Printing date 19.07.2021

Revision: 19.07.2021

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

- · 1.1 Product identifier
- · Trade name: <u>N-[(1R,2R)-2-Aminocyclohexyl]-N'-(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)thiourea</u>, 95%
- · Item number: 07-6363
- · CAS Number:
- 933456-75-8
- 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 The substance is not classified according to the CLP regulation. · 2.2 Label elements · Labelling according to Regulation (EC) No 1272/2008 Void · Hazard pictograms Void · Signal word Void · Hazard statements Void · Precautionary statements P262 Do not get in eyes, on skin, or on clothing. 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. Store in a well-ventilated place. Keep container tightly closed. *P403+P233 P411+P235* Store at temperatures not exceeding 4°C. Keep cool. P501 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

3.1 Chemical characterisation: Substances
 CAS No. Description
 933456-75-8 N-[(1R,2R)-2-Aminocyclohexyl]-N'-(2,3,4,6-tetra-O-acetyl-

 β -D-glucopyranosyl)thiourea, 95%

(Contd. on page 2)

CHEMICALS, INC

Printing date 19.07.2021

Revision: 19.07.2021

Trade name: N-[(1R,2R)-2-Aminocyclohexyl]-N'-(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)thiourea, 95%

(Contd. of page 1)

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: Generally the product does not irritate the skin.
- 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.
- 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: Do not allow to enter sewers/surface or ground water.
- **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.
- 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: None.
- *Recommended storage temperature:* Store at temperatures not exceeding 4 °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.

(Contd. on page 3)



CHEMICALS, INC.

