JM Johnson Matthey
SAFETY DATA SHEET
Gold

Product code: 50000

Section 1. Identification

GHS product identifier Gold
Chemical name gold
Synonym gold, colloidal; E 175; CI 77480; C.I. 77480
Product type Solid.

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

<table>
<thead>
<tr>
<th>Product use</th>
<th>Specific end use(s)</th>
<th>Uses advised against</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
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<td>Not available.</td>
</tr>
<tr>
<td>Professional</td>
<td>Not available.</td>
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</tr>
</tbody>
</table>

Address of Supplier: Johnson Matthey Inc, 2001 Nolte Drive, West Deptford, NJ 08066 USA

Emergency telephone number (with hours of operation): +1 856 384 7050 24 hours

Section 2. Hazards identification

OSHA Status While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification Not classified.

GHS label elements

Signal word No signal word.

Hazard statements

No known significant effects or critical hazards.

Precautionary statements

Prevention Not applicable.
Response Not applicable.
Storage Not applicable.
Disposal Not applicable.

Hazards not otherwise classified None known.

Section 3. Composition/information on ingredients

Identifiers

Product name Gold
Product code 50000
Chemical name gold
Synonyms gold, colloidal; E 175; CI 77480; C.I. 77480
CAS number 7440-57-5
Substance/mixture Substance

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>gold</td>
<td>99 - 100</td>
<td>7440-57-5</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
Section 3. Composition/information on ingredients

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

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

**Eye contact**  Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation**  Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

**Skin contact**  Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion**  Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

**Potential acute health effects**

**Eye contact**  No known significant effects or critical hazards.

**Inhalation**  No known significant effects or critical hazards.

**Skin contact**  No known significant effects or critical hazards.

**Ingestion**  No known significant effects or critical hazards.

Over-exposure signs/symptoms

**Eye contact**  No specific data.

**Inhalation**  No specific data.

**Skin contact**  No specific data.

**Ingestion**  No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

**Notes to physician**  Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**  No specific treatment.

**Protection of first-aiders**  No action shall be taken involving any personal risk or without suitable training.

Section 5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media**  Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media**  None known.

**Special protective actions for firefighters**  Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for firefighters**  Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Section 5. Fire-fighting measures

**Chemical Hazard**
No specific fire or explosion hazard.

**Remarks**
Decomposition products may include the following materials: metal oxide/oxides

Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

**For emergency responders**
If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Methods and materials for containment and cleaning up**

**Environmental precautions**
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Small spill**
Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

**Large spill**
Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

**Precautions for safe handling**

**Protective measures**
Put on appropriate personal protective equipment (see Section 8).

**Advice on general occupational hygiene**
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities**
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

**Occupational exposure limits**
None.

**Appropriate engineering controls**
Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Environmental exposure controls**
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**
Section 8. Exposure controls/personal protection

**Hygiene measures**
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

**Hand protection**
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection**
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection**
Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**
Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

**Physical state**
Solid.

**Color**
Yellow.

**Odor**
Not available.

**Odor threshold**
Not applicable.

**pH**
Not applicable.

**Boiling point**
Not applicable.

**Flash point**
Not applicable.

**Evaporation rate**
Not applicable.

**Partition coefficient: n-octanol/water**
Not available.

**Vapor pressure**
Not applicable.

**Vapor density**
Not available.

**Viscosity**
Not available.

**Solubility**
Not available.

**Melting point**
1064.76°C (1948.6°F)

**Relative density**
Not available.

**Flammability (solid, gas)**
Not available.

**Lower and upper explosive (flammable) limits**
Not available.

**Auto-ignition temperature**
Not applicable.

**Decomposition temperature**
Not applicable.

Section 10. Stability and reactivity

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

**Chemical stability**
The product is stable.

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

**Conditions to avoid**
No specific data.
Section 10. Stability and reactivity

Incompatible materials  No specific data.
Hazardous decomposition products  Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on the likely routes of exposure


Acute toxicity
Not available.

