

# SAFETY DATA SHEET

Preparation Date: 02/14/2024

Revision Date:

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## SECTION 1: Identification

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### 1.1 Product Identifier

Product Name BioReady™ Magnetic Gold Nanoshells (MSXR)  
Registration Number (REACH) It is not required to list the identified uses because the substance is not subject to registration according to REACH (<1 t/a)

### 1.2 Other Means of Identification

Item Number(s): MSXR-XX, MSXR-XXX, MSXRXX-XX, MSXRXX-XXX.

Where XX in the base number equals particle size and -XM, -XMM, and -XXXM indicate packaging configuration/quantity.

### 1.3 Recommended Use of the Chemical and Restrictions on Use

Relevant identified Uses Laboratory chemicals, Laboratory and analytical use, Manufacture substances  
Uses Advised Against Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

### 1.4 Suppliers Details

Name: nanoComposix, Inc. :  
Address: 4878 Ronson CT STE K  
San Diego, CA 92111-1806  
Telephone: (858) 565-4227  
Email: [techsupport@nanocomposix.com](mailto:techsupport@nanocomposix.com)

### 1.5 Emergency Phone Number(s)

Technical Support: (+1) 858 565 4227  
CHEMTREC (EMERGENCY ONLY): (800) 424-9300  
POISON CENTER: (800) 562-8236

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## SECTION 2: Hazards Identification

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### 2.1 Classification of the Substance or Mixture

Not a hazardous substance or mixture.

### 2.2 GHS Label Elements, Including Precautionary Statements

Not a hazardous substance or mixture.

### 2.3 Hazards not Otherwise Classified (HNOC)

None

Results of PBT and vPvB Assessment: Not Applicable

**EMERGENCY OVERVIEW:**

**OSHA Hazards:** No known OSHA hazards. Not a dangerous substance according to GHS.

**HMIS CLASSIFICATION**

Health Hazard: 0

Flammability: 0

Physical Hazards: 0

**NFPA RATING**

Health Hazard: 0

Fire: 0

Reactivity Hazard: 0

**APPEARANCE:** Pink or red/blue colored liquid.

**PRIMARY ROUTES OF EXPOSURE:** Ingestion, dermal contact.

**EYE CONTACT:** May cause eye irritation. Prolonged exposure may cause eye damage.

**SKIN CONTACT:** May be harmful if absorbed through skin. May cause skin irritation.

**INHALATION:** May be harmful if inhaled. May cause respiratory tract irritation.

**INGESTION:** May be harmful if ingested.

**ACUTE HEALTH EFFECTS:** May be irritating to skin, eyes and digestive tract.

**CHRONIC HEALTH EFFECTS:** Repeated and prolonged exposures have not been studied.

**AGGRAVATION of PRE-EXISTING CONDITIONS:** Persons with preexisting conditions may be more susceptible.

## SECTION 3: Composition and Information on Ingredients

### 3.1 Substances

Not Applicable

### 3.2 Mixtures

INGREDIENTS	CAS #	EINECS Number (EC No.)	% by Mass (Concentration)	Hazardous
Gold (as colloid)	7440-57-5	231-165-9	<0.125	No
Silica	7631-86-9	231-545-4	<0.007	No
Magnetite	1317-61-9	215-277-5	<0.0125	No
Carboxyl Ligand	NA	NA	Trace	No
Potassium Carbonate	584-08-7	209-529-3	< 0.003	No
Water	7732-18-5	231-791-2	>99	No

**CHEMICAL NAME:** Colloidal gold nanoshells

**CAS REGISTRY NUMBER:** 7440-57-5 (gold); 7631-86-9 (silica colloid), 1317-61-9 (Triiron Tetroxide)

**FORMULA:** Au, SiO<sub>2</sub>, Fe<sub>3</sub>O<sub>4</sub>

**CHEMICAL FAMILY:** metal composite

**SYNONYM:** magnetic gold nanoshells, gold nanoshells, gold shells, magnetic gold, gold composites, colloidal gold

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## SECTION 4: First Aid Measures



### 4.1 Description of Necessary First-Aid Measures

If inhaled	If breathed in, move person to fresh air. If not breathing, give artificial respiration.
In case of skin contact	Wash the affected area with soap and water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.
In case of eye contact	Remove contacts if present. Immediately flush the eyes with water for at least 10-15 minutes. Seek medical attention if irritation persists.
If swallowed	If the person is conscious, rinse their mouth out with water. Never give anything by mouth to an unconscious person.

