



SHINHAN POWDER RICH GOLD

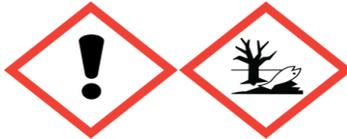
According to Regulation (EC) No. 1907/2006 (REACH)

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

- 1.1** Product identifier: ShinHan Powder Rich Gold
- 1.2** Relevant identified uses of the substance or mixture and uses advised against:
 Relevant identified uses: Use for art painting.
 Uses advised against: Do not use it except for art painting.
- 1.3** Details of the supplier of the safety data sheet:
 Company name : SHINHANART MATERIALS INC.
 Address : 154 Bulgwang-ro, Eunpyeong-gu, Seoul, Korea
 Email : info@shinhanart.com
- 1.4** Emergency telephone number:
 - Tel : +82 02-357-2651 - Fax : +82 02-357-7481

SECTION 2: Hazards identification

- 2.1** Classification of the substance or mixture:
- 2.1.1** Classification according to Regulation (EC) No 1272/2008:
 Acute Tox 4, H332
 Aquatic Acute 1, H400
 Aquatic Chronic 1, H410
- 2.2** Label elements:
 Labeling according to Regulation (EC) No 1272/2008:
 Pictograms:



Signal word: Warning

Hazard statements:

- H332 Harmful if inhaled.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

- 1) Prevention
 P261 Avoid breathing dust.
 P271 Use only outdoors or in a well-ventilated area.
 P273 Avoid release to the environment.
- 2) Response
 P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for Breathing
 P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 P391 Collect spillage.
- 3) Storage
- 4) Disposal
 P501 Dispose of contents/container in accordance with local/ regional/ national/ international regulations.

- 2.3** Other hazards: No additional information available.

SECTION 3: Composition/information on ingredients

- 3.1** Substances: Not relevant.
- 3.2** Mixtures: The mixture contains these substances:

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 1 / 7



SAFETY DATA SHEET

SHINHAN POWDER RICH GOLD

According to Regulation (EC) No. 1907/2006 (REACH)

Substance name	EC/CAS No.	Registr. No.	Classification CLP			Conc. (%)
			Hazard Class and Category Code(s)	Hazard statement	Pictogram/Signal word	
Copper(*)	231-159-6/ 7440-50-8		Aquatic Chronic 2	H411	GHS09	5-10
zinc	231-175-3/ 7440-66-6		Pyr. Sol. 1 Water-react. 1 Aquatic Acute 1 Aquatic Chronic 1	H250 H260 H400 H410	GHS02 GHS09 Dgr	1-5
titanium dioxide(*)	236-675-5/ 13463-67-7	-	Carc. 2	H351	GHS08 Wng	1-5
mica(*)	601-648-2/ 12001-26-2	-	Not classified			1-5
ferric oxide(*)	215-168-2/ 1309-37-1	-	Not classified			<1
tin oxide	242-159-0/ 18282-10-5		Not classified			<0.1
trade secret(^)	-		Not classified			80-90

* : Substance with assigned community workplace exposure limits.

^ : No hazardous chemicals.

For full text of H-phrases see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures:

Following inhalation: Move to fresh air. Call a physician if symptoms develop or persist.

Following skin contact: Wash off with soap and water. Get medical attention if irritation or rash develops.

Following eye contact: Rinse with water. Get medical attention if irritation develops and persists.

Following ingestion: Rinse mouth. Do not let him/her eat anything. If unconscious.

Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed: Adverse effects are not known.

4.3 Indication of any immediate medical attention and special treatment needed: Provide general supportive measures and treat symptomatically. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media: dry sand, dry chemical, alcohol-resistant foam, Carbon dioxide (CO₂).

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture: By heating and fire, harmful vapors/gases may be formed.

5.3 Advice for firefighters: Move containers from fire area if you can do so without risk. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.

Do not discharge contaminated water into drains, dispose of according to regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: Wear appropriate personal protective equipment. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.

For emergency responders: No data available.

6.2 Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 2 / 7



SHINHAN POWDER RICH GOLD

According to Regulation (EC) No. 1907/2006 (REACH)

- 6.3** Methods and material for containment and cleaning up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see section 13 of the MSDS.
- 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 specific recommendations for technical measures. When using do not eat, drink or smoke. Use personal protection recommended in Section 8 of the MSDS. For further information on contact avoidance measures, please refer to section 10 of the MSDS.
Wash thoroughly after handling, Be careful to high temperature.
- 7.2** Conditions for safe storage, including any incompatibilities: Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS). Safe packaging materials: Keep in original container.
- 7.3** Specific end use(s): No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

European Union (Directive 98/24/EC):

copper (cas 7440-50-8): (Fume as Cu)	0.2 mg/m ³ (8h TWA)
(Dust and mists)	1 mg/m ³ (8h TWA)
mica (cas 12001-26-2): (Inhalable)	10 mg/m ³ (8h TWA)
(Respirable)	0.8 mg/m ³ (8h TWA)
iron oxide (cas 1309-37-1): (Fume as Fe)	5 mg/m ³ (8h TWA)
titanium dioxide (cas 13463-67-7): (Inhalable)	10 mg/m ³ (8h TWA)
(Respirable)	4 mg/m ³ (8h TWA)

Substance	CAS	Workplace exposure limit				Remarks	Source
		Long-term exposure limit (8-hr TWA reference period)		Short-term exposure limit (15 minute reference period)			
		ppm	mg/m ³	ppm	mg/m ³		
copper fume (as Cu) Copper and compounds: dust and mists (as Cu)	7440-50-8		0.2				EH40/2005
mica total inhalable respirable	12001-26-2		10 0.8				EH40/2005
iron oxide, fume (as Fe)	1309-37-1		5		10		EH40/2005

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 3 / 7

**SHINHAN POWDER RICH GOLD**

According to Regulation (EC) No. 1907/2006 (REACH)

- 10.1 Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.
- 10.2 Chemical stability: Material is stable under normal conditions.
- 10.3 Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.
- 10.4 Conditions to avoid: None established.
- 10.5 Incompatible materials: None established.
- 10.6 Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11: Toxicological information**11.1 Information on toxicological effects:**

Substances:

Copper : LD-50 rats >481mg/kg Rat

Zinc : LD-50 >2000mg/kg Rat

Mixtures:

Acute toxicity: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.Germ cell mutagenicity: Based on available data, the classification criteria are not met. No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.Carcinogenicity: Based on available data, the classification criteria are not met.Reproductive toxicity: Based on available data, the classification criteria are not met. This product is not expected to cause reproductive or developmental effects.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:**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2 Persistence and degradability: No data is available on the degradability of this product.**12.3 Bioaccumulative potential:** No data available.**12.4 Mobility in soil:** No data available.**12.5 Results of PBT and vPvB assessment:** No data available.**12.6 Other adverse effects:** No data available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods:** Dispose in accordance with all applicable regulations.

