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SECTION 1: Identification of the substance/mixture and of the company/undertaking

- · 1.1 Product identifier
- · Trade name: Carbonyl(acetylacetonato)(triphenylphosphine)rhodium(I), 99%
- *Item number:* 45-0355
- 1.2 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.
- · 1.3 Details of the supplier of the safety data sheet

 Manufacturer/Supplier: Strem Chemicals, Inc.
7 Mulliken Way NEWBURYPORT, MA 01950 USA info@strem.com

- · Further information obtainable from: Technical Department
- 1.4 Emergency telephone number: EMERGENCY: CHEMTREC: + 1 (800) 424-9300 During normal opening times: +1 (978) 499-1600

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture · Classification according to Regulation (EC) No 1272/2008

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008
- The product is classified and labelled according to the CLP regulation.
- Hazard pictograms



| • Signal word Wa | rning |
|--------------------|---|
| · Hazard statemen | 8 |
| H315 Causes ski | n irritation. |
| H319 Causes set | ious eye irritation. |
| · Precautionary st | atements |
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |
| P103 | Read label before use. |
| P262 | Do not get in eyes, on skin, or on clothing. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P305+P351+P3 | 38 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
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P501

(Contd. of page 1) Dispose of contents/container in accordance with local/regional/national/international regulations.

· 2.3 Other hazards

- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

- · Description: Mixture of substances listed below with nonhazardous additions.
- · Dangerous components: Void
- Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- · 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- Suitable extinguishing agents:
- CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- · 5.3 Advice for firefighters
- · Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Not required.
- · 6.2 Environmental precautions: No special measures required.
- 6.3 Methods and material for containment and cleaning up:
- Dispose contaminated material as waste according to item 13.
- 6.4 Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

• 7.1 Precautions for safe handling No special precautions are necessary if used correctly.

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- Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed.
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · 8.1 Control parameters
- · Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

• Additional information: The lists valid during the making were used as basis.

· 8.2 Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

• **Respiratory protection:** Not required.

• Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation \cdot *Material of gloves*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. • Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

| • 9.1 Information on basic phys • General Information | ical and chemical properties |
|--|------------------------------|
| · Appearance: | |
| Form: | Solid |
| Colour: | Yellow |
| · Odour: | Odourless |

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| | (Contd. of | pag |
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| Odour threshold: | Not determined. | |
| pH-value: | Not applicable. | |
| Change in condition Melting point/freezing point: Initial boiling point and boiling range | Undetermined. e: 0 °C | |
| Flash point: | 0 °C | |
| Flammability (solid, gas): | Not determined. | |
| Ignition temperature: | | |
| Decomposition temperature: Not determined. | | |
| Auto-ignition temperature: | Product is not selfigniting. | |
| Explosive properties: | Product does not present an explosion hazard. | |
| Explosion limits: Lower: Upper: | Not determined. Not determined. | |
| Vapour pressure: | Not applicable. | |
| Density: Relative density Vapour density Evaporation rate | Not determined. Not determined. Not applicable. Not applicable. | |
| Solubility in / Miscibility with water: | Insoluble. | |
| Partition coefficient: n-octanol/water: | Not determined. | |
| Viscosity: Dynamic: Kinematic: | Not applicable. Not applicable. | |
| Solvent content: Organic solvents: VOC (EC) 9.2 Other information | 0.0 % 0.00 % No further relevant information available. | |

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

· 10.2 Chemical stability

• Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

- · 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.

• 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

 \cdot Acute toxicity Based on available data, the classification criteria are not met.

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- · Primary irritant effect:
- · Skin corrosion/irritation
- Causes skin irritation. • Serious eye damage/irritation
- Causes serious eye irritation.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · 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 Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- · Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes: Not known to be hazardous to water.
- · 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

| · 14.1 UN-Number · ADR, ADN, IMDG, IATA | not noculated | |
|--|---------------|--|
| | not regulated | |
| \cdot 14.2 UN proper shipping name | | |
| · ADR, ADN, IMDG, IATA | not regulated | |
| · 14.3 Transport hazard class(es) | | |
| · ADR, ADN, IMDG, IATA | | |
| · Class | not regulated | |
| · 14.4 Packing group | | |
| $\cdot ADR, IMDG, IATA$ | not regulated | |

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| | (Contd. of page 5 |
|-----------------|---|
| | |
| No | |
| Not applicable. | |
| nex II of | |
| Not applicable. | |
| not regulated | |
| | Not applicable. nex II of Not applicable. |

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I None of the ingredients is listed.

• 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Technical Department.

· Contact: Technical Director

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Skin corrosion/irritation – Category 2 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2