

MATERIAL SAFETY DATA SHEET

Perrhenic acid

Version No. 1.0 **SDS reference number:** XXX
Initial issue date: XX-XX-XXXX **Revision date:** XX-XX-XXXX

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

1.1 PRODUCT IDENTIFIER

SUBSTANCE NAME: **PERHHENIC ACID**

EC No.: 237-380-4

IUPAC NAME: Hydroxy(trioxo)rhenium

REACH REGISTRATION No.: **TO BE ADDED BY COMPANY**

CAS No.: 13768-11-1

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

RELEVANT IDENTIFIED USES: Use as an intermediate (SU 9, SU 10, SU 14)
Use as a catalyst (SU 8)

USES ADVISED AGAINST: None identified

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:

MANUFACTURER/SUPPLIER: **TO BE ADDED BY COMPANY**

ADDRESS:

COUNTRY:

TELEPHONE NUMBER:

FAX NUMBER:

EMAIL ADDRESS OF COMPETENT PERSON RESPONSIBLE FOR THE SDS:

1.4 EMERGENCY TELEPHONE NUMBER: **TO BE ADDED BY COMPANY**

SECTION 2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

2.1.1 CLASSIFICATION ACCORDING TO REGULATION (EC) No 1272/2008 (CLP/GHS)

Metal Corr. 1, H290
Acute Tox. 4, H302
Skin Corr. 1A, H314
Eye Damage 1, H318

2.1.2 CLASSIFICATION ACCORDING TO EC DIRECTIVE 67/548/EEC

Xn Harmful; R22 Harmful if swallowed
C Corrosive; R35 Causes severe burns
Xi Irritant; R41 Risk of serious damage to eyes

SAFETY PHRASES

S1/2: Keep locked up and out of reach of children
S22: Do not breathe dust
S24: Avoid contact with skin
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S39: Wear eye/face protection
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

2.1.3 ADDITIONAL INFORMATION

2.2 LABEL ELEMENTS:

Labelling in accordance with Regulation EC No 1272/2008 (CLP)

PICTOGRAM(S):



SIGNAL WORD:

Danger

HAZARD STATEMENT(S):

H290: May be corrosive to metals
H302: Harmful if swallowed
H314: Causes severe skin burns and eye damage
H318: Causes serious eye damage

PRECAUTIONARY STATEMENT(S):

P101: If medical advice is needed, have product container or label in hand
P102: Keep out of reach of children
P103: Read label before use
P260: Do not breathe dust/fume/gas/mist/vapours/spray
P270: Do not eat, drink or smoke when using this product
P280: Wear protective gloves/protective clothing/eye protection/face protection
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P301+P330+P331: IF SWALLOWED: rinse mouth Do NOT induce vomiting
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310: Immediately call a POISON CENTER or doctor/physician
P321: Specific treatment (see...on this label)
P330: Rinse mouth
P363: Wash contaminated clothing before reuse
P405: Store locked up
P501: Dispose of contents/container to...

2.3 OTHER HAZARDS

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS-No	EINECS/ELINCS	WEIGHT % CONTENT
Perrhenic acid	13768-11-1	237-380-4	≥80% (w/w)
Water	7732-18-5	231-791-2	≤20% (w/w)

SECTION 4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

GENERAL NOTES:

In case of accident or if you feel unwell, seek medical advice immediately.

FOLLOWING INHALATION:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

FOLLOWING SKIN CONTACT:

Immediately rinse with water. Immediately remove all soiled and contaminated clothing. Seek medical treatment.

FOLLOWING EYE CONTACT:

Rinse opened eye for several minutes under running water. Then consult a doctor.

FOLLOWING INGESTION:

Rinse out mouth and then drink plenty of water. Do not induce vomiting; call for medical help immediately.

4.2 MOST IMPORTANT

EFFECTS/SYMPTOMS:

No data

4.3 IMMEDIATE MEDICAL ATTENTION

AND SPECIAL TREATMENT NEEDED:

No data

SECTION 5. FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

In case of fire, the following can be released: Metal oxide.

