

Safety data sheet
According to Regulation n. 1907/2006 and Regulation 878/2020
CHLOROTRIS (TRIPHENYLPHOSPHINE) RHODIUM (I)



Revision n. 6 – 25.09.2024
Replaces revision n 4 - 29.11.2022

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

- 1.1 Product identifier**
Chemical name Clorotris(trifenilfosfina)rodio(I)
Product code 202
C.A.S. Registry Number 14694-95-2
EC Number 238-744-5
Molecular weight 925,2 g/mol
Raw Formula C54H45ClP3Rh
Reach registration number Exempt under Article 6(1)
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
Intended uses Industrial use. Catalyst for synthesis
Use advised against Check section 15
- 1.3 Details of the supplier of the safety data sheet**
Name FAGGI ENRICO S.P.A.
Adress 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 substance or mixture**
- | Hazard classes | Category codes | Hazard statements |
|-----------------|----------------|-------------------|
| Aquatic chronic | 2 | H411 |

2.2 Label elements

Pictograms



Signal word

-

Hazard statements

H411

Very toxic to terrestrial invertebrates

Precautionary statements

P391

Collect spillage

P273

Avoid release to the environment.

P501

Dispose of contents/container according to national regulations

2.3 Other hazards

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

3.1 Substance:

- Chemical name Clorotris(trifenilfosfina)rodio(I)
CAS Number 14694-95-2
EC Number 238-744-5

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INDEX	Not available
ATE	Not applicable
M Factor	Data no available

4. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Bring the victim in a very well ventilated area.
Ingestion	Call a doctor immediately.
Contact with skin	Wash with soap and water and rinse thoroughly.
Contact with eyes	Rinse with plenty of running water for at least 15 minutes while keeping the eyelids open (remove contact lenses if it is easy to do so). Consult an ophthalmologist.

Recommendations:

- Need to see a doctor immediately YES
- Possibility of delayed effects following exposure NO
- 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 NO

4.2 Most important symptoms and effects, both acute and delayed

No information available

4.3 Indication of any immediate medical attention and special treatment needed

None in particular

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	Suitable extinguishing media: CO ₂ , powder or water spray extinguishers. Extinguish large fires with water spray or alcohol-resistant foam.
Unsuitable extinguishing media	None

5.2 Special hazards arising from the substance or mixture

If involved in a fire it can develop fumes of hydrochloric acid and phosphorus oxides

5.3 Advice for firefighters

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)

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Keep away from contaminated area

6.1.2. For emergency responders

Use :

Chemical risk gloves compliant with EN420 EN374 standards

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

Complete clothing compliant with the UNI EN 13034: 2006 standard.

Check the spreading with absorbent material.

6.2 Environmental precautions

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In the event of infiltration into bodies of water or sewers or penetration into the ground, notify the competent authorities.

6.3 Methods and material for containment and cleaning up

6.3.1. Advice in order to contain a spill

None in particular

6.3.2. Advice in order to clean-up a spill

Wash the contaminated area with water. Prevent infiltration into the sewer, groundwater and surface 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

Use under suction. Use is permitted only to trained and informed personnel.

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 for safe storage, including any incompatibilities

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

Store in an area without drains or access to sewers and protected from humidity

7.2.2. Control of weather conditions, ambient pressure, temperature, sunlight, humidity, and vibration

7.2.3. Conditions to maintain the integrity of the substance or mixture

Keep in tightly closed containers. Avoid contact with oxygen in the air which can cause slow decomposition of the product.

7.2.4. Advice regarding the ventilation, specific design for storage rooms or vessels, quantity limits under storage conditions, packaging compatibilities

Store in a cool and dry warehouse

7.3. Specific end use(s)

Industrial use. Catalyst for synthesis

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

For this substance, the occupational and biological exposure limit values corresponding to the relative Community limit values referred to in Directives 98/24 / EC and 2004/37 / EC have not been established.

DNEL

No data available up to now

PNEC

No data available up to now

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Use under a fume hood. Periodically check the capacity of the hoods.