Revision: 19.07.2021

Could. of page Additional information: The lists valid during the making were used as basis. 8.2 Exposure controls Personal protective equipment: General hypeienic measures: The usual precedutionary measures are to be adhered to when handling chemicals. Respiratory protection: Not required. Protection of hands: The subal precedutionary measures are to be adhered to when handling chemicals. Respiratory protection: Not required. Protection of hands: The subal precedutionary measures are to be adhered to when handling chemicals. Respiratory protection: Not required. Protection of the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ 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 or varies from manufacturer to manufacturer. 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 observed. Sys protection: Safety glasses 9.1 Information on basic physical and chemical properties General hypointmation Appearance: Form: Powder Colour: Not applicable. Characteristic Odour: Character		yl]-N'-(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)thiourea, 95%
8.2 Exposure controls Personal protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals. Respiratory protection: Not required. Protection of hands: Several protection: Not required. Protection of hands: Protection of hands: Protection of hands: Protection of hands: Protection of the glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves 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 or varies from manufacturer to manufacturer. Penetration time of glove material The secare break through time has to be found out by the manufacturer of the protective gloves and has to observed. Sobserved. 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour threshold: Not determined. Initial boiling point: Undetermined. Initial boiling point: Not determined.	Additional information: The lists valid	(Contd. of page during the making were used as basis.
Personial protective equipment: General protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals. Respiratory protection: Not required. Protection of hands: We be added by the substance of the preparation. Due to missing tests no recommendation to the glove material can be given for the preparation. Due to missing tests no recommendation to the glove material can be given for the product of the preparation. Due to missing tests no recommendation to the glove material can be given for the product of the preparation. Chemical mixture. Selection of the substance 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 or varies from manufacturer to manufacturer. 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 observed. Eye protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Portection: Portection: Portection: Portection: Powder Colour: Characteristic Odour threshold: Not applicable. Mueting point/freezing point: Undetermined. Pivalue: Not applicable. Flamability (solid, gas): Product of not naget uses of the protective gloves and Pivalue: Not applicable. Flamability (solid, gas): Product does not present an explosion hazard. Explosion temperature: Not determined. Explosion temperature: Not determined. Explosion timits: Lower: Not determined. Explosion timits: Lower: Not determined. Pivalue density Not determined. Pivalue density Not determined. Pivalue density Not determined. Pivalue density Not determined. Pivalue density Not applicable.	-	
General protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals. Respiratory protection: Noir 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/ Attential of gloves Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves The selection of the glove material Attential of gloves The selection of the glove material The selection of the suitable gloves does not only depend on the material, but also on further marks of quality or varies from manufacturer to the protective gloves and has to observed. Spermance: Form: Porter Colour: Quanter thereshold: Not deprinteed. pH-		
The usual precautionary measures are to be adhered to when handling chemicals. Respiratory protection: Not required. Protection of hands: 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/ 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 glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves The 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 or varies from manufacturer to manufacturer. 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 observed. Pye protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Odour: Characteristic Odour: Characteristic Odour: Characteristic Odour: Characteristic Colour: Characteristic Flammability (solid, gas): Product is not flammable. Flammability (solid, gas): Product is not flammable. Flammability (solid, gas): Product is not flammable. Explosion temperature: Not determined. Explos		rps.
Respiratory protection: Not required. Protection of hands: Protection of hands: 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/ 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 or varies from manufacturer to manufacturer. 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 observed. Eye protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour: Characteristic Odour threshold: Not applicable. Change in condition Melting point/freezing point: Undetermined. Initial boiling point and boiling range: Undetermined. Flammability (solid, gas): Product is not flammable. Factoristic Information Auto-ignition temperature: Not determined. Explosive properties: Product is not flammable. Explosive properties: Product is not flammable. Explosive properties: Product obsen not present an explosion hazard. Explosion timits: Lower: Not determined. Explosion timits: Lower: Not determined. Explosion properties: Product does not present an explosion hazard. Explosion fimits: Lower: Not determined. Explosion pressure: Not determined. Explosion pressure: Not determined. Explosion pressure: Not determined. Explosion hazard. Explosion fimits: Lower: Not determined. Explosion pressure: Not determined. Explosion hazard. Explosion hazard. E		
Protection of hands:		
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/ 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 of varies from manufacturer to manufacturer. 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 observed. Eye protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Characteristic Odour: Characteristic Odour: Undetermined. pil-value: Not applicable. Change in condition Multing point freezing point: Undetermined. Flash point: Not applicable. Flammability (solid, gas): Product is not flammable. Ignition temperature: Not determined. Luo-ignition temperature: Not determined. Luoinginition temperature: Not determined. Luoinginition temperature: Not determined.		