5.3 ADVICE FOR FIRE FIGHTERS

Wear self-contained respiratory protective device. Wear fully protective suit.

SECTION 5. FIREFIGHTING MEASURES

ADDITIONAL INFORMATION: Collect contaminated firefighting water separately. It must not enter the sewage system. Prevent any seepage into the ground.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: The usual precautionary measures are to be adhered to when handling chemicals. Wear protective equipment. Keep unprotected persons away. Avoid contact with the eyes and skin. Ensure adequate ventilation.

6.2 ENVIRONMENTAL PRECAUTIONS: Do not allow to enter sewers/surface or ground water. Do not allow to penetrate the ground/soil.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Send for recovery or disposal in suitable receptacles.

6.4 REFERENCE TO OTHER SECTIONS: See section 8 for personal protective equipment.

SECTION 7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING PROTECTIVE MEASURES: Wear protective equipment. Keep unprotected persons away. The usual precautionary measures are to be adhered to when handling chemicals. Ensure good ventilation/exhaustion at the workplace. Use respiratory protective device against the effects of fumes/dust/aerosol.

INFORMATION ABOUT FIRE- AND EXPLOSION PROTECTION: No data

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: REQUIREMENTS TO BE MET BY STOREROOMS AND VESSELS: Corrosive action on metals. Ensure adequate ventilation.

INFORMATION ABOUT STORAGE IN ONE COMMON STORAGE FACILITY: Not required.

FURTHER INFORMATION ABOUT STORAGE CONDITIONS: Keep container tightly sealed. Store in dry conditions.

7.3. SPECIFIC END USE(S): Use as an intermediate. Use as a catalyst.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROLS PARAMETERS:

DNELs	WORKERS				CONSUMERS			
	ACUTE EFFECT LOCAL	ACUTE EFFECT SYSTEMIC	CHRONIC EFFECT LOCAL	CHRONIC EFFECT SYSTEMIC	ACUTE EFFECT LOCAL	ACUTE EFFECT SYSTEMIC	CHRONIC EFFECT LOCAL	CHRONIC EFFECT SYSTEMIC
ROUTE OF EXPOSURE								
Oral	Not required				No data	No data	No data	No data
Inhalation	No data	No data	No data	No data	No data	No data	No data	No data
Dermal	No data	No data	No data	No data	No data	No data	No data	No data

PNECs

Freshwater No data

Freshwater sediment No data

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Marine water	No data
Marine sediment	No data
Intermittent releases	No data
STP	No data
Soil	No data
Air	No data
Secondary poisoning	No data
8.2 EXPOSURE CONTROLS:	No data
8.2.1 APPROPRIATE ENGINEERING CONTROLS:	Ensure good ventilation/exhaustion at the workplace.
8.2.2 PERSONAL PROTECTION:	Keep away from foodstuffs, beverages and feed. Do not eat or drink while working. Avoid contact with the eyes and skin. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/aerosols.
a) EYE PROTECTION:	Tightly sealed goggles.
b) SKIN PROTECTION:	Protective gloves, material of gloves: Nitrile rubber. For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable: Nitrile rubber (Thickness of glove material: 0.11 mm).
c) RESPIRATORY PROTECTION:	Use respiratory protective device against the effects of fumes/dust/aerosol. Filter P3.
d) BODY PROTECTION:	Protective work clothing

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Liquid
COLOUR:	Clear, colourless
ODOUR:	Odourless
pH:	0.7 (0.1%)
BOILING POINT AND BOILING RANGE:	102°C at 100.70 kPa (attributed to water loss from the aqueous solution, remaining residue underwent thermal decomposition)
MELTING/FREEZING POINT:	<-20 °C (<253 K) at 101.3 kPa
FLASH POINT:	Not applicable
FLAMMABILITY:	Not applicable
EVAPORATION RATE:	No data
VAPOUR PRESSURE:	Not applicable
DENSITY:	1.77 g/cm ³ at 20°C
WATER SOLUBILITY:	Very soluble
PARTITION COEFFICIENT: N-OCTANOL/WATER:	Not applicable
AUTO-IGNITION TEMPERATURE:	Not applicable