**PRIMARY ROUTES OF EXPOSURE:** Ingestion, dermal contact.

### 4.2 Most Important Symptoms/Effects, Acute and Delayed

The most important known symptoms and effects are described in section 2 and/or in section 11

### 4.3 Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary

Treat symptomatically and supportively.

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## SECTION 5: Fire Fighting Measures

### 5.1 Suitable Extinguishing Media

The product itself does not burn.

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.



### 5.2 Specific Hazards Arising from the Chemical

No data Available.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** None.

**UNUSUAL FIRE OR EXPLOSION HAZARDS:** None.

### 5.3 Special Protective Actions for Fire-fighters

Wear self-contained breathing apparatus for fire-fighting if necessary.

### Further Information

No data available.

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## SECTION 6: Accidental Release Measures

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### 6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

See Section 8 for personal protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

### 6.2 Environmental Precautions

No special environmental precautions required.

### 6.3 Methods and Materials for Containment and Clean Up

Small spills can be swept up or diluted flushed with water to dilute according to local, state, and federal disposal guidelines. Solid surface should be wiped with a detergent-based cleaner to clean any remaining materials.

#### Reference to Other Sections

For disposal see Section 13.

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## SECTION 7: Handling and Storage

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### 7.1 Precautions for Safe Handling

Handle in accordance with good industrial hygiene and safety practices. Wash hands with soap and water after handling. Avoid contact with skin, eyes and clothing. Avoid prolonged or repeat exposure.



### 7.2 Conditions for Safe Storage, Including any Incompatibilities

Keep container tightly closed. Store at 2-8°C. DO NOT FREEZE. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage class (TRGS 510): Non-Combustible Liquids

#### Specific End Use(s)

Apart from the uses mentioned in Section 1 no other specific uses are stipulated.

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## SECTION 8: Exposure Controls and Personal Protection

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### 8.1 Control Parameters

Contains no substances with occupational exposure limit values.

### 8.2 Appropriate Engineering Controls

General industrial hygiene practice.

### 8.3 Individual Protection Measures, such as Personal Protective Equipment (PPE)

#### Pictograms



**EYE PROTECTION:** Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Use protective eyewear to guard against splash of liquids.



**SKIN PROTECTION:** Wear protective clothing and gloves. Hand protection is not required.



**VENTILATION:** None.

**RESPIRATOR:** Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**ADDITIONAL PROTECTION:** No additional protection required.

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## SECTION 9: Physical and Chemical Properties

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### 9.1 Information on Basic Physical and Chemical Properties

<b>FORM:</b>	Liquid, individual particles 100-300 nm total diameter.
<b>APPEARANCE/COLOR:</b>	Blue, Blue-gray colored liquid.
<b>UPPER/LOWER FLAMMABILITY LIMIT:</b>	No data available.
<b>ODOR:</b>	No data available.
<b>VAPOR PRESSURE:</b>	No data available.
<b>ODOR THRESHOLD:</b>	No data available.
<b>VAPOR DENSITY:</b>	No data available.
<b>pH:</b>	No data available.
<b>RELATIVE DENSITY:</b>	1.0001 g/cm <sup>3</sup> at 25 °C (77 °F)
<b>MELTING/FREEZING POINT (°C):</b>	No data available.
<b>SOLUBILITY:</b>	No data available.
<b>BOILING POINT (°C):</b>	No data available.
<b>FLASH POINT (°C):</b>	No data available.
<b>EVAPORATION RATE:</b>	No data available.
<b>FLAMMABILITY:</b>	No data available.
<b>PARTITION COEFFICIENT:</b>	No data available.
<b>AUTO-IGNITION TEMPERATURE (°C):</b>	No data available.
<b>DECOMPOSITION TEMPERATURE (°C):</b>	No data available.
<b>MOLECULAR WEIGHT:</b>	No data available.
<b>VISCOSITY:</b>	No data available.
<b>SPECIFIC GRAVITY:</b>	No data available.