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/ 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 or varies from manufacturer to manufacturer. 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 observed. Eye protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour: Characteristic Odour threshold: Not determined. pil-value: Not applicable. Flammability (solid, gas): Product is not flammable. Ignition temperature: Not determined. Initial boiling point Not determined. Linitial boiling point: Not determined. Linitial boiling case: Product is not flammable. Ignition temperature: Not determine	đh	
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/ 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 or varies from manufacturer to manufacturer. 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 observed. Eye protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour: Characteristic Odour threshold: Not determined. pil-value: Not applicable. Flammability (solid, gas): Product is not flammable. Ignition temperature: Not determined. Initial boiling point Not determined. Linitial boiling point: Not determined. Linitial boiling case: Product is not flammable. Ignition temperature: Not determine	Protective gloves	
Due'io missing tests no recommendation to the glove material can be given for the product/ the preparation/ 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 of varies from manufacturer to manufacturer. 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 observed. Eve protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour: Characteristic Odour threshold: Not determined. pH-value: Not applicable. Change in condition Melting point/freezing point: Undetermined. Flash point: Not applicable. Flammability (solid, gas): Product is not flammable. Ignition temperature: Not determined. Flash point: Not determined. Flash point poin		
Due'io missing tests no recommendation to the glove material can be given for the product/ the preparation/ 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 of varies from manufacturer to manufacturer. 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 observed. Eve protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour: Characteristic Odour threshold: Not determined. pH-value: Not applicable. Change in condition Melting point/freezing point: Undetermined. Flash point: Not applicable. Flammability (solid, gas): Product is not flammable. Ignition temperature: Not determined. Flash point: Not determined. Flash point poin		1 1
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 of varies from manufacturer to manufacturer. 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 observed. Eye protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour: Characteristic Odour threshold: Not adetermined. pH-value: Not applicable. Change in condition Melting point/freezing point: Undetermined. Initial boiling point and boiling range: Undetermined. Flash point: Not applicable. Flammability (solid, gas): Product is not flammable. Ignition temperature: Not determined. Auto-ignition temperature: Not determined. Explosive properties: Product does not present an explosion hazard. Explosion limits: Lower: Not determined. Explosion limits: Lower: Not determined. Yapour pressure: Not determined. Product does not present an explosion hazard. Explosion limits: Lower: Not determined. Product does not present an explosion hazard. Explosion limits: Lower: Not determined. Product does not present an explosion hazard. Explosion limits: Lower: Not determined. Paperimed. Yapour pressure: Not determined. Pensity: Not determined. Pensity		
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 of varies from manufacturer to manufacturer. 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 observed. System System Posterial Appearance: Form: Powder Colour: Whitish Odour threshold: Not determined. pH-value: Not applicable. Characteristic Odour is not flammable. Ignition temperature: Not applicable. Flammability (solid, gas): Product is not flammable. Ignition temperature: Not determined. Decomposition temperature: Not determined. Lawer: Not determined. Initial boiling range: Undetermined. Initial boiling rome: Not applicable. Flammability (solid, gas): Product is not flammable. Ignition temperature: Not determined. Lower: Not determined. <t< td=""><td></td><td>n to the glove material can be given for the product/ the preparation/ t</td></t<>		n to the glove material can be given for the product/ the preparation/ t
Material of gloves The selection of the suitable gloves does not only depend on the material, but also on further marks of quality of varies from manufacturer to manufacturer. 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 observed. Eye protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour: Characteristic Odour threshold: Not determined. pH-value: Not applicable. Change in condition Metermined. Initial boiling point and boiling range: Undetermined. Initial boiling point and boiling range: Undetermined. Initial boiling point freezing point: Not applicable. Flash point: Not determined. Initial boiling point of the protective: Not determined. Initial boiling point of the protective: Not determined. Initial boiling range: Not determined. Initial boiling point: Not determined. Explosion temperature: Not determined. Decomposition temperature: <td></td> <td>deration of the penetration times. rates of diffusion and the degradation</td>		deration of the penetration times. rates of diffusion and the degradation
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality of varies from manufacturer to manufacturer. 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 observed. Eye protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour: Characteristic Odour: Not applicable. PH-value: Not applicable. Characteristic Not applicable. Flash point! Undetermined. Initial boiling point and boiling range: Undetermined. Initial boiling gas): Product is not flammable. Ignition temperature: Not determined. Decomposition temperature: Not determined. Auto-ignition temperature: Not determined. Lower: Not determined. Lower: Not determined. Vapour pressure: Not determined. Lower: Not determined. Explosion limits: Not determined.		
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 observed. Eye protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour threshold: Not determined. pH-value: Not applicable. Characteristic Odour: Melting point/freezing point: Undetermined. Initial boiling point and boiling range: Undetermined. Flash point: Not applicable. Flash point: Not applicable. Ignition temperature: Not determined. Decomposition temperature: Not determined. Explosive properties: Product is not flammable. Explosion limits: Lower: Lower: Not determined. Upper: Not determined. Vapour pressure: Not determined. Vapour pressure: Not determined. Desconposition temperature: Not determined. Lower: Not determined. Upper: <td></td> <td>s not only depend on the material, but also on further marks of quality a</td>		s not only depend on the material, but also on further marks of quality a
The exact break through time has to be found out by the manufacturer of the protective gloves and has to observed. Eye protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour threshold: Not determined. pH-value: Not applicable. Change in condition Undetermined. Melting point/freezing point: Undetermined. Initial boiling point and boiling range: Undetermined. Flash point: Not applicable. Flammability (solid, gas): Product is not flammable. Ignition temperature: Not determined. Decomposition temperature: Not determined. Explosive properties: Product does not present an explosion hazard. Explosion limits: Lower: Lower: Not determined. Vapour pressure: Not determined. Vapour pressure: Not determined. Lower: Not determined. Explosion limits: Lower: Lower: Not determined. Vapour pressure: Not deter		rer.
observed. Eye protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour: Characteristic Odour threshold: Not determined. pH-value: Not applicable. Change in condition Metting point/freezing point: Melting point/freezing point: Undetermined. Initial boiling point and boiling range: Undetermined. Flash point: Not applicable. Flash point: Not applicable. Flash point: Not applicable. Flash point: Not determined. Initial boiling gas): Product is not flammable. Ignition temperature: Not determined. Decomposition temperature: Not determined. Auto-ignition temperature: Not determined. Explosion limits: Lower: Lower: Not determined. Upper: Not determined. Vapour pressure: Not determined. Vapour pressure: Not determined. V		
Eye protection: Safety glasses 9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour: Characteristic Odour threshold: Not determined. pH-value: Not applicable. Charge in condition Undetermined. Melting point freezing point: Undetermined. Initial boiling point and boiling range: Undetermined. Flash point: Not applicable. Flammability (solid, gas): Product is not flammable. Ignition temperature: Not determined. Decomposition temperature: Not determined. Explosion limits: Product does not present an explosion hazard. Explosion limits: Not determined. Upper: Not determined. Vapour pressure: Not applicable. Vapour pressure: Not applicable. Vapour density Not determined. Vapour density Not determined.		e found out by the manufacturer of the protective gloves and has to
9.1 Information on basic physical and chemical properties General Information Appearance: Form: Powder Colour: Whitish Odour in Characteristic Odour threshold: Not determined. pH-value: Not applicable. Charge in condition Undetermined. Melting point/freezing point: Undetermined. Initial boiling point and boiling range: Undetermined. Flash point: Not applicable. Flash point: Not determined. Initial boiling cas): Product is not flammable. Ignition temperature: Not determined. Auto-ignition temperature: Not determined. Explosion limits: Not determined. Lower: Not determined. Upper: Not determined. Vapour pressure: Not determined. Vapour pressure: Not determined. <tr< td=""><td></td><td></td></tr<>		
General Information Appearance: Form: Powder Colour: Whitish Odour: Characteristic Odour threshold: Not determined. pH-value: Not applicable. Change in condition Undetermined. Melting point/freezing point: Undetermined. Initial boiling point and boiling range: Undetermined. Flash point: Not applicable. Flammability (solid, gas): Product is not flammable. Ignition temperature: Not determined. Decomposition temperature: Not determined. Auto-ignition temperature: Not determined. Explosive properties: Product does not present an explosion hazard. Explosion limits: Not determined. Lower: Not determined. Vapour pressure: Not determined. Vapour pressure: Not determined. Density: Not determined. Vapour density Not determined. Vapour density Not determined.		
Appearance:PowderForm:PowderColour:WhitishOdour threshold:Not determined.pH-value:Not applicable.Change in conditionUndetermined.Melting point/freezing point:Undetermined.Initial boiling point and boiling range:Undetermined.Flash point:Not applicable.Flash point:Not applicable.Flammability (solid, gas):Product is not flammable.Ignition temperature:Not determined.Decomposition temperature:Not determined.Lower:Not determined.Lower:Not determined.Upper:Not determined.Lower:Not determined.Vapour pressure:Not applicable.Density:Not determined.Katermined.Not determined.Katermined.Not determined.Katermined.Not determined.Katermined.Not determined.Katermined.Not determined.Katermined.Not determined.Katermined.Not determined.Katermined.Not determined.Katermined.Not determined.Katermined.		chemical properties
Form:PowderColour:WhitishOdour:CharacteristicOdour threshold:Not determined.pH-value:Not applicable.Change in conditionUndetermined.Melting point/freezing point:Undetermined.Initial boiling point and boiling range:Undetermined.Flash point:Not applicable.Flash point:Not applicable.Flash point:Not applicable.Flammability (solid, gas):Product is not flammable.Ignition temperature:Not determined.Decomposition temperature:Not determined.Auto-ignition temperature:Not determined.Explosion limits:Product does not present an explosion hazard.Lower:Not determined.Upper:Not determined.Vapour pressure:Not applicable.Density:Not determined.Kelative densityNot determined.Vapour densityNot determined.Vapour densityNot applicable.		
