation (EC) No 1272/2008 (CLP),
 - Commission Directive 2006/15/EC,
 - Commission Directive 2000/39/EC.
 - ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
- 15.2- Chemical safety assessment**
- No chemical safety assessment has been processed for the mixture and the substances it contains.

16- OTHER INFORMATION

Full text of any H- & EUH-statements not written out in full under Sections 2 to 15

- H290 May be corrosive to metals
- H314 Causes severe skin burns and eye damage.
- H341 Suspected of causing genetic defects.
- H400 Very toxic to aquatic life
- H410 Very toxic to aquatic life with long lasting effects
- EUH071 Corrosive to the respiratory tract.

List of abbreviations

- ADN European Agreement concerning the international Carriage of Dangerous Goods by Inlands Waterways

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its
amendment Regulation (EU) 2020/878

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ADR	European Agreement Concerning the Int. Carriage of Dangerous Goods by Road
CAS No	Chemical Abstract Service Index Number
CLP	Regulation of Classification, Labelling and Packaging of Chemicals
CLP	Regulation of Classification, Labelling and Packaging of Chemicals
EC No	Identifier in ESIS (European archive of existing substances)
EmS	Emergency Schedule
IATA DGR	International Air Transport Association Dangerous Goods Regulation
IMDG	International Maritime Code for Dangerous Goods
LC50	Lethal Concentration 50%
LD50	Dosage producing 50% mortality
PBT	Persistent Bioaccumulative Toxic
RID	International Rule for Transport of Dangerous Substances by Railway
STEL	Short-term exposure limit
TWA	Time-weighted average exposure limit
vPvB	Very Persistent, Very Bioaccumulative

Other Information:

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Organized by Gultekin Baskoylu (Chemist)

Sources of information:

- ECHA and related EU directives,
- UN ADR, IMDG, IATA lists,
- Safety data sheets for raw materials and product components,
- Other helpful resources.

Note for users

The information, recommendations and suggestions herein are believed to be reliable. However, it is the users responsibility to determine the safe handling and suitability for his/her use of the product described herein. Since the use by others is outside our control, no guarantee, expressed or implied, is made by TWL as to the effects of such use, the results obtained or the safety and toxicity of the product nor does TWL per se assume any liability arising out of use, by others of the product referred to herein. Nor is the information herein to be construed as absolutely complete since more information may be desirable or necessary when particular or exceptional circumstances exist, or because of applicable laws or government regulations.