### 9.2 Other Information

Information with regard to physical hazard classes: Hazard classes according to GHS (physical hazards): Not Relevant

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## SECTION 10: Stability and Reactivity

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### 10.1 Reactivity

No data available.

### 10.2 Chemical Stability

Stable under recommended storage conditions.

### 10.3 Possibility of Hazardous Reactions

No data available.

### 10.4 Conditions to Avoid

DO NOT FREEZE

### 10.5 Incompatible Materials

No data available.

### 10.6 Hazardous Decomposition Products

Hazardous decomposition products may be formed under fire conditions – Nature of decomposition products not known.

## SECTION 11: Toxicological Information

### 11.1 Information on Toxicological Effects

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation.

#### ACUTE TOXICITY

Based on available data, classification data are not met.

**Oral LD50:** No data available.

**Inhalation LD50:** No data available.

**Dermal LD50:** No data available.

**Other information on acute toxicity:** No data available.

#### COMPONENTS:

INGREDIENTS	CAS #	EINECS Number (EC No.)	% by Mass (Concentration)	Hazardous
Gold (as colloid)	7440-57-5	231-165-9	<0.125	No
Silica	7631-86-9	231-545-4	<0.007	No
Magnetite	1317-61-9	215-277-5	<0.0125	No
Carboxyl Ligand	NA	NA	Trace	No
Potassium Carbonate	584-08-7	209-529-3	< 0.003	No
Water	7732-18-5	231-791-2	>99	No

#### SKIN CORROSION/IRRITATION:

Based on available data, classification data are not met. May cause mild skin irritation.

#### SERIOUS EYE DAMAGE/IRRITATION

Based on available data, classification data are not met. May cause mild eye irritation.

#### RESPIRATORY OR SKIN SENSITIZATION

Based on available data, classification data are not met.

#### GERM CELL MUTAGENICITY

Based on available data, classification data are not met.

#### CARCINOGENICITY

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

<b>REPRODUCTIVE TOXICITY:</b>	Based on available data, classification data are not met.
<b>TERATOGENICITY:</b>	No data available
<b>SPECIFIC TARGET ORGAN TOXICITY (Single Exposure)</b>	Based on available data, classification data are not met.
<b>SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure)</b>	Based on available data, classification data are not met.
<b>ASPIRATION HAZARD</b>	Based on available data, classification data are not met.
<b>POTENTIAL HEALTH EFFECTS</b>	
<b>Inhalation:</b>	May be harmful if inhaled. May cause respiratory tract irritation.
<b>Ingestion:</b>	May be harmful if swallowed.
<b>Skin:</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>Eyes:</b>	May cause eye irritation.
<b>SIGNS AND SYMPTOMS OF EXPOSURE</b>	Exposure to gold compounds can cause contact dermatitis. The toxicological properties have not been thoroughly investigated. The data supplied are for a closely related compound No data available.
<b>SYNERGISTIC EFFECTS:</b>	No data available.
<b>ADDITIONAL INFORMATION:</b>	RTECS not available.

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## SECTION 12: Ecological Information

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<b>TOXICITY</b>	No data available.
<b>PERSISTANCE AND DEGRADABILITY:</b>	No data available.
<b>BIOACCUMULATIVE POTENTIAL:</b>	No data available.
<b>MOBILITY IN SOIL:</b>	No data available.
<b>RESULTS of PBT AND vPvB ASSESSMENT:</b>	No data available.
<b>AQUATIC/TERRESTRIAL ORGANISM TOXICITY:</b>	No data available.
<b>ASPIRATION HAZARD</b>	No data available.
<b>OTHER ADVERSE EFFECTS:</b>	No data available.