Colour:Whitish CharacteristicOdour threshold:Not determined.pH-value:Not applicable.Change in condition Melting point/freezing point:Undetermined.Thitial boiling point and boiling range:Undetermined.Flash point:Not applicable.Flash point:Not applicable.Flammability (solid, gas):Product is not flammable.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: Upper:Not determined.Vapour pressure:Not applicable.Density: Kelative densityNot determined.Vapour densityNot determined.Vapour densityNot determined.Vapour densityNot applicable.		Powder
Odour threshold:Not determined.pH-value:Not applicable.Change in condition Melting point/freezing point:Undetermined.Initial boiling point and boiling range:Undetermined.Flash point:Not applicable.Flammability (solid, gas):Product is not flammable.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: Upper:Not determined.Vapour pressure:Not applicable.Density: Relative densityNot determined.Not determined. Not determined.Not determined.Vapour densityNot determined.Vapour densityNot determined.Vapour densityNot determined.Vapour densityNot applicable.		
pH-value:Not applicable.Change in condition Melting point/freezing point:Undetermined.Initial boiling point and boiling range:Undetermined.Flash point:Not applicable.Flash point:Not applicable.Flammability (solid, gas):Product is not flammable.Ignition temperature:Not determined.Decomposition temperature:Not determined.Auto-ignition temperature:Not determined.Explosive properties:Product does not present an explosion hazard.Explosion limits: Upper:Not determined.Vapour pressure:Not determined.Vapour pressure:Not determined.Density:Not determined.Vapour densityNot determined.Vapour densityNot determined.Vapour densityNot determined.Vapour densityNot determined.Vapour densityNot determined.		Characteristic
Change in condition Melting point/freezing point:Undetermined.Initial boiling point and boiling range:Undetermined.Flash point:Not applicable.Flash point:Not applicable.Flammability (solid, gas):Product is not flammable.Ignition temperature:Decomposition temperature: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 determined.Density:Not determined.Ponduct densityNot determined.Vapour densityNot determined.Vapour densityNot applicable.	Odour threshold:	Not determined.
Meling point/freezing point:Undetermined.Initial boiling point and boiling range:Undetermined.Flash point:Not applicable.Flash point:Product is not flammable.Flammability (solid, gas):Product is not flammable.Ignition temperature:Not determined.Decomposition temperature:Not determined.Auto-ignition temperature:Not determined.Explosive properties:Product does not present an explosion hazard.Explosion limits:Not determined.Lower:Not determined.Vapour pressure:Not applicable.Density:Not determined.Vapour densityNot determined.Vapour densityNot determined.	pH-value:	Not applicable.
Initial boiling point and boiling range: Undetermined.Flash point:Not applicable.Flammability (solid, gas):Product is not flammable.Ignition temperature:Not determined.Decomposition temperature:Not determined.Auto-ignition temperature:Not determined.Explosive properties:Product does not present an explosion hazard.Explosion limits:Not determined.Upper:Not determined.Vapour pressure:Not applicable.Density:Not determined.Vapour densityNot determined.Vapour densityNot determined.Vapour densityNot applicable.		
Flash point:Not applicable.Flammability (solid, gas):Product is not flammable.Ignition temperature:Product is not flammable.Decomposition temperature:Not determined.Auto-ignition temperature:Not determined.Explosive properties:Product does not present an explosion hazard.Explosion limits:Not determined.Lower:Not determined.Upper:Not determined.Vapour pressure:Not applicable.Density:Not determined.Vapour densityNot determined.Vapour densityNot applicable.		
Flammability (solid, gas):Product is not flammable.Ignition temperature:Not determined.Decomposition temperature:Not determined.Auto-ignition temperature:Not determined.Explosive properties:Product does not present an explosion hazard.Explosion limits:Not determined.Lower:Not determined.Upper:Not determined.Vapour pressure:Not applicable.Density:Not determined.Relative densityNot determined.Vapour densityNot applicable.	Initial boiling point and boiling range	e: Undetermined.
Ignition temperature:Decomposition temperature:Not determined.Auto-ignition temperature:Not determined.Explosive properties:Product does not present an explosion hazard.Explosion limits:Not determined.Lower:Not determined.Upper:Not determined.Vapour pressure:Not applicable.Density:Not determined.Relative densityNot determined.Vapour densityNot applicable.	Flash point:	Not applicable.
Decomposition temperature:Not determined.Auto-ignition temperature:Not determined.Explosive properties:Product does not present an explosion hazard.Explosion limits:Not determined.Lower:Not determined.Upper:Not determined.Vapour pressure:Not applicable.Density:Not determined.Relative densityNot determined.Vapour densityNot applicable.	Flammability (solid, gas):	Product is not flammable.
Auto-ignition temperature:Not determined.Explosive properties:Product does not present an explosion hazard.Explosion limits:Not determined.Lower:Not determined.Upper:Not determined.Vapour pressure:Not applicable.Density:Not determined.Relative densityNot determined.Vapour densityNot applicable.	<u> </u>	
Explosive properties:Product does not present an explosion hazard.Explosion limits:Not determined.Lower:Not determined.Upper:Not determined.Vapour pressure:Not applicable.Density:Not determined.Relative densityNot determined.Vapour densityNot applicable.		
Explosion limits: Lower: Not determined. Upper: Not determined. Vapour pressure: Not applicable. Density: Not determined. Relative density Not determined. Vapour density Not applicable.	° •	
Lower:Not determined.Upper:Not determined.Vapour pressure:Not applicable.Density:Not determined.Relative densityNot determined.Vapour densityNot applicable.	Explosive properties:	Product does not present an explosion hazard.
Upper:Not determined.Vapour pressure:Not applicable.Density:Not determined.Relative densityNot determined.Vapour densityNot applicable.		
Vapour pressure:Not applicable.Density:Not determined.Relative densityNot determined.Vapour densityNot applicable.		
Density:Not determined.Relative densityNot determined.Vapour densityNot applicable.	Upper:	Not determined.
Relative densityNot determined.Vapour densityNot applicable.	Vapour pressure:	Not applicable.
Vapour density Not applicable.		
Evaporation rate Not applicable.	Vapour density	

