

Revision Date 11-Jan-2013

Revision Number 4

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

Product Identifier

Product Description:

Doyle dirhodium catalyst - RH₂(4S-MEOX)₄

Cat No.

302540000; 302540250

Synonyms

Dirhodium(II)tetrakis[methyl 2-oxazolidinone-4(S)-carboxylate], acetonitrile complex

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

Recommended Use

Laboratory chemicals

Uses advised against

No Information available

Details of the supplier of the safety data sheet

Company

Acros Organics BVBA
Janssen Pharmaceuticaaan 3a
2440 Geel, Belgium

E-mail address

begel.sdsdesk@thermofisher.com

Emergency Telephone Number

For information in the US, call: 001-800-ACROS-01

For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300

CHEMTREC Phone Number, Europe: 001-703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity - (single exposure)	Category 3

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

Symbol(s)

Xn - Harmful

R-phrases(s)

Risk Combination Phrases

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

R36/37/38 - Irritating to eyes, respiratory system and skin

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SECTION 2. HAZARDS IDENTIFICATION

Label Elements



Signal Word

Warning

Hazard Statements

H302 - Harmful if swallowed
 H332 - Harmful if inhaled
 H312 - Harmful in contact with skin
 H315 - Causes skin irritation
 H319 - Causes serious eye irritation
 H335 - May cause respiratory irritation

Precautionary Statements - EU (§28, 1272/2008)

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell
 P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Other Hazards

No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC-No.	Weight %	CAS-No	67/548/EEC Classification	CLP Classification - Regulation (EC) No 1272/2008	REACH No.
Doyle dirhodium catalyst - RH2(4S-MEOX)4 167693-36-9		100	167693-36-9	Xn;R20/21/22 Xi;R36/37/38	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Acute Tox. 4 (H312) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)	-

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For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

SECTION 4. FIRST AID MEASURES**Description of first aid measures****General Advice**

If symptoms persist, call a physician Show this safety data sheet to the doctor in attendance
Do not breathe dust/fume/gas/mist/vapors/spray Do not get in eyes, on skin, or on clothing

Eye Contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Skin Contact

Remove and wash contaminated clothing before re-use. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Ingestion

Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do not induce vomiting.

Inhalation

Move to fresh air. Consult a physician. If breathing is irregular or stopped, administer artificial respiration. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device.

Protection of First-aiders

Use personal protective equipment

Notes to Physician

Treat symptomatically

SECTION 5. FIRE-FIGHTING MEASURES**Extinguishing media****Suitable Extinguishing Media**

Water spray. Carbon dioxide (CO₂). Dry chemical. chemical foam.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Explosive properties.

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

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Ensure adequate ventilation

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas.. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with skin. No information available.. Do not breathe dust. Do not take internally. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

Specific End Uses

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Component

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European Union	The United Kingdom	France	Belgium	Spain
				VLA-ED: 1 mg/m ³ 8 horas

Component

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Italy	Germany	Portugal	The Netherlands	Finland
		TWA: 1 mg/m ³ 8 horas		

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas

Personal protective equipment

Eye Protection

Goggles

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Hand Protection
Skin and body protection
Respiratory Protection

 Protective gloves
 Wear appropriate protective gloves and clothing to prevent skin exposure
 Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Hygiene Measures
Environmental exposure controls

 Handle in accordance with good industrial hygiene and safety practice
 Do not allow material to contaminate ground water system

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Red brown
pH	No information available.
Boiling Point/Range	No information available.
Melting Point/Range	293°C / 559.4°F
Flash Point	No information available.
Autoignition Temperature	No information available.
Water Solubility	Insoluble
Molecular Formula	C24 H30 N6 O16 Rh2
Molecular Weight	864.34

SECTION 10. STABILITY AND REACTIVITY
Reactivity
Chemical Stability

Moisture sensitive.

Possibility of Hazardous Reactions

Hazardous Polymerization	No information available.
Hazardous Reactions .	No information available.

Conditions to Avoid

Avoid dust formation, Incompatible products, Exposure to moist air or water.

Incompatible Materials

Acids, Bases, Metals, Reducing agents.

Hazardous Decomposition Products

 Nitrogen oxides (NO_x). Carbon monoxide (CO). Carbon dioxide (CO₂). Hydrogen cyanide (hydrocyanic acid).

SECTION 11. TOXICOLOGICAL INFORMATION

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SECTION 11. TOXICOLOGICAL INFORMATIONInformation on Toxicological EffectsAcute Toxicity**Product Information** No acute toxicity information is available for this product**Component Information**Chronic Toxicity**Carcinogenicity** There are no known carcinogenic chemicals in this product**Sensitization**

No information available.

Mutagenic Effects

No information available

Reproductive Effects

No information available.

Developmental Effects

No information available.

Target Organs

Respiratory system

Other Adverse Effects

The toxicological properties have not been fully investigated.

Endocrine Disruptor Information

None known

SECTION 12. ECOLOGICAL INFORMATIONToxicity**Ecotoxicity effects** Do not empty into drainsPersistence and degradability

No information available

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessmentOther adverse effects

No information available

SECTION 13. DISPOSAL CONSIDERATIONSWaste treatment methods**Waste from Residues / Unused Products**

Dispose of in accordance with local regulations

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**Contaminated Packaging
Other Information**

Empty containers should be taken to local recyclers for disposal
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific Waste codes should be assigned by the user based on the application for which the product was used

SECTION 14. TRANSPORT INFORMATION**IMDG/IMO**

UN-No	UN2811
Hazard Class	6.1
Packing Group	III
Proper Shipping Name	Toxic solid, organic, n.o.s

ADR

UN-No	UN2811
Hazard Class	6.1
Packing Group	III
Proper Shipping Name	Toxic solid, organic, n.o.s

IATA

UN-No	UN2811
Hazard Class	6.1
Packing Group	III
Proper Shipping Name	Toxic solid, organic, n.o.s

SECTION 15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories****Legend****TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**CHINA** - China Inventory of Existing Chemical Substances**AICS** - Inventory of Chemical Substances**KECL** - Existing and Evaluated Chemical Substances

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Chemical Safety Assessment**SECTION 16. OTHER INFORMATION****Full text of R-phrases referred to under sections 2 and 3**

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

R36/37/38 - Irritating to eyes, respiratory system and skin

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Revision Summary

Reason for revision (M)SDS sections updated, 2, 3, 14, 16.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet