Printing date 16.07.2021

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SECTION 1: Identification of the substance/mixture and of the company/undertaking
· 1.1 Product identifier
· Trade name: 1-{(1R,2S)-1-[(11bR)-Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-4-yloxy]-1-phenylpropan-
2-yl}-3-phenylurea, min. 97%

- Item number: 15-2202
- · CAS Number:
- 1198080-55-5
- · 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. STOT SE 3 H335 May cause respiratory irritation.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008 The substance is classified and labelled according to the CLP regulation. · Hazard pictograms



· Signal word Warning

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· Hazard-determining components of labelling:
phenylurea, min. 97%
· Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
· Precautionary statements
P101
               If medical advice is needed, have product container or label at hand.
                                                                        (Contd. on page 2)
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HEMICALS, INC.

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 16.07.2021

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Trade name: 1-{(1R,2S)-1-[(11bR)-Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-4-yloxy]-1-phenylpropan-2-yl}-3-phenylurea, min. 97%

(Contd. of page 1)

	(F-8)
P102	Keep out of reach of children.
P103	Read label before use.
P231	Handle under inert gas.
P235	Keep cool.
P222	Do not allow contact with air.
P305+P351	+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if
	present and easy to do. Continue rinsing.
P422	Store contents under inert gas.
P501	Dispose of contents/container in accordance with local/regional/national/international
	regulations.
· 2.3 Other ha	izards

• Results of PBT and vPvB assessment

• *PBT:* Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.1 Chemical characterisation: Substances

· CAS No. Description

1198080-55-5 1-{(1R,2S)-1-[(11bR)-Dinaphtho[2,1-d:1',2'-f][1,3, 2]dioxaphosphepin-4-yloxy]-1-phenylpropan-2-yl}-3phenylurea, min. 97%

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: Use fire extinguishing methods suitable to surrounding conditions.
- · 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.

(Contd. on page 3)

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(Contd. of page 2)

Ensure adequate ventilation.

- · 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 Open and handle receptacle with care.
- Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage: Keep cool.
- 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.
- Store in cool, dry conditions in well sealed receptacles.
- Recommended storage temperature: Store at temperatures not exceeding -18 °C. Keep cool.
- · 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: Not required.
- 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:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

• 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 • 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.

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3-phenylurea, min. 97%	htho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-4-yloxy]-1-phenylpropan-2
	(Contd. of pa
Penetration time of glove material	(condici pr
	be found out by the manufacturer of the protective gloves and has t
observed.	
Eye protection:	
Tightly sealed goggles	
9.1 Information on basic physical and	chemical properties
General Information	enemieu properties
Appearance:	
Form:	Powder
Colour:	White
Odour:	Odourless
Odour threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	**
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling ran	
Flash point:	Not applicable.
Flammability (solid, gas):	Not determined.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Not determined.
Explosive properties:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure:	Not applicable.
Density:	Not determined.
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
water:	Insoluble.
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.00 %
Solids content:	100.0 %
	(Contd. on pa



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(Contd. of page 4)

• 9.2 Other information

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

- · Acute toxicity Based on available data, the classification criteria are not met.
- 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
- May cause respiratory irritation.

· 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.

(Contd. on page 6)

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(Contd. of page 5)

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.

SECTION 14: Transport information		
· 14.1 UN-Number · ADR, ADN, IMDG, IATA	not regulated	
· 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 · ADR, IMDG, IATA	not regulated	
· 14.5 Environmental hazards: · Marine pollutant:	No	
· 14.6 Special precautions for user	Not applicable.	
• 14.7 Transport in bulk according to Ann. Marpol and the IBC Code	nex II of Not applicable.	
· UN ''Model Regulation'':	not regulated	

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 Substance is not 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

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GB

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: Serious eye damage/eye irritation – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3