Residual waste: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Local disposal regulations: Contract with a disposal operator licensed by the Law on Disposal and Cleaning. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 5 / 7



SHINHAN POWDER RICH GOLD

According to Regulation (EC) No. 1907/2006 (REACH)

SECTION 14: Transport information

	ADR/RID	IMDG/IMO	IATA /ICAO
14.1 UN number:	Not applicable. Not regulated as dangerous goods.		
14.2 UN proper shipping name:	Not applicable		
14.3 Transport hazard class(es):	Not applicable		
14.4 Packing group:	Not applicable		
14.5 Environmental hazards:	Not applicable		
14.6 Special precautions for user:	Not applicable		
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	Not applicable		
14.8 Other information:	No data available		

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
The substances in the mixture are not subject to authorisation under Title VII or restrictions under Title VIII of Regulation (EC) No. 1907/2006.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;

Regulation (EC) No 1272/2008 of the European parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures and amending Regulation (EC) No 1907/2006;

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH);

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH);

Industrial Safety and Health Act

Notifiable substances: Not regulated.

Labeling substances: Not regulated.

Poisonous and Deleterious Substances Control Act

Specified poisonous substances: Not regulated.

Poisonous substances: Not regulated.

Deleterious substances: Not regulated.

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

Class I specified chemical substances: Not regulated.

Class II specified chemical substances: Not regulated.

Monitoring chemical substances: Not regulated.

Priority Assessment Chemical Substances (PACs): Not regulated.

Reporting Exempted Substances: Not regulated.

Law concerning Pollutant Release and Transfer Register

Specified class 1 substances (substance name, ordinance number and content): Not regulated.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 6 / 7

**SHINHAN POWDER RICH GOLD**

According to Regulation (EC) No. 1907/2006 (REACH)

Class 1 substances (substance name, ordinance number and content): Not regulated.
Class 2 substances (substance name, ordinance number and content): Not regulated.
Ship Safety Law, Dangerous Goods Marine Transport and Storage Rule: Not regulated.
Air Law, Enforcement Rule: Not regulated.
Explosives Control Act: Not regulated.

15.2 Chemical safety assessment: Chemical safety assessment is not available.

SECTION 16: Other information

16.1 List of relevant risk phrases and hazard statements:

H250 Catches fire spontaneously if exposed to air. H260 In contact with water releases flammable gases. H351 Suspected of causing cancer. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects.

16.2 Instructions for the training: Product handling instruction shall be included into the educational system about the safety work (initial training, training at the workplace, repeated training) according to specific conditions at the workplace.

16.3 Recommended restrictions on use (i.e. non-statutory recommendations by supplier): Mixture should not be used for any other purpose than for which is appointed (point 1.2). Because of the fact that specific conditions of use of mixture are out of supplier's control, it is responsibility of the user to adjust the prescribed warnings to local laws and regulations. Safety information describes the product in terms of safety and it cannot be considered as technical information about product.

16.4 Sources of key data used to compile the Safety Data Sheet: SDS was elaborated according to requirements set in Annex II of Regulation (EC) No 1907/2006 of the European Parliament and of the Council. SDS was prepared using data from the producer.

16.5 Sources of key data used to compile the Safety Data Sheet: SDS was elaborated according to requirements set in Annex II of Regulation (EC) No 1907/2006 of the European Parliament and of the Council. SDS was prepared using data from the producer.

16.6 Purpose of SDS: Purpose of this SDS is to provide relevant information for users of product to ensure proper handling and control of risks/hazards.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 7 / 7

**SHINHAN POWDER SILVER**

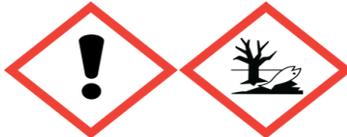
According to Regulation (EC) No. 1907/2006 (REACH)

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

- 1.1** Product identifier: ShinHan Powder Silver
1.2 Relevant identified uses of the substance or mixture and uses advised against:
Relevant identified uses: Paint for art painting.
Uses advised against: Do not use it except for art painting.
1.3 Details of the supplier of the safety data sheet:
Company name : SHINHANART MATERIALS INC.
Address : 154 Bulgwang-ro, Eunpyeong-gu, Seoul, Korea
Email : info@shinhanart.com
1.4 Emergency telephone number:
- Tel : +82 02-357-2651 - Fax : +82 02-357-7481

SECTION 2: Hazards identification

- 2.1** Classification of the substance or mixture:
2.1.1 Classification according to Regulation (EC) No 1272/2008:
Acute Tox 4, H332
Aquatic Acute 1, H400
Aquatic Chronic 1, H410
2.2 Label elements:
Labeling according to Regulation (EC) No 1272/2008:
Pictograms:



Signal word: Warning

Hazard statements:

- H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

- 1) Prevention
P261 Avoid breathing dust.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
2) Response
P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for Breathing
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P391 Collect spillage.
3) Storage
4) Disposal
P501 Dispose of contents/container in accordance with local/ regional/ national/ international regulations.

- 2.3** Other hazards: No additional information available.

SECTION 3: Composition/information on ingredients

- 3.1** Substances: Not relevant.
3.2 Mixtures: The mixture contains these substances:

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 1 / 7



SAFETY DATA SHEET

SHINHAN POWDER SILVER

According to Regulation (EC) No. 1907/2006 (REACH)

Substance name	EC/CAS No.	Registr. No.	Classification CLP			Conc. (%)
			Hazard Class and Category Code(s)	Hazard statement	Pictogram/Signal word	
titanium dioxide(*)	236-675-5/ 13463-67-7	-	Carc. 2	H351	GHS08 Wng	1-5
aluminium(*)	231-072-3/ 7429-90-5		Flam. Sol. 1 Water-react. 2	H228 H261	GHS02 Dgr	5-10
mica(*)	601-648-2/ 12001-26-2	-	Not classified			1-5
silicon dioxide	231-545-4/ 7631-86-9		Not classified			1-5
calcium titanium borosilicate	266-046-0/ 65997-17-3		Not classified			5-10
tin oxide	242-159-0/ 18282-10-5		Not classified			<0.1
trade secret(^)	-		Not classified			70-80

* : Substance with assigned community workplace exposure limits.

^ : No hazardous chemicals.

For full text of H-phrases see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures:

Following inhalation: Move to fresh air. Call a physician if symptoms develop or persist.

Following skin contact: Wash off with soap and water. Get medical attention if irritation or rash develops.

Following eye contact: Rinse with water. Get medical attention if irritation develops and persists.

Following ingestion: Rinse mouth. Do not let him/her eat anything. If unconscious.

Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed: Adverse effects are not known.

4.3 Indication of any immediate medical attention and special treatment needed: Provide general supportive measures and treat symptomatically. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media: dry sand, dry chemical, alcohol-resistant foam, Carbon dioxide (CO₂).

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture: By heating and fire, harmful vapors/gases may be formed.

