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CHEMICALS, INC.

	7.2021	
SECTION 1	: Identification of the substance/mixture and of	the company/undertaking
· 1.1 Product ide	entifier	
	- N-Phenyl-2-(di-t-butylphosphino)pyrrole, 95+% [cataCXiu	m® PtB]
• Item number: • CAS Number: • 672937-61-0 • 1.2 Relevant id		
• 1.3 Details of t • Manufacturer Strem Chemica 7 Mulliken Way NEWBURYPO USA info@strem.co	uls, Înc. y RT, MA 01950	
	nation obtainable from: Technical Department y telephone number:	
EMERGENCY:	: CHEMTREC: + 1 (800) 424-9300 l opening times: +1 (978) 499-1600	
EMERGENCY: During normal	: CHEMTREC: + 1 (800) 424-9300	
EMERGENCY: During normal SECTION 2 2.1 Classificati Classification d	 CHEMTREC: + 1 (800) 424-9300 l opening times: +1 (978) 499-1600 C: Hazards identification C: Hazards identification con of the substance or mixture according to Regulation (EC) No 1272/2008 is not classified according to the CLP regulation. 	
EMERGENCY: During normal SECTION 2 2.1 Classificati Classification of The substance 2.2 Label elemant Labelling acco Hazard pictogr	 CHEMTREC: + 1 (800) 424-9300 l opening times: +1 (978) 499-1600 C: Hazards identification ion of the substance or mixture according to Regulation (EC) No 1272/2008 is not classified according to the CLP regulation. is not classified according to the CLP regulation. 	
EMERGENCY: During normal SECTION 2 2.1 Classification Classification of The substance 2.2 Label eleme Labelling acco Hazard pictogr Signal word Vo Hazard statema	CHEMTREC: + 1 (800) 424-9300 I opening times: +1 (978) 499-1600 C: Hazards identification ion of the substance or mixture according to Regulation (EC) No 1272/2008 is not classified according to the CLP regulation. tents ording to Regulation (EC) No 1272/2008 Void rams Void oid tents Void total statements	
EMERGENCY: During normal SECTION 2 2.1 Classification Classification of The substance Labelling acco Hazard pictogr Signal word Vo Hazard statema Precautionary P231 P222	 CHEMTREC: + 1 (800) 424-9300 l opening times: +1 (978) 499-1600 C: Hazards identification ion of the substance or mixture according to Regulation (EC) No 1272/2008 is not classified according to the CLP regulation. is not classified according to the CLP regulat	ral minutes. Remove contact lenses, if
EMERGENCY: During normal SECTION 2 2.1 Classification Classification of The substance Labelling acco Hazard pictogr Signal word Vo Hazard statema Precautionary P231 P222	Chemtre C: + 1 (800) 424-9300 I opening times: +1 (978) 499-1600 C: Hazards identification ion of the substance or mixture according to Regulation (EC) No 1272/2008 is not classified according to the CLP regulation. tents ording to Regulation (EC) No 1272/2008 Void rams Void oid tents Void statements Handle under inert gas. Do not allow contact with air.	v closed.

· 3.1 Chemical characterisation: Substances · CAS No. Description 672937-61-0 N-Phenyl-2-(di-t-butylphosphino)pyrrole, 95+% [cataCXium® PtB]

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SECTION 4: First aid measures

- 4.1 Description of first aid measures
- · General information: No special measures required.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately rinse with water.
- · After eye contact: Rinse opened eye for several minutes under running water. Then 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.
- \cdot 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.
- · 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 measures required. Open and handle receptacle with care.
- · Handling: Handle under inert gas.
- · Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- Storage: Store contents under inert gas.
- 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: None.
- · 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.

