SAFETY DATA SHEET



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Complying with 1907/2006/EEC Regulation of 18 December 2006 ("REACH Regulation") and REGULATION (EC) No 1272/2008 (CLP)

Section 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier Product name: Sicrys™ I30EG-1 Trade name: Sicrys™ I30EG-1 Product type: Silver ink

1.2 Relevant identified uses of the substance or mixture and uses advised against Ink

1.3 Details of the supplier of the safety data sheet

P.V. Nano Cell Ltd. P.O.Box 236, Migdal Ha'Emek, Israel 23100 Phone: +972-4-6546881 Fax: +972-4-6546880

E-mail address of person responsible for this SDS:

1.4 Emergency telephone number

Emergency telephone number (with hours of operation): National Information & Response Center: in Israel *6911 or 08-9253321 Outside Israel: +972 8 925 3321 infocenter@sviva.gov.il

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Directive 67/548/EEC (DSD) or 1999/45/EC

<u> </u>	
Product name	EU Classification
Sicrys™ I30EG-1	Xn; R22

2.2 Label elements

Labelling in accordance with 1999/45 (DPD)

Hazard symbol(s):



Warning

Risk phrase(s): Xn: Harmful R22: Harmful if swallowed.





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Hazard statement(s):

H302: Harmful if swallowed.

H373: May cause damage to organs (kidney) through prolonged or repeated exposure if swallowed.

Safety phrase(s):

S02: Keep out of the reach of children. S46: If swallowed, seek medical advice immediately and show this container or label.

2.3 Other hazard

None

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation:

Product/ Ingredient name	Identifiers	%	EU Classification
Silver	CAS number: 7440-22-4 EC number: 231-131-3	25-35	Not classified
Ethylene Glycol	CAS number: 107-21-1 EC number: 203-473-3	65-75	Xn; R22

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in section 8. See section 16 for the full text of the R-phrases declared above.

Section 4. FIRST AID MEASURES

4.1 Description of first aid measures

Eyes contact:	In case of contact with eyes, rinse immediately with water. Get medical attention if irritation occurs.
Skin contact:	Avoid prolonged or repeated contact with skin. After handling, always wash hands thoroughly with water. Get medical attention if irritation develops.
Inhalation:	Remove from site of exposure to fresh air. If breathing is difficult, give oxygen. If not breathing give artificial respiration. Get medical attention.
Ingestion:	If large quantities of this material are swallowed, call a physician immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give a glassful of water by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed. Causes eye irritation. May cause irritation to skin and respiratory system. May be harmful if inhaled and if absorbed through skin.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote, medical staff contacts Poisons Information Center. All treatments should be based on observed signs and symptoms of distress in the patient. Consideration





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should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

 $\label{eq:suitable:suitable} \frac{Suitable:}{Not \ suitable:} \ N/A$

5.2 Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic fumes.

5.3 Advice for firefighters

Special protective equipment for fire fighters: Fire fighters should wear full protective clothing and self-contained breathing apparatus in positive pressure mode.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Ventilate area of spill. Avoid breathing fumes.

6.2 Environmental precautions

Do not let this chemical enter the environment. Keep away from drains, surface and ground water.

6.3 Methods and materials for containment and cleaning up

Absorb the chemical onto sand, vermiculite, or any other non-combustible absorbent, and collect into containers for later disposal.

Large spill: As for small spill

Personal Protection in Case of Large Spill: Safety glasses. Full suit. Suitable respirator. Boots. Gloves. A self- contained breathing apparatus should be used to avoid inhalation of the product.

6.4 Reference to other sections

See Section 1 for emergency contact information.

Section 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling: Do not breathe vapors. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Wash thoroughly after handling.

Hygiene Measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also section 8 for additional information measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage: Keep containers tightly closed, in a dry, cool and well ventilated place, away from direct light. Do not store together with strong oxidizing agents, strong acids, strong bases, aldehydes, aluminum, acid chlorides and halogens.

Ethylene glycol is hygroscopic.



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7.3 Specific end use(s): N/A

Section 8: EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limit values:		
Ingredient name	Occupational exposure limits	
Silver	ACGIH-TLV 0.1 mg/m ³ (TWA), (dust, fume)	
Ethylene Glycol	ACGIH-TLV 100 mg/m ³ (CEIL), aerosol	

8.2 Exposure controls

Enginnering Measures

Use process enclosures, local exhaust ventilation, or others engineering controls to keep airborne levels below recommend exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Person Protective measures

<u>Respiratory protection</u>: Suitable respirator. Be sure to use an approved/certified or equivalent. Wear appropriate respirator when ventilation is inadequate.