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8.2.2. Individual protection measures, such as personal protective equipment

Eye/face protection	Protective goggles for eyes compliant with Directive 89/686 / EEC and with standard EN166: 2001
Skin protection (hands)	Chemical gloves according to EN 420 EN 374 Glove material: nitrile rubber Material thickness: 0.38 mm Penetration time: ≥ 240 min DIN EN374 method
Skin protection (body)	Complete antacid clothing compliant with the UNI EN 13034: 2006 type 6
Respiratory protection	Semi-facial masks with ABEK-P3 filters

Thermal hazards The substance does not present thermal hazards

8.2.3. Environmental exposure controls

Maintain suction in all environments using localized collection systems and ambient air exchange. Do not use recirculating air suction systems. Avoid any spill into the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Crystalline powder
Colour	Red-brown
Odour	Odorless
Melting point/freezing point	Decomposes at 103 ° C
Boiling point or initial boiling point and boiling range	Not applicable
Flammability	Not inflammable
Lower and upper explosion limit	Not explosive
Flash point	Not inflammable
Auto-ignition temperature	Not inflammable
Decomposition temperature	103 ° C
pH	Not applicable
Kinematic viscosity	Not applicable
Solubility	0.09 mg/L
Partition coefficient n-octanol/water (log value)	Log Pow 5.69 at 20 ° C

Vapour pressure	Not applicable
Density and/or relative density	1.4 g / cm ³ at 20 ° C
Relative vapour density	Not applicable
Particle characteristics	<100 µm: 95.9%

9.2. Other information

None

10. STABILITY AND REACTIVITY

10.1 Reactivity

It can be corrosive to some metals due to the presence of chloride

10.2 Chemical stability

The product is stable if kept in an inert nitrogen atmosphere. It slowly decomposes in the air.

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10.3	Possibility of hazardous reactions	
	There are no known dangerous reactions.	
10.4	Conditions to avoid	
	None	
10.5	Incompatible materials	
	None	
10.6	Hazardous decomposition products	
	If involved in a fire it can develop fumes of hydrochloric acid and phosphorus oxides	
11.	TOXICOLOGICAL INFORMATION	
11.1	Information on hazard classes as defined in Regulation (EC) No 1272/2008	
	Acute toxicity	Oral LD50 > 5000 mg /kg bw (rat)
	Skin corrosion / irritation	Based on available data, the classification criteria are not met
	Serious eye damage/irritation	Based on available data, the classification criteria are not met
	Respiratory or skin sensitization	Based on available data, the classification criteria are not met
	Germ cell mutagenicity	Based on available data, the classification criteria are not met
	Carcinogenicity	No data available
	Reproductive toxicity	Based on available data, the classification criteria are not met
	STOT – single exposure	No data available
	STOT – repeated exposure	No data available
11.2	Information on other hazards	
	None	
12.	ECOLOGICAL INFORMATION	
12.1	Toxicity	EC50 (24h) (Daphnia): 12 mg/L EC50 (72h) (algae): 4.38 mg / L
12.2	Persistence and degradability	Not biodegradable
12.3	Bioaccumulative potential	No information is available
12.4	Mobility in soil	No information is available
12.5	Results of PBT and vPvB assessment	Not PBT nor vPvB
12.6	Endocrine disrupting properties	No known effects
12.7	Other adverse effects	No known effects
13.	DISPOSAL CONSIDERATIONS	
13.1.	Waste treatment methods	
	Dispose of waste according to current legislation.	
14.	TRANSPORT INFORMATION	
14.1	UN number or ID number	3077
14.2	Official UN shipping name	Environmentally hazardous substance, solid, n.o.s
14.3	Transport hazard class(es)	
	ADR/RID/IMDG/ICAO-IATA: Class:	9
	ADR/RID/IMDG/ICAO-IATA: Label:	9 + mark environmental hazard
	ADR: Tunnel restriction code	E
	IMDG - EmS:	F-A S-F
14.4	Packing group	

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14.5 Dangers for the environment

ADR/RID/ICAO-IATA: Product dangerous for the environment

IMDG: Marine Contaminant: yes

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

Bulk transport is not foreseen

15. REGULATORY INFORMATION

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" NO

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 NO

<https://echa.europa.eu/it/substances-restricted-under-reach>

15.2 Chemical safety assessment

A chemical safety assessment was not carried out

16. OTHER INFORMATION

16.1 Changes compared to the previous edition

Changes to sections 1 – 2 – 8 – 12-14- 16

16.2 Acronym 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

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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

16.3 Main references and data sources

ECHA's data bank on registered substances and soon to be registered substances:
<https://chem.echa.europa.eu/>

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

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