



Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table border="1"> <tr> <td style="background-color: #00FFFF;">Health Hazard</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="background-color: #FFCCCC;">Fire Hazard</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="background-color: #FFFF00;">Reactivity</td> <td style="text-align: center;">0</td> </tr> </table>	Health Hazard	2	Fire Hazard	1	Reactivity	0	
Health Hazard	2							
Fire Hazard	1							
Reactivity	0							
See Section 15.								

Section 1. Chemical Product and Company Identification		Page Number: 1										
Common Name/Trade Name	Streptozocin	<table border="1"> <tr> <td>Catalog Number(s).</td> <td>ST139</td> </tr> <tr> <td>CAS#</td> <td>18883-66-4</td> </tr> <tr> <td>RTECS</td> <td>LZ5775000</td> </tr> <tr> <td>TSCA</td> <td>TSCA 8(b) inventory: No products were found.</td> </tr> <tr> <td>CI#</td> <td>Not available.</td> </tr> </table>	Catalog Number(s).	ST139	CAS#	18883-66-4	RTECS	LZ5775000	TSCA	TSCA 8(b) inventory: No products were found.	CI#	Not available.
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CAS#	18883-66-4											
RTECS	LZ5775000											
TSCA	TSCA 8(b) inventory: No products were found.											
CI#	Not available.											
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	<p style="text-align: center; color: blue; margin: 0;">IN CASE OF EMERGENCY</p> <p style="text-align: center; color: blue; margin: 0;">CHEMTREC (24hr) 800-424-9300</p> <p style="text-align: center; margin-top: 20px;">CALL (310) 516-8000</p>										
Commercial Name(s)	Streptozocin, Zanosar											
Synonym	2-Deoxy-2-[[[(methylnitrosoamino)carbonyl]amino]-D-glucopyranose; 2-Deoxy-2-(3-methyl-3-nitrosoureido)-alpha(and beta)-D-glucopyranose; 2-Deoxy-2-(3-methyl-3-nitrosoureido)-D-glucopyranose; D-Glucopyranose, 2-deoxy-2-(((methylnitrosoamino)carbonyl)amino)-; D-Glucose, 2-deoxy-2-(((methylnitrosoamino)carbonyl)amino)- (9CI); D-Glucose 2-deoxy-2-(3-methyl-3-nitrosoureido)-; N-D-Glucosyl-(2)-N'-nitrosomethylurea											
Chemical Name	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D-											
Chemical Family	Not available.											
Chemical Formula	C8H15N3O7											
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248											

Section 2. Composition and Information on Ingredients								
Name	CAS #	Exposure Limits			% by Weight			
		TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)				
1) Streptozocin	18883-66-4				100			
<table border="0" style="width: 100%;"> <tr> <td style="width: 20%;">Toxicological Data on Ingredients</td> <td style="width: 20%;"> Streptozocin: ORAL (LD50): </td> <td style="width: 60%;"> Acute: >3000 mg/kg [Mouse]. >5150 mg/kg [Rat]. </td> </tr> </table>						Toxicological Data on Ingredients	Streptozocin: ORAL (LD50):	Acute: >3000 mg/kg [Mouse]. >5150 mg/kg [Rat].
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Section 3. Hazards Identification

Potential Acute Health Effects Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects

CARCINOGENIC EFFECTS: Classified 2B (Possible for human.) by IARC. Classified 2 (Some evidence.) by NTP.

MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.

TERATOGENIC EFFECTS: Classified POSSIBLE for human.

DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED].

The substance may be toxic to kidneys, the reproductive system.

Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin Contact In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation Not available.

Ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion Not available.

Section 5. Fire and Explosion Data

Flammability of the Product May be combustible at high temperature.

Auto-Ignition Temperature Not available.

Flash Points Not available.

Flammable Limits Not available.

Products of Combustion These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...).

Fire Hazards in Presence of Various Substances Slightly flammable to flammable in presence of heat.
Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards Not available.

Special Remarks on Explosion Hazards Not available.

Section 6. Accidental Release Measures

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7. Handling and Storage

Precautions	Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Refrigerate. Do not store above 6°C (42.8°F).

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance	Solid. (Crystalline solid.)	Odor	Not available.
Molecular Weight	265.22 g/mole	Taste	Not available.
pH (1% soln/water)	Not available.	Color	Yellow. (Light.)
Boiling Point	Not available.		
Melting Point	46.111°C (115°F)		
Critical Temperature	Not available.		
Specific Gravity	Not available.		
Vapor Pressure	Not applicable.		
Vapor Density	Not available.		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water.		
Solubility	Soluble in cold water, hot water. Soluble in lower alcohols, and Ketones. Insoluble in non-polar organic solvents. Slightly soluble in polar organic solvents.		