5.3 Advice for firefighters: Move containers from fire area if you can do so without risk. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.

Do not discharge contaminated water into drains, dispose of according to regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: Wear appropriate personal protective equipment. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.

For emergency responders: No data available.

6.2 Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 2 / 7



SHINHAN POWDER SILVER

According to Regulation (EC) No. 1907/2006 (REACH)

like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see section 13 of the MSDS.

- 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 specific recommendations for technical measures. When using do not eat, drink or smoke. Use personal protection recommended in Section 8 of the MSDS. For further information on contact avoidance measures, please refer to section 10 of the MSDS.

Wash thoroughly after handling, Be careful to high temperature.

- 7.2** Conditions for safe storage, including any incompatibilities: Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS). Safe packaging materials: Keep in original container.

- 7.3** Specific end use(s): No data available.

SECTION 8: Exposure controls/personal protection

- 8.1** Control parameters:

European Union (Directive 98/24/EC):

aluminium (cas 7429-90-5): (Inhalable dust)	10 mg/m ³ (8h TWA)
(Respirable dust)	4 mg/m ³ (8h TWA)
mica (cas 12001-26-2): (Inhalable)	10 mg/m ³ (8h TWA)
(Respirable)	0.8 mg/m ³ (8h TWA)
titanium dioxide (cas 13463-67-7): (Inhalable)	10 mg/m ³ (8h TWA)
(Respirable)	4 mg/m ³ (8h TWA)

Substance	CAS	Workplace exposure limit				Remarks	Source
		Long-term exposure limit (8-hr TWA reference period)		Short-term exposure limit (15 minute reference period)			
		ppm	mg/m ³	ppm	mg/m ³		
aluminium metal inhalable dust respirable dust	7429-90-5		10 4				EH40/2005
mica total inhalable respirable	12001-26-2		10 0.8				EH40/2005
titanium dioxide total inhalable respirable	13463-67-7		10 4				EH40/2005

ACGIH regulation

aluminium	TWA : 1 mg/m ³
mica	TWA : 3 mg/m ³

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 3 / 7



SAFETY DATA SHEET

SHINHAN POWDER SILVER

According to Regulation (EC) No. 1907/2006 (REACH)

titanium dioxide

TWA : 10 mg/m³

tin oxide

TWA : 2 mg/m³ (oxide and inorganic compound)

8.2 Exposure controls:

8.2.1 Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

8.2.2 Individual protection measures, such as personal protective equipment:

8.2.2.1 Eye/face protection: use eye/face protection.

8.2.2.2 Skin protection:

Hand protection: Wear protective gloves.

Other: Wear suitable protective clothing.

8.2.2.3 Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

8.2.2.4 Thermal hazards: No data available.

8.2.3 Environmental exposure controls: Avoid discharge into drains, water courses or into the ground.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	powder
Odour:	odorless
Odour threshold:	no data available
pH:	no data available
Melting point/freezing point:	no data available
Initial boiling point and boiling range:	no data available
Flash point:	no data available
Evaporation rate:	no data available
Flammability (solid, gas):	not flammable
Upper/lower flammability or explosive limits:	no data available
Vapour pressure:	no data available
Vapour density:	no data available
Relative density:	no data available
Solubility(ies):	no data available
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
Viscosity:	no data available
Explosive properties:	not explosive
Oxidising properties:	not oxidising

9.2 Other information: No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2 Chemical stability: Material is stable under normal conditions.

10.3 Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid: None established.

10.5 Incompatible materials: None established.

10.6 Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

Substances:

No data available.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 4 / 7



SHINHAN POWDER SILVER

According to Regulation (EC) No. 1907/2006 (REACH)

Mixtures:

Acute toxicity: Based on available data, the classification criteria are not met.

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.

Germ cell mutagenicity: Based on available data, the classification criteria are not met. No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met. This product is not expected to cause reproductive or developmental effects.

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:

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2 Persistence and degradability: No data is available on the degradability of this product.

12.3 Bioaccumulative potential: No data available.

12.4 Mobility in soil: No data available.

12.5 Results of PBT and vPvB assessment: No data available.

12.6 Other adverse effects: No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods: Dispose in accordance with all applicable regulations.

Residual waste: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Local disposal regulations: Contract with a disposal operator licensed by the Law on Disposal and Cleaning. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.

SECTION 14: Transport information

	ADR/RID	IMDG/IMO	IATA /ICAO
14.1 UN number:	Not applicable. Not regulated as dangerous goods.		
14.2 UN proper shipping name:	Not applicable		
14.3 Transport hazard class(es):	Not applicable		
14.4 Packing group:	Not applicable		
14.5 Environmental hazards:	Not applicable		
14.6 Special precautions for user:	Not applicable		

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 5 / 7



SHINHAN POWDER SILVER

According to Regulation (EC) No. 1907/2006 (REACH)

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	Not applicable
14.8 Other information:	No data available

SECTION 15: Regulatory information

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

The substances in the mixture are not subject to authorisation under Title VII or restrictions under Title VIII of Regulation (EC) No. 1907/2006.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;

Regulation (EC) No 1272/2008 of the European parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures and amending Regulation (EC) No 1907/2006;

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH);

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH);

Industrial Safety and Health Act

Notifiable substances: Not regulated.

Labeling substances: Not regulated.

Poisonous and Deleterious Substances Control Act

Specified poisonous substances: Not regulated.

Poisonous substances: Not regulated.

Deleterious substances: Not regulated.

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

Class I specified chemical substances: Not regulated.

Class II specified chemical substances: Not regulated.

Monitoring chemical substances: Not regulated.

Priority Assessment Chemical Substances (PACs): Not regulated.

Reporting Exempted Substances: Not regulated.

Law concerning Pollutant Release and Transfer Register

Specified class 1 substances (substance name, ordinance number and content): Not regulated.

Class 1 substances (substance name, ordinance number and content): Not regulated.

Class 2 substances (substance name, ordinance number and content): Not regulated.

Ship Safety Law, Dangerous Goods Marine Transport and Storage Rule: Not regulated.

Air Law, Enforcement Rule: Not regulated.

Explosives Control Act: Not regulated.

