

Safety data sheet
According to Regulation n. 1907/2006 and Regulation 878/2020
Rh(cypy)Cl₂



Revision 4 – 07.01.2025
Replaces revision 3 - 29.11.2022

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

1.1 Product identifier

Chemical name	Rh (III) pentamethylcyclopentadienyl dichloride dimer
Product code	162
C.A.S. Registry Number	12354-85-7
EC number	625-704-0
INDEX number	Not available
Molecular weight	618.08 g/mol
Brute formula	C ₂₀ H ₃₀ Cl ₄ Rh ₂
Commercial name	Rh(cypy)Cl ₂
REACH registration number	Exempt under article 6(1)

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

Intended use: Industrial use. Catalyst for synthesis

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 substance or mixture

The product is classified as dangerous pursuant to the provisions of Regulation (EC) 1272/08 (CLP) and subsequent amendments. The product therefore requires a safety data sheet compliant with the provisions of Regulation (EC) 1907/06 and subsequent amendments. Any additional information regarding risks to health and / or the environment are reported in sections 11 and 12 of this sheet

Hazard class	Category codes	Hazards indications
Acute Tox.	4	H302
Acute Tox.	4	H312
Skin Irrit.	2	H315
Eye Irrit.	2	H319
Acute Tox.	4	H332
STOT SE	3	H335

2.2 Label elements:

Pictograms



Signal word

WARNING

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Hazard statement	H302	Harmful if swallowed	
	H312	Harmful in contact with skin	
	H315	Causes skin irritation	
	H319	Causes serious eye irritation	
	H332	Harmful if inhaled	
	H335	It can irritate the respiratory tract	
	Precautionary advise	P264	Wash your hands thoroughly after use
		P270	Do not eat, drink or smoke during use
		P280	Wear protective gloves / protective clothing / eye protection / face protection
		P301+P312	IF SWALLOWED: If you feel unwell, contact a poison control center / doctor
P302+P352	IN CASE OF CONTACT WITH SKIN: wash with plenty of water		
P305+P351+P338	IN CASE OF EYE CONTACT: rinse thoroughly for several minutes. Remove any contact lenses if easy to do. Continue rinsing		

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

CAS number : 12354-85-7
 EC number : 625-704-0
 Index Number : Not available
 ATE Oral: 500 mg/kg bw
 ATE Inhalation (dusts/mists): 1.5 mg/l
 ATE Cutaneous: 1100 mg/kg bw
 M factor : Not applicable

4. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Remove from exposure and breathe fresh air. If breathing is difficult, call a doctor right away.
Ingestion	Wash your mouth and give 2 glasses of water to drink. Consult a physician.
Contact with skin	Remove contaminated clothing and shoes and wash immediately and abundantly with water for at least 15 minutes. Get medical attention

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6.3.3 Other information

6.4 Reference to other sections

None

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

7.1.1. *Raccomentations 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*

Avoid raising dust clouds. Use under a hood.

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

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

Store in closed original container. Store in a well-ventilated, cool and dry place. Keep locked up.

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

Store in closed and labeled containers

7.2.3. *Conditions for keeping substances / mixtures intact*

Keep out of direct sunlight.

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

Keep out of direct sunlight.

7.3. Specific end use(s)

Industrial use. Catalyst for synthesis

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters (related to metallic Silver species)

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 hood.

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

Eye/face protection

Splashproof glasses compliant with Directive 89/686/EEC and EN166:2001 standard

Skin protection (hands)

Gloves compliant with EN 374

Glove Material:

Nitrile rubber

Thickness 0.11 mm

Penetration time: 480 minutes

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Skin protection (body)	Complete clothing compliant with UNI EN 13034:2006 type 6
Respiratory protection	In case of dust/mist formation: half-face masks with ABEK2P2 filters compliant with EN14387:2004 + a1:2008
Thermal hazards	none

8.2.3. Environmental exposure controls

Emissions from manufacturing processes, including those from ventilation equipment should be controlled for compliance with environmental protection legislation. Do not let the product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Solid
Color	Red
Odor	Odorless
Melting point / freezing point	> 300 ° C
Boiling point or initial boiling point and boiling range	Not applicable
Flammability	Not inflammable
Lower and upper explosive limits	Not explosive
Flash point	Not inflammable
Self-ignition temperature	Not applicable
Decomposition temperature	Data not available
pH	Not applicable
Kinematic viscosity	Not applicable
Solubility	Insoluble in water. Soluble in chloroform and acetone
Partition coefficient n-octanol / water (logarithmic value)	Not applicable
Vapor pressure	Not applicable
Density and / or relative density	Data not available
Relative vapor density	Not applicable
Characteristics of the particles	Data not available

9.2. Other information

None

10. STABILITY AND REACTIVITY

10.1 Reactivity

Catalytic properties

10.2 Chemical stability

This product does not exhibit reactivity under the specified conditions of storage, shipping and use.

10.3 Possibility of hazardous reactions

None in particular

10.4 Conditions to avoid

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10.5	None in particular Incompatible materials	
10.6	None in particular Hazardous decomposition products	
11.	CO and Cl ₂ TOXICOLOGICAL INFORMATION	
11.1	Information on hazard classes as defined in Regulation (EC) No 1272/2008	
	Acute toxicity	ATE Oral: 500 mg/kg bw ATE Inhalation (dusts/mists): 1.5 mg/l ATE Cutaneous: 1100 mg/kg bw
	Skin corrosion / irritation	The product causes skin irritation
	Serious eye damage/irritation	The product causes serious eye irritation
	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	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	The product is classified as STOT SE 3 but no other data are available
	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	Based on available data, the classification criteria are not met
12.2	Persistence and degradability	Data not available
12.3	Bioaccumulative potential	Data not available
12.4	Mobility in soil	Data not available
12.5	Results of PBT and vPvB assessment	Not applicable
12.6	Endocrine disrupting properties	No known effects
12.7	Other adverse effects	None known
13.	DISPOSAL CONSIDERATIONS	
13.1.	Waste treatment methods	
	Both the mixture and the packaging must be sent to plants authorized for the disposal of industrial waste.	
14.	TRANSPORT INFORMATION	
14.1	UN number or ID number	not subject to ADR regulations
14.2	Official UN shipping name	Not applicable

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14.3	Transport hazard class(es)	Not applicable
14.4	Packing group	Not applicable
14.5	Dangers for the environment	Not applicable
14.6	Special precautions for user	
	None	
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	YES
	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 75 (check link)
15.2	Chemical safety assessment	
	A chemical safety assessment has not been carried out	
16.	OTHER INFORMATION	
16.1	Changes compared to the previous edition	
	Changes to sections: 1-2-8-11-12-16	
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	
	DNEL: derived no effect level	
	TLV (ceiling value): threshold limit value	

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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/>

16.4 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