

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



Revision n. IV - 29.11.2022  
Replaces revision n III - 15.09.2022

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

**1.1 Product identifier**

Chemical name	Product code
Clorotris(trifenilfosfina)rodio(I)	202
C.A.S. Registry Number	14694-95-2
EC Number	238-744-5
Molecular weight	925,2 g/mol
Brut Formula	C54H45ClP3Rh
Reach registration number	A REACH registration number is not available for this substance as the annual year produced or imported is less than one tonne.

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Intended uses	Industrial use
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
<b>1.4 Emergency telephone number</b>	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**

n.a.

**Hazard statements**

H411 Very toxic to terrestrial invertebrates  
P391 Collect spillage

**Precautionary statements**

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)

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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
INDEX	Not available
ATE	Not applicable
M Factor	1

**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<sub>2</sub>, 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**

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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**

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**

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7.3. Store in a cool and dry warehouse

**7.3. Specific end use(s)**

Industrial use

**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.

**8.2. Exposure controls**

**8.2.1. Appropriate engineering controls**

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

**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 risk gloves compliant with EN420 EN374 standards

**Skin protection (body)** Complete antacid clothing compliant with the UNI EN 13034: 2006 type 6

**Respiratory protection** Semi-facial masks with P2 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	Magenta
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	insoluble

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	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 <sup>3</sup>
	Relative vapour density	Not applicable
	Particle characteristics	<100 µm: 95.9%
<b>9.2.</b>	<b>Other information</b>	
	None	
<b>10.</b>	<b>STABILITY AND REACTIVITY</b>	
<b>10.1</b>	<b>Reactivity</b>	
	It can be corrosive to some metals due to the presence of chloride	
<b>10.2</b>	<b>Chemical stability</b>	
	The product is stable if kept in an inert nitrogen atmosphere. It slowly decomposes in the air.	
<b>10.3</b>	<b>Possibility of hazardous reactions</b>	
	There are no known dangerous reactions.	
<b>10.4</b>	<b>Conditions to avoid</b>	
	None	
<b>10.5</b>	<b>Incompatible materials</b>	
	None	
<b>10.6</b>	<b>Hazardous decomposition products</b>	
	If involved in a fire it can develop fumes of hydrochloric acid and phosphorus oxides	
<b>11.</b>	<b>TOXICOLOGICAL INFORMATION</b>	
<b>11.1</b>	<b>Information on hazard classes as defined in Regulation (EC) No 1272/2008</b>	
	<b>Acute toxicity</b>	Oral LD50> 5000 mg / kg rat
	<b>Skin corrosion / irritation</b>	Based on available data, the classification criteria are not met
	<b>Serious eye damage/irritation</b>	Based on available data, the classification criteria are not met
	<b>Respiratory or skin sensitization</b>	Based on available data, the classification criteria are not met
	<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met
	<b>Carcinogenicity</b>	No data available
	<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met
	<b>STOT – single exposure</b>	No data available
	<b>STOT – repeated exposure</b>	No data available
<b>11.2</b>	<b>Information on other hazards</b>	
	None	
<b>12.</b>	<b>ECOLOGICAL INFORMATION</b>	
<b>12.1</b>	<b>Toxicity</b>	EC50 72h for freshwater algae: 4.38 mg / L
<b>12.2</b>	<b>Persistence and degradability</b>	Not biodegradable

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12.3	<b>Bioaccumulative potential</b>	No information is available	
12.4	<b>Mobility in soil</b>	No information is available	
12.5	<b>Results of PBT and vPvB assessment</b>	Not PBT nor vPvB	
12.6	<b>Endocrine disrupting properties</b>	No known effects	
12.7	<b>Other adverse effects</b>	No known effects	
13.	<b>DISPOSAL CONSIDERATIONS</b>		
13.1.	<b>Waste treatment methods</b>		
	Dispose of waste according to current legislation.		
14.	<b>TRANSPORT INFORMATION</b>		
14.1	<b>UN number or ID number</b>	Not subject to ADR regulations	
14.2	<b>UN proper shipping name</b>	Not applicable	
14.3	<b>Transport hazard class(es)</b>	Not applicable	
14.4	<b>Packing group</b>	Not applicable	
14.5	<b>Environmental hazards</b>	Not applicable	
14.6	<b>Special precautions for user</b>	Not applicable	
14.7	<b>Maritime transport in bulk according to IMO instruments</b>	Not applicable	
15.	<b>REGULATORY INFORMATION</b>		
15.1	<b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>		<b>Applicability</b>
	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
	<a href="https://echa.europa.eu/it/substances-restricted-under-reach">https://echa.europa.eu/it/substances-restricted-under-reach</a>		
15.2	<b>Chemical safety assessment</b>		
	A chemical safety assessment was not carried out		
16.	<b>OTHER INFORMATION</b>		
16.1	<b>Changes compared to the previous edition</b>		
	Regulatory update		
16.2	<b>Acronim and abbreviation legend</b>		
	ADR : Agreement concerning the International Carriage of Dangerous Goods by Road		
	GHS: Globally Harmonized System of Classification and Labelling of Chemicals		
	EINECS: European Inventory of Existing Commercial Chemical Substances		
	CAS: Chemical Abstract Service		
16.3	<b>Main references and data sources</b>		
	ECHA's data bank on registered substances and soon to be registered substances:		
	<a href="http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances">http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances</a>		

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**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