15.2 Chemical safety assessment: Chemical safety assessment is not available.

SECTION 16: Other information

16.1 List of relevant risk phrases and hazard statements:

H228 Flammable Solid. H261 In contact with water releases flammable gases. H351 Suspected of causing cancer.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 6 / 7

**SHINHAN POWDER SILVER**

According to Regulation (EC) No. 1907/2006 (REACH)

- 16.2** Instructions for the training: Product handling instruction shall be included into the educational system about the safety work (initial training, training at the workplace, repeated training) according to specific conditions at the workplace.
- 16.3** Recommended restrictions on use (i.e. non-statutory recommendations by supplier): Mixture should not be used for any other purpose than for which is appointed (point 1.2). Because of the fact that specific conditions of use of mixture are out of supplier's control, it is responsibility of the user to adjust the prescribed warnings to local laws and regulations. Safety information describes the product in terms of safety and it cannot be considered as technical information about product.
- 16.4** Sources of key data used to compile the Safety Data Sheet: SDS was elaborated according to requirements set in Annex II of Regulation (EC) No 1907/2006 of the European Parliament and of the Council. SDS was prepared using data from the producer.
- 16.5** Sources of key data used to compile the Safety Data Sheet: SDS was elaborated according to requirements set in Annex II of Regulation (EC) No 1907/2006 of the European Parliament and of the Council. SDS was prepared using data from the producer.
- 16.6** Purpose of SDS: Purpose of this SDS is to provide relevant information for users of product to ensure proper handling and control of risks/hazards.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 7 / 7



SHINHAN POWDER WHITE SILVER

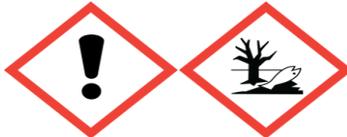
According to Regulation (EC) No. 1907/2006 (REACH)

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

- 1.1** Product identifier: ShinHan Powder White Silver
- 1.2** Relevant identified uses of the substance or mixture and uses advised against:
 Relevant identified uses: Use for art painting.
 Uses advised against: Do not use it except for art painting.
- 1.3** Details of the supplier of the safety data sheet:
 Company name : SHINHANART MATERIALS INC.
 Address : 154 Bulgwang-ro, Eunpyeong-gu, Seoul, Korea
 Email : info@shinhanart.com
- 1.4** Emergency telephone number:
 - Tel : +82 02-357-2651 - Fax : +82 02-357-7481

SECTION 2: Hazards identification

- 2.1** Classification of the substance or mixture:
- 2.1.1** Classification according to Regulation (EC) No 1272/2008:
 Acute Tox 4, H332
 Aquatic Acute 1, H400
 Aquatic Chronic 1, H410
- 2.2** Label elements:
 Labeling according to Regulation (EC) No 1272/2008:
 Pictograms:



Signal word: Warning

Hazard statements:

- H332 Harmful if inhaled.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

- 1) Prevention
 P261 Avoid breathing dust.
 P271 Use only outdoors or in a well-ventilated area.
 P273 Avoid release to the environment.
- 2) Response
 P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for Breathing
 P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 P391 Collect spillage.
- 3) Storage
- 4) Disposal
 P501 Dispose of contents/container in accordance with local/ regional/ national/ international regulations.

- 2.3** Other hazards: No additional information available.

SECTION 3: Composition/information on ingredients

- 3.1** Substances: Not relevant.
- 3.2** Mixtures: The mixture contains these substances:

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 1 / 7



SHINHAN POWDER WHITE SILVER

According to Regulation (EC) No. 1907/2006 (REACH)

Substance name	EC/CAS No.	Registr. No.	Classification CLP			Conc. (%)
			Hazard Class and Category Code(s)	Hazard statement	Pictogram/Signal word	
titanium dioxide(*)	236-675-5/ 13463-67-7	-	Carc. 2	H351	GHS08 Wng	5-10
calcium titanium borosilicate	266-046-0/ 65997-17-3		Not classified			5-10
mica(*)	601-648-2/ 12001-26-2	-	Not classified			5-10
tin oxide	242-159-0/ 18282-10-5		Not classified			<0.1
trade secret(^)	-		Not classified			75-85

* : Substance with assigned community workplace exposure limits.

^ : No hazardous chemicals.

For full text of H-phrases see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures:

Following inhalation: Move to fresh air. Call a physician if symptoms develop or persist.

Following skin contact: Wash off with soap and water. Get medical attention if irritation or rash develops.

Following eye contact: Rinse with water. Get medical attention if irritation develops and persists.

Following ingestion: Rinse mouth. Do not let him/her eat anything. If unconscious.

Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed: Adverse effects are not known.

4.3 Indication of any immediate medical attention and special treatment needed: Provide general supportive measures and treat symptomatically. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media: dry sand, dry chemical, alcohol-resistant foam, Carbon dioxide (CO₂).

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture: By heating and fire, harmful vapors/gases may be formed.

5.3 Advice for firefighters: Move containers from fire area if you can do so without risk. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.

Do not discharge contaminated water into drains, dispose of according to regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: Wear appropriate personal protective equipment. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.

For emergency responders: No data available.

6.2 Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 2 / 7



SAFETY DATA SHEET

SHINHAN POWDER WHITE SILVER

According to Regulation (EC) No. 1907/2006 (REACH)

(e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see section 13 of the MSDS.

- 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 specific recommendations for technical measures. When using do not eat, drink or smoke. Use personal protection recommended in Section 8 of the MSDS. For further information on contact avoidance measures, please refer to section 10 of the MSDS.

Wash thoroughly after handling. Be careful to high temperature.

- 7.2** Conditions for safe storage, including any incompatibilities: Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS). Safe packaging materials: Keep in original container.

- 7.3** Specific end use(s): No data available.

SECTION 8: Exposure controls/personal protection

- 8.1** Control parameters:

European Union (Directive 98/24/EC):

mica (cas 12001-26-2): (Inhalable)	10 mg/m ³ (8h TWA)
	(Respirable) 0.8 mg/m ³ (8h TWA)
titanium dioxide (cas 13463-67-7): (Inhalable)	10 mg/m ³ (8h TWA)
	(Respirable) 4 mg/m ³ (8h TWA)

Substance	CAS	Workplace exposure limit				Remarks	Source
		Long-term exposure limit (8-hr TWA reference period)		Short-term exposure limit (15 minute reference period)			
		ppm	mg/m ³	ppm	mg/m ³		
mica total inhalable respirable	12001-26-2		10 0.8				EH40/2005
titanium dioxide total inhalable respirable	13463-67-7		10 4				EH40/2005

ACGIH regulation

mica	TWA : 3 mg/m ³
titanium dioxide	TWA : 10 mg/m ³
tin oxide	TWA : 2 mg/m ³ (oxide and inorganic compound)

- 8.2** Exposure controls:

- 8.2.1** Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

- 8.2.2** Individual protection measures, such as personal protective equipment:

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 3 / 7



SAFETY DATA SHEET

SHINHAN POWDER WHITE SILVER

According to Regulation (EC) No. 1907/2006 (REACH)

8.2.2.1 Eye/face protection: use eye/face protection.

8.2.2.2 Skin protection:

Hand protection: Wear protective gloves.

Other: Wear suitable protective clothing.

8.2.2.3 Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

8.2.2.4 Thermal hazards: No data available.

8.2.3 Environmental exposure controls: Avoid discharge into drains, water courses or into the ground.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	powder
Odour:	odorless
Odour threshold:	no data available
pH:	no data available
Melting point/freezing point:	no data available
Initial boiling point and boiling range:	no data available
Flash point:	no data available
Evaporation rate:	no data available
Flammability (solid, gas):	not flammable
Upper/lower flammability or explosive limits:	no data available
Vapour pressure:	no data available
Vapour density:	no data available
Relative density:	no data available
Solubility(ies):	no data available
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
Viscosity:	no data available
Explosive properties:	not explosive
Oxidising properties:	not oxidising

9.2 Other information: No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2 Chemical stability: Material is stable under normal conditions.