MICALS, INC.

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

Printing date 19.07.2021

Revision: 19.07.2021

Trade name: N-[(1R,2R)-2-Aminocyclohexyl]-N'-(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)thiourea, 95%

		(Contd. of page
· 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 %	
VŎC (EC)	0.00 %	
· 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.
- \cdot 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.
- $\cdot \textit{Reproductive toxicity Based on available data, the classification criteria are not met.}$
- $\cdot \textit{STOT-single exposure Based on available data, the classification criteria are not met.}$
- 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:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

(Contd. on page 5)

-GB

Printing date 19.07.2021

Revision: 19.07.2021

Trade name: N-[(1R,2R)-2-Aminocyclohexyl]-N'-(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)thiourea, 95%

(Contd. of page 4)

· 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.

SECTION 14: Transport information	tion	
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:	Not applicable.	
14.6 Special precautions for user	Not applicable.	
14.7 Transport in bulk according to Ann Marpol and the IBC Code	ex 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.

· National regulations:

· Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

• 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.

(Contd. on page 6)



⁻ GB

CHEMICALS, INC.

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

Printing date 19.07.2021

Revision: 19.07.2021

Trade name: N-[(1R,2R)-2-Aminocyclohexyl]-N'-(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)thiourea, 95%

(Contd. of page 5)

GB

· 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