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## SECTION 13: Disposal Considerations

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**Disposal of Product:** Dispose of according to local, state and federal regulations. Local regulations may be more stringent than State or Federal Requirements. (Refer to Section 8)

**Disposal of Contaminated Packaging:** Dispose of as unused product.

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## SECTION 14: Transportation Information

#### 14.1 UN-Number

Not Applicable

#### 14.2 UN Proper Shipping Name

Not Applicable

#### 14.3 Transport Hazard Class(es)

Not Applicable

**DOT (US):** Not dangerous goods.

**IMDG:** Not dangerous goods.

**IATA:** Not dangerous goods.

**SHIPPING NAME (CFR):** Non-hazardous.

**SHIPPING NAME (IATA):** Non-hazardous.

#### 14.4 Packing Group

Not Applicable

#### 14.5 Environmental Hazards

No data available

#### 14.6 Special Precautions for User

No data available

#### 14.7 Transport in Bulk According to Annex II of MARPOL and the IBC Code

Not Applicable

### SECTION 15: Regulatory Information

#### 15.1 Safety, Health, and Environmental Regulations Specific for the Product in Question

**OSHA HAZARDS:** No known OSHA hazards

**DSL STATUS:** All components of this product are on the Canadian DSL list

**TSCA 8(b) inventory:** Gold - CAS# 7440-57-5, Silica - CAS# 7631-86-9, Magnetite - CAS# 1317-61-9, Potassium Carbonate – CAS# 584-08-7

**SARA 302 COMPONENTS:** No chemicals in this material are subject the reporting requirements of SARA Section 302.

**SARA 313 COMPONENTS:** No chemicals in this material are subject to the reporting requirements of SARA Section 313.

**SARA 311/312 HAZARDS:** No SARA Hazards.

**MA RIGHT TO KNOW COMPONENTS:** No components are subject to the MA Right to Know Act.

**PA RIGHT TO KNOW COMPONENTS:**

INGREDIENTS	CAS #	EINECS Number (EC No.)	% by Mass (Concentration)	Hazardous
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Gold (as colloid)	7440-57-5	231-165-9	<0.125	No
Silica	7631-86-9	231-545-4	<0.007	No
Magnetite	1317-61-9	215-277-5	<0.0125	No
Carboxyl Ligand	NA	NA	Trace	No
Potassium Carbonate	584-08-7	209-529-3	< 0.003	No
Water	7732-18-5	231-791-2	>99	No

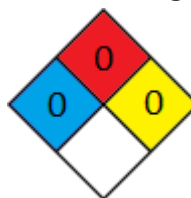
**NJ RIGHT TO KNOW COMPONENTS**

INGREDIENTS	CAS #	EINECS Number (EC No.)	% by Mass (Concentration)	Hazardous
Gold (as colloid)	7440-57-5	231-165-9	<0.125	No
Silica	7631-86-9	231-545-4	<0.007	No
Magnetite	1317-61-9	215-277-5	<0.0125	No
Carboxyl Ligand	NA	NA	Trace	No
Potassium Carbonate	584-08-7	209-529-3	< 0.003	No
Water	7732-18-5	231-791-2	>99	No

**CA PROP 65 COMPONENTS:** This product does not contain any chemicals known to the State of CA to cause cancer, birth defects, or any other reproductive harm.

**HMIS Rating**

Health	0
Flammability	0
Instability	0
Personal Protection	

**NFPA Rating**

**SECTION 16 Other Information**
**16.1 Further Information/Disclaimer**

Date of Issue: February 14, 2024

**DISCLAIMER:** The information herein is believed to be accurate and reliable as of the date compiled and represents the best information currently available to us. However, nanoComposix, Inc. makes no representation, warranty of merchantability or any other warranty, express or implied, or guarantee of any kind, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability, with respect to the information contained in this document or any use of the product based on this information, for their particular purposes. All materials may present unknown hazards and should be used with caution. In no event shall nanoComposix be held liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if we have been advised of the possibility of such damages.