10.3 Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid: None established.

10.5 Incompatible materials: None established.

10.6 Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

Substances:

No data available.

Mixtures:

Acute toxicity: Based on available data, the classification criteria are not met.

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.

Germ cell mutagenicity: Based on available data, the classification criteria are not met. No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met. This product is not expected to cause reproductive or developmental effects.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 4 / 7



SAFETY DATA SHEET

SHINHAN POWDER WHITE SILVER

According to Regulation (EC) No. 1907/2006 (REACH)

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:

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2 Persistence and degradability: No data is available on the degradability of this product.

12.3 Bioaccumulative potential: No data available.

12.4 Mobility in soil: No data available.

12.5 Results of PBT and vPvB assessment: No data available.

12.6 Other adverse effects: No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods: Dispose in accordance with all applicable regulations.

Residual waste: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Local disposal regulations: Contract with a disposal operator licensed by the Law on Disposal and Cleaning. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.

SECTION 14: Transport information

	ADR/RID	IMDG/IMO	IATA /ICAO
14.1 UN number:	Not applicable. Not regulated as dangerous goods.		
14.2 UN proper shipping name:	Not applicable		
14.3 Transport hazard class(es):	Not applicable		
14.4 Packing group:	Not applicable		
14.5 Environmental hazards:	Not applicable		
14.6 Special precautions for user:	Not applicable		
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	Not applicable		
14.8 Other information:	No data available		

SECTION 15: Regulatory information

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

The substances in the mixture are not subject to authorisation under Title VII or restrictions under Title VIII of Regulation (EC) No. 1907/2006.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 5 / 7



SAFETY DATA SHEET

SHINHAN POWDER WHITE SILVER

According to Regulation (EC) No. 1907/2006 (REACH)

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;

Regulation (EC) No 1272/2008 of the European parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures and amending Regulation (EC) No 1907/2006;

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH);

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH);

Industrial Safety and Health Act

Notifiable substances: Not regulated.

Labeling substances: Not regulated.

Poisonous and Deleterious Substances Control Act

Specified poisonous substances: Not regulated.

Poisonous substances: Not regulated.

Deleterious substances: Not regulated.

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

Class I specified chemical substances: Not regulated.

Class II specified chemical substances: Not regulated.

Monitoring chemical substances: Not regulated.

Priority Assessment Chemical Substances (PACs): Not regulated.

Reporting Exempted Substances: Not regulated.

Law concerning Pollutant Release and Transfer Register

Specified class 1 substances (substance name, ordinance number and content): Not regulated.

Class 1 substances (substance name, ordinance number and content): Not regulated.

Class 2 substances (substance name, ordinance number and content): Not regulated.

Ship Safety Law, Dangerous Goods Marine Transport and Storage Rule: Not regulated.Air Law, Enforcement Rule: Not regulated.Explosives Control Act: Not regulated.

15.2 Chemical safety assessment: Chemical safety assessment is not available.

SECTION 16: Other information

16.1 List of relevant risk phrases and hazard statements:

H351 Suspected of causing cancer.

16.2 Instructions for the training: Product handling instruction shall be included into the educational system about the safety work (initial training, training at the workplace, repeated training) according to specific conditions at the workplace.

16.3 Recommended restrictions on use (i.e. non-statutory recommendations by supplier): Mixture should not be used for any other purpose than for which is appointed (point 1.2). Because of the fact that specific conditions of use of mixture are out of supplier's control, it is responsibility of the user to adjust the prescribed warnings to local laws and regulations. Safety information describes the product in terms of safety and it cannot be considered as technical information about product.

16.4 Sources of key data used to compile the Safety Data Sheet: SDS was elaborated according to requirements set in Annex II of Regulation (EC) No 1907/2006 of the European Parliament and of the Council. SDS was prepared using data from the producer.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 6 / 7

**SHINHAN POWDER WHITE SILVER**

According to Regulation (EC) No. 1907/2006 (REACH)

- 16.5** Sources of key data used to compile the Safety Data Sheet: SDS was elaborated according to requirements set in Annex II of Regulation (EC) No 1907/2006 of the European Parliament and of the Council. SDS was prepared using data from the producer.
- 16.6** Purpose of SDS: Purpose of this SDS is to provide relevant information for users of product to ensure proper handling and control of risks/hazards.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 7 / 7

**SHINHAN POWDER COPPER**

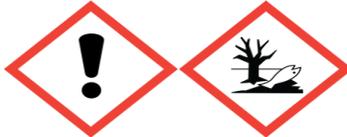
According to Regulation (EC) No. 1907/2006 (REACH)

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

- 1.1 Product identifier: ShinHan Powder Copper
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:
Relevant identified uses: Use for art painting.
Uses advised against: Do not use it except for art painting.
- 1.3 Details of the supplier of the safety data sheet:
Company name : SHINHANART MATERIALS INC.
Address : 154 Bulgwang-ro, Eunpyeong-gu, Seoul, Korea
Email : info@shinhanart.com
- 1.4 Emergency telephone number:
- Tel : +82 02-357-2651 - Fax : +82 02-357-7481

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture:
 - 2.1.1 Classification according to Regulation (EC) No 1272/2008:
Acute Tox 4, H332
Aquatic Acute 1, H400
Aquatic Chronic 1, H410
- 2.2 Label elements:
Labeling according to Regulation (EC) No 1272/2008:
Pictograms:



Signal word: Warning

Hazard statements:

- H332 Harmful if inhaled.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

- 1) Prevention
 - P261 Avoid breathing dust.
 - P271 Use only outdoors or in a well-ventilated area.
 - P273 Avoid release to the environment.
- 2) Response
 - P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for Breathing
 - P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 - P391 Collect spillage.
- 3) Storage
- 4) Disposal
 - P501 Dispose of contents/container in accordance with local/ regional/ national/ international regulations.

- 2.3 Other hazards: No additional information available.

SECTION 3: Composition/information on ingredients

- 3.1 Substances: Not relevant.
- 3.2 Mixtures: The mixture contains these substances:

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 1 / 7



SHINHAN POWDER COPPER

According to Regulation (EC) No. 1907/2006 (REACH)

Substance name	EC/CAS No.	Registr. No.	Classification CLP			Conc. (%)
			Hazard Class and Category Code(s)	Hazard statement	Pictogram/Signal word	
titanium dioxide(*)	236-675-5/ 13463-67-7	-	Carc. 2	H351	GHS08 Wng	<1
calcium titanium borosilicate	266-046-0/ 65997-17-3		Not classified			1-5
ferric oxide(*)	215-168-2/ 1309-37-1	-	Not classified			5-10
mica(*)	601-648-2/ 12001-26-2	-	Not classified			5-10
tin oxide	242-159-0/ 18282-10-5		Not classified			<0.1
trade secret(^)	-		Not classified			75-85

* : Substance with assigned community workplace exposure limits.