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	uire monitoring at the workplace: Not required. id during the making were used as basis.
 8.2 Exposure controls Personal protective equipment: General protective and hygienic mea The usual precautionary measures ar Respiratory protection: Not required. Protection of hands: 	e to be adhered to when handling chemicals.
Protective gloves	
Due to missing tests no recommendation chemical mixture. Selection of the glove material on con • Material of gloves	eable and resistant to the product/ the substance/ the preparation. tion to the glove material can be given for the product/ the preparation/ the asideration of the penetration times, rates of diffusion and the degradation oes not only depend on the material, but also on further marks of quality and turer.
The exact break through time has to observed.	b be found out by the manufacturer of the protective gloves and has to be
• Eye protection: Safety glasses	
 9.1 Information on basic physical an General Information 	nd chemical properties
 9.1 Information on basic physical an General Information Appearance: 	
 9.1 Information on basic physical an General Information Appearance: Form: 	Powder
 9.1 Information on basic physical an General Information Appearance: 	
 9.1 Information on basic physical an General Information Appearance: Form: Colour: 	Powder Light yellow
 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: 	Powder Light yellow Odourless
 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour: pH-value: 	Powder Light yellow Odourless Not determined.
 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour threshold: 	Powder Light yellow Odourless Not determined.
 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour: pH-value: Change in condition 	Powder Light yellow Odourless Not determined. Not applicable. Undetermined.
 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour threshold: pH-value: Change in condition Melting point/freezing point: 	Powder Light yellow Odourless Not determined. Not applicable. Undetermined.
 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour: PH-value: Change in condition Melting point/freezing point: Initial boiling point and boiling ran 	Powder Light yellow Odourless Not determined. Not applicable. Undetermined. nge: Undetermined.
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 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour threshold: pH-value: Change in condition Melting point/freezing point: Initial boiling point and boiling ran Flash point: Flammability (solid, gas): 	Powder Light yellow Odourless Not determined. Not applicable. Undetermined. nge: Undetermined. Not applicable.
 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour threshold: pH-value: Change in condition Melting point/freezing point: Initial boiling point and boiling ran Flash point: Flammability (solid, gas): Ignition temperature: 	Powder Light yellow Odourless Not determined. Not applicable. Undetermined. nge: Undetermined. Not applicable. Product is not flammable.
 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour threshold: pH-value: Change in condition Melting point/freezing point: Initial boiling point and boiling ran Flash point: Flammability (solid, gas): Ignition temperature: Decomposition temperature: 	Powder Light yellow Odourless Not determined. Not applicable. Undetermined. nge: Undetermined. Not applicable. Product is not flammable. Not determined.
 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour threshold: pH-value: Change in condition Melting point/freezing point: Initial boiling point and boiling ran Flash point: Flammability (solid, gas): Ignition temperature: Decomposition temperature: Auto-ignition temperature: 	Powder Light yellow Odourless Not determined. Not applicable. Undetermined. nge: Undetermined. Not applicable. Product is not flammable. Not determined. Not determined.
 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour threshold: Odour threshold: pH-value: Change in condition Melting point/freezing point: Initial boiling point and boiling ran Flash point: Flammability (solid, gas): Ignition temperature: Decomposition temperature: Auto-ignition temperature: Explosive properties: Explosion limits: Lower: 	Powder Light yellow Odourless Not determined. Not applicable. Undetermined. nge: Undetermined. Not applicable. Product is not flammable. Not determined. Not determined. Not determined. Not determined. Not determined. Not determined.
 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour: Odour threshold: PH-value: Change in condition Melting point/freezing point: Initial boiling point and boiling ran Flash point: Flash point: Flammability (solid, gas): Ignition temperature: Decomposition temperature: Auto-ignition temperature: Explosive properties: Explosion limits: 	Powder Light yellow Odourless Not determined. Not applicable. Undetermined. nge: Undetermined. Not applicable. Product is not flammable. Not determined. Not determined. Not determined. Product does not present an explosion hazard.
 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour threshold: Odour threshold: pH-value: Change in condition Melting point/freezing point: Initial boiling point and boiling ran Flash point: Flash point: Flammability (solid, gas): Ignition temperature: Auto-ignition temperature: Explosive properties: Explosion limits: Lower: 	Powder Light yellow Odourless Not determined. Not applicable. Undetermined. nge: Undetermined. Not applicable. Product is not flammable. Not determined. Not determined. Product does not present an explosion hazard. Not determined.
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· 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 %	
• 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 Based on available data, the classification criteria are not met.
- · Serious eye damage/irritation Based on available data, the classification criteria are not met.
- 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.
- \cdot **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.

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

· 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	ex II of	
Marpol and the IBC Code	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.

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CHEMICALS, INC.

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

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· 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

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