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

DECOMPOSITION TEMPERATURE:	No data
VISCOSITY:	No data
EXPLOSIVE PROPERTIES:	Non-explosive
OXIDISING PROPERTIES:	Non-oxidising
9.2 OTHER INFORMATION:	

SECTION 10. STABILITY AND REACTIVITY

10.1 REACTIVITY:	No dangerous reactions known.
10.2 CHEMICAL STABILITY:	TO BE ADDED BY COMPANY
10.3 POSSIBILITY OF HAZARDOUS REACTIONS:	TO BE ADDED BY COMPANY
10.4 CONDITIONS TO AVOID:	No further relevant information available.
10.5 INCOMPATIBLE MATERIAL:	Corrosive action on metals.
10.6 HAZARDOUS DECOMPOSITION PRODUCTS:	Metal oxide.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY:	LD50 rat (oral)	>500 to <2000	mg/kg bw
SKIN IRRITATION OR CORROSION:	Corrosive		
SERIOUS EYE DAMAGE/IRRITATION:	May cause severe eye damage		
RESPIRATORY OR SKIN SENSITISATION:	No data		
MUTAGENICITY:	No data		
CARCINOGENICITY:	No data		
REPEATED DOSE TOXICITY:	No data		
REPRODUCTIVE TOXICITY:	No data		

SECTION 12. ECOLOGICAL INFORMATION

12.1 TOXICITY:					
ACUTE TOXICITY:	Algae (OECD 201, <i>D. subspicatus</i>):	EC50	72 h	209.44	mg/L
	Invertebrates (OECD 202, <i>D. magna</i>):	EC50	48 h	>91.95	mg/L
	Fish:	No data			
	Microorganisms:	No data			
	Other organisms:	No data			

SECTION 12. ECOLOGICAL INFORMATION

CHRONIC TOXICITY:	No data
	Ecotoxicity results are read across from sodium rhenate, and results expressed as concentration of perrhenic acid.
12.2 PERSISTENCE AND DEGRADABILITY:	Not applicable
12.3 BIOACCUMULATIVE POTENTIAL:	No data
12.4 MOBILITY IN SOIL:	No data
12.5 PBT/VPvB ASSESSMENT:	No data
12.6 OTHER ADVERSE EFFECTS:	

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS:	
13.1.1 PRODUCT DISPOSAL:	Contact manufacturer for recycling information. Disposal must be made according to official regulations.
13.1.2 PACKAGING DISPOSAL:	Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

	ADR/RID	AND (R)	IMDG	ICAO/IATA
14.1 UNITED NATIONS (UN) NUMBER:	1760	No data	1760	1760
14.2 UN PROPER SHIPPING NAME:	1760 CORROSIVE LIQUID, N.O.S. (Hydroxytrioxorhenium(VII	No data	CORROSIVE LIQUID, N.O.S. (Hydroxytrioxorhenium(VII	CORROSIVE LIQUID, N.O.S. (Hydroxytrioxorhenium(VII
14.3 TRANSPORT HAZARD CLASS(S):	8 Corrosive substances	No data	8	8
14.4 PACKING GROUP:	II, Labels: 8	No data	II, Labels: 8, EmS Number: F-A, S-B	II, Labels: 8
14.5 ENVIRONMENTAL HAZARDS:	No data	No data	No data	No data
14.6 SPECIAL PRECAUTIONS FOR USER:	No data	No data	No data	No data
14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE:	No data	No data	No data	No data

SECTION 15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS:	The product is classified in accordance with EC Regulation 1272/2008 (CLP).
15.2 CHEMICAL SAFETY ASSESSMENT:	Not applicable

SECTION 16. OTHER INFORMATION

FURTHER INFORMATION:	The SDS has been revised in accordance with EC Regulation 1272/2008 (CLP)
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SECTION 16. OTHER INFORMATION

SOURCES OF DATA: IUCLID dataset

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