^ : No hazardous chemicals.

For full text of H-phrases see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures:

Following inhalation: Move to fresh air. Call a physician if symptoms develop or persist.

Following skin contact: Wash off with soap and water. Get medical attention if irritation or rash develops.

Following eye contact: Rinse with water. Get medical attention if irritation develops and persists.

Following ingestion: Rinse mouth. Do not let him/her eat anything. If unconscious.

Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed: Adverse effects are not known.

4.3 Indication of any immediate medical attention and special treatment needed: Provide general supportive measures and treat symptomatically. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media: dry sand, dry chemical, alcohol-resistant foam, Carbon dioxide (CO₂).

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture: By heating and fire, harmful vapors/gases may be formed.

5.3 Advice for firefighters: Move containers from fire area if you can do so without risk. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.

Do not discharge contaminated water into drains, dispose of according to regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: Wear appropriate personal protective equipment. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.

For emergency responders: No data available.

6.2 Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 2 / 7



SHINHAN POWDER COPPER

According to Regulation (EC) No. 1907/2006 (REACH)

(e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see section 13 of the MSDS.

- 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 specific recommendations for technical measures. When using do not eat, drink or smoke. Use personal protection recommended in Section 8 of the MSDS. For further information on contact avoidance measures, please refer to section 10 of the MSDS. Wash thoroughly after handling, Be careful to high temperature.
- 7.2** Conditions for safe storage, including any incompatibilities: Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS). Safe packaging materials: Keep in original container.
- 7.3** Specific end use(s): No data available.

SECTION 8: Exposure controls/personal protection

- 8.1** Control parameters:

European Union (Directive 98/24/EC):

mica (cas 12001-26-2): (Inhalable)	10 mg/m ³ (8h TWA)
	(Respirable) 0.8 mg/m ³ (8h TWA)
iron oxide (cas 1309-37-1): (Fume as Fe)	5 mg/m ³ (8h TWA)
titanium dioxide (cas 13463-67-7): (Inhalable)	10 mg/m ³ (8h TWA)
	(Respirable) 4 mg/m ³ (8h TWA)

Substance	CAS	Workplace exposure limit				Remarks	Source
		Long-term exposure limit (8-hr TWA reference period)		Short-term exposure limit (15 minute reference period)			
		ppm	mg/m ³	ppm	mg/m ³		
mica total inhalable respirable	12001-26-2		10 0.8				EH40/2005
iron oxide,fume (as Fe)	1309-37-1		5		10		EH40/2005
titanium dioxide total inhalable respirable	13463-67-7		10 4				EH40/2005

ACGIH regulation

mica	TWA : 3 mg/m ³
iron oxide	TWA : 5 mg/m ³
titanium dioxide	TWA : 10 mg/m ³
tin oxide	TWA : 2 mg/m ³

- 8.2** Exposure controls:

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 3 / 7



SHINHAN POWDER COPPER

According to Regulation (EC) No. 1907/2006 (REACH)

- 8.2.1** Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
- 8.2.2** Individual protection measures, such as personal protective equipment:
- 8.2.2.1** Eye/face protection: use eye/face protection.
- 8.2.2.2** Skin protection:
Hand protection: Wear protective gloves.
Other: Wear suitable protective clothing.
- 8.2.2.3** Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.
- 8.2.2.4** Thermal hazards: No data available.
- 8.2.3** Environmental exposure controls: Avoid discharge into drains, water courses or into the ground.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	powder
Odour:	odorless
Odour threshold:	no data available
pH:	no data available
Melting point/freezing point:	no data available
Initial boiling point and boiling range:	no data available
Flash point:	no data available
Evaporation rate:	no data available
Flammability (solid, gas):	not flammable
Upper/lower flammability or explosive limits:	no data available
Vapour pressure:	no data available
Vapour density:	no data available
Relative density:	no data available
Solubility(ies):	no data available
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
Viscosity:	no data available
Explosive properties:	not explosive
Oxidising properties:	not oxidising

9.2 Other information: No data available.

SECTION 10: Stability and reactivity

- 10.1** Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.
- 10.2** Chemical stability: Material is stable under normal conditions.
- 10.3** Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.
- 10.4** Conditions to avoid: None established.
- 10.5** Incompatible materials: None established.
- 10.6** Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

Substances:

No data available.

Mixtures:

Acute toxicity: Based on available data, the classification criteria are not met.

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.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 4 / 7



SAFETY DATA SHEET

SHINHAN POWDER COPPER

According to Regulation (EC) No. 1907/2006 (REACH)

Germ cell mutagenicity: Based on available data, the classification criteria are not met. No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met. This product is not expected to cause reproductive or developmental effects.

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:

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2 Persistence and degradability: No data is available on the degradability of this product.

12.3 Bioaccumulative potential: No data available.

12.4 Mobility in soil: No data available.

12.5 Results of PBT and vPvB assessment: No data available.

12.6 Other adverse effects: No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods: Dispose in accordance with all applicable regulations.

Residual waste: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Local disposal regulations: Contract with a disposal operator licensed by the Law on Disposal and Cleaning. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.

SECTION 14: Transport information

	ADR/RID	IMDG/IMO	IATA /ICAO
14.1 UN number:	Not applicable. Not regulated as dangerous goods.		
14.2 UN proper shipping name:	Not applicable		
14.3 Transport hazard class(es):	Not applicable		
14.4 Packing group:	Not applicable		
14.5 Environmental hazards:	Not applicable		
14.6 Special precautions for user:	Not applicable		
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	Not applicable		
14.8 Other information:	No data available		

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 5 / 7



SAFETY DATA SHEET

SHINHAN POWDER COPPER

According to Regulation (EC) No. 1907/2006 (REACH)

SECTION 15: Regulatory information

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

The substances in the mixture are not subject to authorisation under Title VII or restrictions under Title VIII of Regulation (EC) No. 1907/2006.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;

Regulation (EC) No 1272/2008 of the European parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures and amending Regulation (EC) No 1907/2006;;

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH);

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH);

Industrial Safety and Health Act

Notifiable substances: Not regulated.

Labeling substances: Not regulated.

Poisonous and Deleterious Substances Control Act

Specified poisonous substances: Not regulated.

Poisonous substances: Not regulated.

Deleterious substances: Not regulated.

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

Class I specified chemical substances: Not regulated.

Class II specified chemical substances: Not regulated.

Monitoring chemical substances: Not regulated.

Priority Assessment Chemical Substances (PACs): Not regulated.

Reporting Exempted Substances: Not regulated.

Law concerning Pollutant Release and Transfer Register

Specified class 1 substances (substance name, ordinance number and content): Not regulated.