Continued on Next Page

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Excess heat
Incompatibility with various substances	Not available.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	Not available.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): >3000 mg/kg [Mouse].
Chronic Effects on Humans	<p>CARCINOGENIC EFFECTS: Classified 2B (Possible for human.) by IARC. Classified 2 (Some evidence.) by NTP.</p> <p>MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.</p> <p>TERATOGENIC EFFECTS: Classified POSSIBLE for human.</p> <p>DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED].</p> <p>May cause damage to the following organs: kidneys, the reproductive system.</p>
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant), of ingestion, of inhalation.
Special Remarks on Toxicity to Animals	<p>Lowest Published toxic dose:</p> <p>TDL [Human] - Route: Intravenous; Dose: 1044 mg/kg/5 days</p> <p>TDL [Woman] - Route: Intravenous; Dose: 13513 ug/kg</p> <p>Lowest Publish Lethal Dose:</p> <p>LDL [Woman] - Route: Intravenous; Dose: 440 mg/kg/65 weeks.</p> <p>LDL [Monkey] - Route: Intravenous; Dose: 80 mg/kg</p> <p>Lethal Dose/Conc 50% Kill:</p> <p>LD50 [Rat] - Route - Intravenous; Dose: 138 mg/kg</p> <p>LD50 [Mouse] - Route - Intraperitoneal; Dose: 360 mg/kg</p> <p>LD50 [Mouse] - Route - Intravenous; Dose: 275 mg/kg</p> <p>LD50 [Mouse] - Route - Parenteral; Dose: 264 mg/kg</p>
Special Remarks on Chronic Effects on Humans	<p>May cause adverse reproductive effects and birth defects (teratogenic). It is a teratogen in animals as a result of induced diabetes.</p> <p>May cause cancer</p>
Special Remarks on other Toxic Effects on Humans	<p>Acute Potential Health Effects:</p> <p>Skin: May cause irritation.</p> <p>Eyes: May cause eye irritation.</p> <p>Inhalation: May cause respiratory tract irritation. May cause systemic effects similar to that of ingestion.</p> <p>Ingestion: May cause gastrointestinal tract irritation with nausea, and/or vomiting. May affect the blood/bone marrow (anemia, reduced white blood cells, reduced platelets), liver (impaired liver function), and kidneys (kidney damage). May affect behavior (toxic psychosis).</p> <p>Chronic Potential Health Effects:</p> <p>Prolonged or repeated exposure by inhalation or ingestion may also affect the blood/bone marrow and cause kidney or liver damage or cancer. It may also affect the pancreas causing diabetes.</p>


Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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Section 14. Transport Information

DOT Classification	Not a DOT controlled material (United States).
Identification	Not applicable.
Special Provisions for Transport	Not applicable.
DOT (Pictograms)	


Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations	California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Streptozocin California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (female) which would require a warning under the statute: Streptozocin California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (male) which would require a warning under the statute: Streptozocin California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Streptozocin California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Streptozocin Connecticut hazardous material survey.: Streptozocin Illinois toxic substances disclosure to employee act: Streptozocin Illinois chemical safety act: Streptozocin New York release reporting list: Streptozocin Pennsylvania RTK: Streptozocin Minnesota: Streptozocin Massachusetts RTK: Streptozocin Massachusetts spill list: Streptozocin New Jersey: Streptozocin New Jersey spill list: Streptozocin Louisiana spill reporting: Streptozocin California Director's List of Hazardous Substances: Streptozocin CERCLA: Hazardous substances.: Streptozocin: 1 lbs. (0.4536 kg)
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California Proposition 65 Warnings
 California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Streptozocin
 California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Streptozocin

Other Regulations
 OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
 EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications	WHMIS (Canada)	CLASS D-2A: Material causing other toxic effects (VERY TOXIC).	
	DSCL (EEC)	R45- May cause cancer. R60- May impair fertility. R63- Possible risk of harm to the unborn child.	S24/25- Avoid contact with skin and eyes. S36/37- Wear suitable protective clothing and gloves. S38- In case of insufficient ventilation, wear suitable respiratory equipment.

HMIS (U.S.A.)	Health Hazard	2	National Fire Protection Association (U.S.A.)		Flammability	
	Fire Hazard	1			Health	Reactivity
	Reactivity	0				Specific hazard
	Personal Protection	E				

WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)




TDG (Canada) (Pictograms)




ADR (Europe) (Pictograms)




Protective Equipment




Gloves.



Lab coat.



Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

Section 16. Other Information**MSDS Code** S4945**References** Not available.**Other Special Considerations** Not available.

Validated by Sonia Owen on 8/11/2006.

Verified by Sonia Owen.

Printed 9/14/2006.

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.