Eye/face protection: Wear protective safety glasses, goggles.

Skin protection: Wear appropriate long-sleeved clothing to minimize skin contact.

Hand protection: Wear protective disposable gloves to prevent skin exposure.

Environmental exposure controls: Not available

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Opaque greenish/grey liquid Odour: N/A Odour threshold: N/A pH: N/A Melting point/Freezing point: N/A Initial boiling point/boiling range: 196-198°C (Ethylene Glycol) Flash point: 111°C, closed cup (Ethylene Glycol) Evaporation rate: N/A Flammability: N/A Upper/lower flammability or explosive limits: N/A Vapor pressure: N/A Vapor density: N/A Relative Density: N/A Solubility(ies): N/A Partition coefficient Octanol/Water: N/A Auto-ignition temperature: N/A Decomposition temperature: N/A Viscosity: N/A Explosive properties: N/A Oxidizing properties: N/A





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9.2 Other information: N/A

Section 10: STABILITY AND REACTIVITY

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients

10.2 Chemical stability

The product is stable under normal handling and storage conditions described in Section 7.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Heat, sparks, open flame.

10.5 Incompatible materials

Strong oxidizing agents, strong acids, strong bases, aldehydes, aluminum, acid chlorides and halogens.

10.6 Hazardous Decomposition products:

Not available

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Product/ingredient name	Test	Species	Dose
Silver	Oral	Mouse	100 mg/kg
Ethylene Glycol	LD50, oral	Rat	4700 mg/kg

Irritation: Causes eye irritation. May cause irritation to skin and respiratory system.

Corrosivity: N/A

Sensitization: N/A

Repeated dose toxicity: N/A

Carcinogenicity: N/A

Mutagenicity: N/A

Toxicity for reproduction: N/A

Other effects:

Harmful if swallowed. May be harmful if inhaled and if absorbed through skin.

Etheylene glycol: When ingested early symptoms mimic alcohol inebriation and are followed by nausea, vomiting, abdominal pain, weakness, muscle tenderness, respiratory failure, convulsions, cardiovascular collapse, pulmonary edema, hypocalcemic tetany, and severe metabolic acidosis. Without treatment, death may occur in 8 to 24 hours. Victims who survive the initial toxicity period usually develop renal failure along with brain and liver damage. Exposure to and/or consumption of alcohol may increase toxic effects.





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Section 12: ECOLOGICAL INFORMATION

12.1 Toxicity

N/A

12.2 Persistence and Degradability

N/A

12.3 Bioaccumulative potential N/A

<u>12.4 Mobility in soil</u> Soil/water partition coefficient (Koc): N/A

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Other adverse effects: N/A

Section 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Packing **19**

Empty containers should be taken for local recycling, recovery or waste disposal.

Section 14: TRANSPORT INFORMATION

<u>14.1 Un number:</u> ADR/RID: -	IMDG: -	<u>IATA:</u> -
14.2 Proper shipping name: ADR/RID: Not regulated		
IMDG: Not regulated		
IATA: Not regulated 14.3 Transport hazard class(es) ADR/RID: -	IMDG: -	<u>IATA:</u> -
14.4 Packing group ADR/RID: -	IMDG: -	<u>IATA:</u> -
<u>14.5 Environmental hazard</u> ADR/RID: -	IMDG: -	<u>IATA:</u> -

14.6 Special precautions for user

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Not available

14.7 Transport to bulk according to Annex II of MARPOL 79/78 and the IBC Code

Not available

Section 15: REGULATORY INFORMATION

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

EU Directives 67/548/EEC and 1999/45/EC (including amendments) EU Regulation(EC) No.1907/2006 (REACH)

15.2 Chemical safety assessment

N/A

Section 16: OTHER INFORMATION

Training advice: Before using/handling the product one must read carefully present MSDS.

Recommended restriction: N/A

Key Legend Information: ACGIH- American Conference of Governmental Industrial Hygienists OSHA- Occupational Safety and Health Administration NTP- National Toxicology program IARC- International Agency for Research on Cancer ND- Not Determined N/A- Not available R-phrases- Risk phrases S-phrases- Safety phrases

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To the best of our knowledge the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.