Class 1 substances (substance name, ordinance number and content): Not regulated.

Class 2 substances (substance name, ordinance number and content): Not regulated.

Ship Safety Law, Dangerous Goods Marine Transport and Storage Rule: Not regulated.

Air Law, Enforcement Rule: Not regulated.

Explosives Control Act: Not regulated.

15.2 Chemical safety assessment: Chemical safety assessment is not available.

SECTION 16: Other information

16.1 List of relevant risk phrases and hazard statements:

H351 Suspected of causing cancer.

16.2 Instructions for the training: Product handling instruction shall be included into the educational system about the safety work (initial training, training at the workplace, repeated training) according to specific conditions at the workplace.

16.3 Recommended restrictions on use (i.e. non-statutory recommendations by supplier): Mixture should not be used for any other purpose than for which is appointed (point 1.2). Because of the fact that specific conditions of use of mixture are out of supplier's control, it is responsibility of the user to adjust the prescribed warnings to local laws and regulations. Safety information describes the product in terms of safety and it cannot be considered as technical information about product.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 6 / 7

**SHINHAN POWDER COPPER**

According to Regulation (EC) No. 1907/2006 (REACH)

- 16.4** Sources of key data used to compile the Safety Data Sheet: SDS was elaborated according to requirements set in Annex II of Regulation (EC) No 1907/2006 of the European Parliament and of the Council. SDS was prepared using data from the producer.
- 16.5** Sources of key data used to compile the Safety Data Sheet: SDS was elaborated according to requirements set in Annex II of Regulation (EC) No 1907/2006 of the European Parliament and of the Council. SDS was prepared using data from the producer.
- 16.6** Purpose of SDS: Purpose of this SDS is to provide relevant information for users of product to ensure proper handling and control of risks/hazards.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

Page 7 / 7



SHINHAN POWDER GOLD

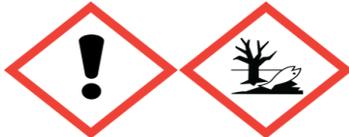
According to Regulation (EC) No. 1907/2006 (REACH)

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

- 1.1** Product identifier: ShinHan Powder Gold
- 1.2** Relevant identified uses of the substance or mixture and uses advised against:
 Relevant identified uses: Use for art painting.
 Uses advised against: Do not use it except for art painting.
- 1.3** Details of the supplier of the safety data sheet:
 Company name : SHINHANART MATERIALS INC.
 Address : 154 Bulgwang-ro, Eunpyeong-gu, Seoul, Korea
 Email : info@shinhanart.com
- 1.4** Emergency telephone number:
 - Tel : +82 02-357-2651 - Fax : +82 02-357-7481

SECTION 2: Hazards identification

- 2.1** Classification of the substance or mixture:
- 2.1.1** Classification according to Regulation (EC) No 1272/2008:
 Acute Tox 4, H332
 Aquatic Acute 1, H400
 Aquatic Chronic 1, H410
- 2.2** Label elements:
 Labeling according to Regulation (EC) No 1272/2008:
 Pictograms:



Signal word: Warning

Hazard statements:

- H332 Harmful if inhaled.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

- 1) Prevention
 - P261 Avoid breathing dust.
 - P271 Use only outdoors or in a well-ventilated area.
 - P273 Avoid release to the environment.
- 2) Response
 - P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for Breathing
 - P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 - P391 Collect spillage.
- 3) Storage
- 4) Disposal
 - P501 Dispose of contents/container in accordance with local/ regional/ national/ international regulations.

- 2.3** Other hazards: No additional information available.

SECTION 3: Composition/information on ingredients

- 3.1** Substances: Not relevant.
- 3.2** Mixtures: The mixture contains these substances:

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02



SHINHAN POWDER GOLD

According to Regulation (EC) No. 1907/2006 (REACH)

Substance name	EC/CAS No.	Registr. No.	Classification CLP			Conc. (%)
			Hazard Class and Category Code(s)	Hazard statement	Pictogram/Signal word	
Copper(*)	231-159-6/ 7440-50-8		Aquatic Chronic 2	H411	GHS09	5-10
zinc	231-175-3/ 7440-66-6		Pyr. Sol. 1 Water-react. 1 Aquatic Acute 1 Aquatic Chronic 1	H250 H260 H400 H410	GHS02 GHS09 Dgr	1-5
aluminium(*)	231-072-3/ 7429-90-5		Flam. Sol. 1 Water-react. 2	H228 H261	GHS02 Dgr	<0.1
mica(*)	601-648-2/ 12001-26-2	-	Not classified			1-5
rutile	215-282-2/ 1317-80-2		Not classified			1-5
ferric oxide(*)	215-168-2/ 1309-37-1	-	Not classified			1-5
tin oxide	242-159-0/ 18282-10-5		Not classified			<1
trade secret(^)	-		Not classified			80-90

* : Substance with assigned community workplace exposure limits.

^ : No hazardous chemicals.

For full text of H-phrases see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures:

Following inhalation: Move to fresh air. Call a physician if symptoms develop or persist.

Following skin contact: Wash off with soap and water. Get medical attention if irritation or rash develops.

Following eye contact: Rinse with water. Get medical attention if irritation develops and persists.

Following ingestion: Rinse mouth. Do not let him/her eat anything. If unconscious.

Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed: Adverse effects are not known.

4.3 Indication of any immediate medical attention and special treatment needed: Provide general supportive measures and treat symptomatically. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media: dry sand, dry chemical, alcohol-resistant foam, Carbon dioxide (CO₂).

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture: By heating and fire, harmful vapors/gases may be formed.

5.3 Advice for firefighters: Move containers from fire area if you can do so without risk. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.

Do not discharge contaminated water into drains, dispose of according to regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: Wear appropriate personal protective equipment. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02



SHINHAN POWDER GOLD

According to Regulation (EC) No. 1907/2006 (REACH)

For emergency responders: No data available.

- 6.2** Environmental precautions: Avoid discharge into drains, water courses or onto the ground.
- 6.3** Methods and material for containment and cleaning up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see section 13 of the MSDS.
- 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 specific recommendations for technical measures. When using do not eat, drink or smoke. Use personal protection recommended in Section 8 of the MSDS. For further information on contact avoidance measures, please refer to section 10 of the MSDS.
Wash thoroughly after handling. Be careful to high temperature.
- 7.2** Conditions for safe storage, including any incompatibilities: Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS). Safe packaging materials: Keep in original container.
- 7.3** Specific end use(s): No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

European Union (Directive 98/24/EC):

copper (cas 7440-50-8): (Fume as Cu)	0.2 mg/m ³ (8h TWA)
(Dust and mists)	1 mg/m ³ (8h TWA)
aluminium (cas 7429-90-5): (Inhalable dust)	10 mg/m ³ (8h TWA)
(Respirable dust)	4 mg/m ³ (8h TWA)
mica (cas 12001-26-2): (Inhalable)	10 mg/m ³ (8h TWA)
(Respirable)	0.8 mg/m ³ (8h TWA)
iron oxide (cas 1309-37-1): (Fume as Fe)	5 mg/m ³ (8h TWA)

