Rhodium, carbonyl(2,4-pentanedionato-kO₂,kO₄)(triphenylphosphine)-,(SP-4-2)-(cas 25470-96-6) MSDS

Johnson Matthey
ACETYLACETONATOCARBONYLTRIPHENYLPHOSPHINERHODIUM
209043 2.00 EC Current 11.08.1999

1. PRODUCT AND COMPANY IDENTIFICATION
209043
Product Code
ACETYLACETONATOCARBONYLTRIPHENYLPHOSPHINERHODIUM
Trade Name
Substance
Johnson Matthey PLC
Manufacturer/Supplier
Precious Metals Division, Chemicals
Address
Orchard Road
ROYSTON, Hertfordshire
SG8 5HE
+(44) 1763 253000
+(44) 1763 253155
Fax Number
Carbonyl(2-4-pentanedionato)triphenylphosphinerhodium(I)
Composition
(CO)₂P(C??H??) (CH -CO-CH-CO-CH )Rh(I)
2
JM Version Number
08/12/92
date of First Issue

2. COMPOSITION/INFORMATION ON THE COMPONENTS
ACETYLACETONATOCARBONYLTRIPHENYLPHOSPHINERHODIUM
Product Formal Name
Product Chemical Family Not Specified
25470-96-6
CAS Number

3. HAZARD IDENTIFICATION
This material is of low acute toxicity and is not classified as harmful. It is only mildly irritating to the skin and is not irritating to the eyes. However animal tests have indicated that it is a moderate skin sensitisier (grade III) according to the Magnusson and Kligman test.
Inhalation of dust may produce irritation of the respiratory tract with a possibility that chronic over-exposure may lead to pulmonary fibrosis.
There is no evidence that Rhodium compounds produce the severe sensitisation of their Platinum analogues. ? ? ?

4. FIRST AID MEASURES
Inhalation of dust may produce irritation of the respiratory system.
First Aid
Ingestion may cause nausea and vomiting.
Eye contact may cause mechanical irritation.
Skin contact may cause irritation and, if prolonged or repeated contact occurs, possible sensitisation and subsequent dermatitic reactions. ? ? ?
remove from exposure and allow to rest in fresh air. Seek medical attention if
First Aid - Inhalation
symptoms persist.
rinse mouth with clean water, give milk or water to drink. Seek medical
First Aid - Ingestion
attention if symptoms persist,
irrigate with clean water or isotonic saline for 5 minutes. Seek medical
First Aid - Eyes
attention if symptoms persist.
remove contaminated clothing, wash skin with soap and water. If symptoms
First Aid - Skin
persist or sensitisation is suspected seek medical advice.

5. FIRE FIGHTING MEASURES
Although the material is not flammable, toxic fumes will be produced if
involved in a fire. The residue, ash or char left after a fire may have catalytic
properties and may promote the re-ignition of flammable materials and
vapours. Wear self-contained breathing apparatus and personal protective
equipment. Use any extinguisher suitable for the surrounding fire.

6. ACCIDENTAL RELEASE MEASURES

6. ACCIDENTAL RELEASE MEASURES (continued)

Collect in a suitable container for re-use, re-cycling or for disposal.

7. HANDLING AND STORAGE
If the process is dusty or if fume is created, local exhaust extraction should be
Handling (JM)
used and protective clothing, including gloves and eye protection, should be
worn. There are no special requirements if used under ordinary conditions
and with adequate ventilation.
Store in a cool, dry area away from incompatible materials, such as liquid
Storage (JM)
halogenated hydrocarbons and oxidising agents. Protect from physical
damage. Powder and other active forms should be kept in tightly sealed
containers under nitrogen.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
UK HSE OES for rhodium metal fume and dust - 0.1 mg/m³
for soluble salts - 0.001 mg/m³
USA ACGIH TLV for rhodium metal - 1 mg/m³
for insoluble compounds - 1 mg/m³
for soluble compounds - 0.01 mg/m³

If a risk of inhalation exists, users should wear an appropriate filter-type
respirator. Suitable eye protection, such as goggles, should also be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES
yellow, micro-crystalline powder.
Appearance
No odour.
Odour
not applicable
pH
Boiling Range/Point not applicable.
decomposes to the metal on ignition.
Melting Point
not applicable.
Flash Point
not flammable.
Flammability
not applicable.
Auto-flammability
not explosive.
Explosive Properties
not oxidising.
Oxidising Properties
no data.
Vapour Pressure
Density no data.
Water - insoluble.
Solubility in Water
Fat - no data. Insoluble in n-hexane.
Very slightly soluble in methanol, ethanol, diethyl ether or ethyl acetate.
Fairly soluble in toluene.
Soluble in chloroform.
no data.
Partition Coefficient

10. STABILITY AND REACTIVITY
The material is supplied in a stable condition and no reactive hazards are known.

11. TOXICOLOGICAL INFORMATION
LD50 (oral-rat) >2000 mg/kg; LD50 (dermal-rat) >2000 mg/kg.
eye-rabbit: non-irritant
skin-rabbit: mild irritant

Magnusson and Kligman test: moderate skin sensitiser (Grade III).
There is no evidence that rhodium compounds give rise to an allergy problem (Type I) sensitisation, similar to that observed with platinum-halogen complexes.