Acute toxicity estimates
Not available.

Irritation/Corrosion
Not available.

Sensitization
Not available.

Chronic toxicity

Mutagenicity
Not available.

Carcinogenicity
Not available.

Conclusion/Summary  Not available.

Reproductive toxicity
Not available.

Developmental toxicity
Not available.

Conclusion/Summary

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available.

Aspiration hazard
Not available.

Potential acute health effects

Eye contact  No known significant effects or critical hazards.
Inhalation  No known significant effects or critical hazards.
Skin contact  No known significant effects or critical hazards.
Ingestion  No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact  No specific data.
Inhalation  No specific data.
Skin contact  No specific data.
Section 11. Toxicological information

Ingestion  No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects  Not available.
Potential delayed effects  Not available.

Long term exposure

Potential immediate effects  Not available.
Potential delayed effects  Not available.

Potential chronic health effects
Not available.

General Chronic toxicity  No known significant effects or critical hazards.
Carcinogenicity  No known significant effects or critical hazards.
Mutagenicity  No known significant effects or critical hazards.
Teratogenicity  No known significant effects or critical hazards.
Developmental effects  No known significant effects or critical hazards.
Fertility effects  No known significant effects or critical hazards.
Other adverse symptoms  No known significant effects or critical hazards.

Section 12. Ecological information

Ecotoxicity  Not available.

Persistence/degradability Bioaccumulative potential
Not available.

Mobility in soil
Soil/water partition coefficient (Koc)  Not available.

Other adverse effects  No known significant effects or critical hazards.

Ecotoxicity  Not available.
Biodegradability  Not available.

Section 13. Disposal considerations

Disposal methods  The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Empty containers or liners may retain some product residues. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Return accumulated waste material to the refinery for metal recovery, or dispose of in accordance with local and national regulations.

Section 14. Transport information

<table>
<thead>
<tr>
<th>DOT Classification</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
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</table>
Section 14. Transport information

| Transport hazard class (es) and Packing group | - | - | - | - | - |
| Additional information | - | - | - | - | - |

**Special precautions for user** Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

Section 15. Regulatory information

**U.S. Federal regulations**

- TSCA 8(a) CDR Exempt/Partial exemption: Not determined
- United States inventory (TSCA 8b): This material is listed or exempted.

**Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** Not listed
**Clean Air Act Section 602 Class I Substances** Not listed
**Clean Air Act Section 602 Class II Substances** Not listed
**DEA List I Chemicals (Precursor Chemicals)** Not listed
**DEA List II Chemicals (Essential Chemicals)** Not listed

**SARA 302/304**
Composition/information on ingredients
No products were found.

**SARA 304 RQ** Not applicable.

**SARA 311/312**
Classification Not applicable.
Composition/information on ingredients
No products were found.

**State regulations**

**State Right to Know listings**

- **Massachusetts** This material is not listed.
- **New York** This material is not listed.
- **New Jersey** This material is not listed.
- **Pennsylvania** This material is not listed.

**International regulations**
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Chemical Weapon Convention List Schedules I, II &amp; III Chemicals</th>
<th>Ingredient name</th>
<th>List name</th>
<th>Status</th>
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<tbody>
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<td>UNECE Aarhus Protocol on POPs and Heavy Metals</td>
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National inventory

<table>
<thead>
<tr>
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<tbody>
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<td>Canada</td>
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<td>Japan</td>
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<td>Malaysia</td>
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<td>Republic of Korea</td>
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</tr>
<tr>
<td>Taiwan</td>
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</tbody>
</table>

Section 16. Other information

Hazardous Material Information System (U.S.A.)

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
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</table>

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

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History

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<th>Date of previous issue</th>
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Key to abbreviations

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
Section 16. Other information

UN = United Nations

References Not available.

⚠ Indicates information that has changed from previously issued version.

Notice to reader

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Gold

Date of issue/Date of revision : 12/05/2015. Date of previous issue : No previous validation. Version : 1

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