Substance	CAS	Workplace exposure limit				Remarks	Source
		Long-term exposure limit (8-hr TWA reference period)		Short-term exposure limit (15 minute reference period)			
		ppm	mg/m ³	ppm	mg/m ³		
copper fume (as Cu) Copper and compounds: dust and mists (as Cu)	7440-50-8		0.2				EH40/2005
aluminium metal inhalable dust respirable dust	7429-90-5		10 4				EH40/2005
mica	12001-26-2						EH40/2005

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02



SHINHAN POWDER GOLD

According to Regulation (EC) No. 1907/2006 (REACH)

total inhalable respirable			10 0.8				
iron oxide, fume (as Fe)	1309-37-1		5		10		EH40/2005

ACGIH regulation

copper	TWA : 0.2 mg/m ³ (fume), TWA : 1 mg/m ³ (dust and mists)
aluminium	TWA : 1 mg/m ³
mica	TWA : 3 mg/m ³
iron oxide	TWA : 5 mg/m ³
tin oxide	TWA : 2 mg/m ³ (oxide and inorganic compound)

8.2 Exposure controls:

8.2.1 Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

8.2.2 Individual protection measures, such as personal protective equipment:

8.2.2.1 Eye/face protection: use eye/face protection.

8.2.2.2 Skin protection:

Hand protection: Wear protective gloves.

Other: Wear suitable protective clothing.

8.2.2.3 Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

8.2.2.4 Thermal hazards: No data available.

8.2.3 Environmental exposure controls: Avoid discharge into drains, water courses or into the ground.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	powder
Odour:	odorless
Odour threshold:	no data available
pH:	no data available
Melting point/freezing point:	no data available
Initial boiling point and boiling range:	no data available
Flash point:	no data available
Evaporation rate:	no data available
Flammability (solid, gas):	not flammable
Upper/lower flammability or explosive limits:	no data available
Vapour pressure:	no data available
Vapour density:	no data available
Relative density:	no data available
Solubility(ies):	no data available
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
Viscosity:	no data available
Explosive properties:	not explosive
Oxidising properties:	not oxidising

9.2 Other information: No data available.

SECTION 10: Stability and reactivity

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02



SAFETY DATA SHEET

SHINHAN POWDER GOLD

According to Regulation (EC) No. 1907/2006 (REACH)

- 10.1** Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.
- 10.2** Chemical stability: Material is stable under normal conditions.
- 10.3** Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.
- 10.4** Conditions to avoid: None established.
- 10.5** Incompatible materials: None established.
- 10.6** Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

Substances:

Copper : LD-50 rats >481mg/kg Rat

Zinc : LD-50 >2000mg/kg Rat

Mixtures:

Acute toxicity: Based on available data, the classification criteria are not met.

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.

Germ cell mutagenicity: Based on available data, the classification criteria are not met. No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met. This product is not expected to cause reproductive or developmental effects.

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:

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2 Persistence and degradability: No data is available on the degradability of this product.

12.3 Bioaccumulative potential: No data available.

12.4 Mobility in soil: No data available.

12.5 Results of PBT and vPvB assessment: No data available.

12.6 Other adverse effects: No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods: Dispose in accordance with all applicable regulations.

Residual waste: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Local disposal regulations: Contract with a disposal operator licensed by the Law on Disposal and Cleaning. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02



SHINHAN POWDER GOLD

According to Regulation (EC) No. 1907/2006 (REACH)

SECTION 14: Transport information

	ADR/RID	IMDG/IMO	IATA /ICAO
14.1 UN number:	Not applicable. Not regulated as dangerous goods.		
14.2 UN proper shipping name:	Not applicable		
14.3 Transport hazard class(es):	Not applicable		
14.4 Packing group:	Not applicable		
14.5 Environmental hazards:	Not applicable		
14.6 Special precautions for user:	Not applicable		
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	Not applicable		
14.8 Other information:	No data available		

SECTION 15: Regulatory information

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

The substances in the mixture are not subject to authorisation under Title VII or restrictions under Title VIII of Regulation (EC) No. 1907/2006.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;

Regulation (EC) No 1272/2008 of the European parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures and amending Regulation (EC) No 1907/2006;

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH);

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH);

Industrial Safety and Health Act

Notifiable substances: Not regulated.

Labeling substances: Not regulated.

Poisonous and Deleterious Substances Control Act

Specified poisonous substances: Not regulated.

Poisonous substances: Not regulated.

Deleterious substances: Not regulated.

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

Class I specified chemical substances: Not regulated.

Class II specified chemical substances: Not regulated.

Monitoring chemical substances: Not regulated.

Priority Assessment Chemical Substances (PACs): Not regulated.

Reporting Exempted Substances: Not regulated.

Law concerning Pollutant Release and Transfer Register

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02

**SHINHAN POWDER GOLD**

According to Regulation (EC) No. 1907/2006 (REACH)

Specified class 1 substances (substance name, ordinance number and content): Not regulated.

Class 1 substances (substance name, ordinance number and content): Not regulated.

Class 2 substances (substance name, ordinance number and content): Not regulated.

Ship Safety Law, Dangerous Goods Marine Transport and Storage Rule: Not regulated.

Air Law, Enforcement Rule: Not regulated.

Explosives Control Act: Not regulated.

15.2 Chemical safety assessment: Chemical safety assessment is not available.

SECTION 16: Other information

16.1 List of relevant risk phrases and hazard statements:

H228 Flammable Solid. H250 Catches fire spontaneously if exposed to air. H260 In contact with water releases flammable gases. H261 In contact with water releases flammable gases. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects.

16.2 Instructions for the training: Product handling instruction shall be included into the educational system about the safety work (initial training, training at the workplace, repeated training) according to specific conditions at the workplace.

16.3 Recommended restrictions on use (i.e. non-statutory recommendations by supplier): Mixture should not be used for any other purpose than for which is appointed (point 1.2). Because of the fact that specific conditions of use of mixture are out of supplier's control, it is responsibility of the user to adjust the prescribed warnings to local laws and regulations. Safety information describes the product in terms of safety and it cannot be considered as technical information about product.

16.4 Sources of key data used to compile the Safety Data Sheet: SDS was elaborated according to requirements set in Annex II of Regulation (EC) No 1907/2006 of the European Parliament and of the Council. SDS was prepared using data from the producer.

16.5 Sources of key data used to compile the Safety Data Sheet: SDS was elaborated according to requirements set in Annex II of Regulation (EC) No 1907/2006 of the European Parliament and of the Council. SDS was prepared using data from the producer.

16.6 Purpose of SDS: Purpose of this SDS is to provide relevant information for users of product to ensure proper handling and control of risks/hazards.

Date: 08.07.2019

Date of revision: 16.02.2024

Revision No.: 02