12. ECOLOGICAL INFORMATION
The effect of rhodium compounds on the environment has not been investigated but the hazard is thought to be low. Rhodium is not concentrated by plants or animals. Natural processes will tend to produce insoluble compounds.

13. DISPOSAL
Return accumulated waste material to the refinery for metal recovery, or dispose of in accordance with local and national regulations.

14. TRANSPORT INFORMATION
Not restricted.

15. REGULATORY INFORMATION
Irritant
Labelling Information
R43 May cause sensitisation by skin contact.
R phrases
S36 Wear suitable protective clothing.
S phrases
2470150
EINECS Number
Xi - Irritant
EC Annex I Classification
16. OTHER INFORMATION

30 July 1999
MSDS first issued
11 August 1999
MSDS data revised

This information relates only to the specific material designated and may not be valid for such material used in combination
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be assumed.

Reference Sources

REFERENCE SOURCES

Registry of Toxic Effects of Chemical Substances. Published by the National Institute of Occupational Safety and Health. USA.
Oil and Hazardous Materials Technical Assistance Data System. Published by The Office of Water and Waste Management.
Environmental Protection Agency USA.
Chemical Hazard Response Information System. Published by US Coast Guard.
NIOSH/HTC Occupational Safety and Health database. Published by the National Institute of Occupational Safety and Health.
USA.
HSSELINE Health and Safety Executive Library and Information Service. Published by the Health and Safety Executive. UK.
CISDOC International Occupational Safety and Health Database. Published by the International Labour Organisation, Geneva.
RISKLINE. Published by the National Chemical Inspectorate. Sweden.
TOKLINE. Published by the Chemical Abstracts Service. USA.
Developmental and Reproductive Toxicology. The National Library of Medicine. USA.
Toxicity, Bibliography. The National Library of Medicine. USA.
Environmental Mutagen Information. Oak Ridge National Laboratory. USA.

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16. OTHER INFORMATION (continued)

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Epidemiology Information. The food and Drug Administration. International Pharmaceutical Abstracts. The American Society of Hospital Pharmacists. USA.
Toxicology Document and Data Depository. National Technical Information Service. USA.
Federal Research in Progress. National Technical Information Service. USA.
Toxicology Research Projects. National Institutes of Health. Toxic Substances Control Act Test Submissions. The Environmental Protection Agency. USA.
Patty's Industrial Hygiene and Toxicology 3rd edition.
Bretherick's Handbook of Reactive Chemical Hazards. 5th edition.
Grant's Toxicology of the Eye. 3rd edition.
Merck Index 10th edition.
Handbook on Toxicology of Inorganic Compounds. Seiler, Sigel and Sigel.
Catalog of Teratogenic Agents. Shepard. 4th edition
Reproductive Hazards of Industrial Chemicals, Barlow and Sullivan.
Royal Society of Chemistry, Chemical Safety Data Sheets. JMAC Approved applications -
National Sales Offices
Johnson Matthey PLC, 33 Jeffreys Road, Brimsdown, ENFIELD, Middlesex EN3 7PW, United Kingdom, Tel:- 0181 8048111,
Fax:- 0181 8041918

S.A. Johnson Matthey N.V., 8 Avenue de Bale, 1140 BRUSSEL, Belgï¿½ / Belgique, Tel:- 2 729 0711, Fax:- 2 216 9061
Johnson Matthey S.A., Vallèsprir, 193-195, 08014 BARCELONA, Espa?a, Tel:- (93) 490 86 86, Fax:- (93) 490 68 98
Johnson Matthey A/S, Frederikssundsvej 274 D, Br??nsh??j 2700, Denmark, Tel:- 38 89 62 00, Fax:- 38 89 62 01
Johnson Matthey PLC, Unit 1 - 2, Blanchardstown Business Centre, Clonsilla Road, Blanchardstown, Dublin 15, Republic of
Ireland, Tel:- 1 820 7722, Fax:- 1 820 7733

Johnston Matthey GmbH, Alfa Products, Zeppelinstrasse 7, Postfach 6540, D-7500 KARLSRUHE 1, Deutschland, Tel:- 721
840070, Fax:- 721 849674

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