

# Safety Data Sheet

TAKK-15J04

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## 1.Substance identity and company contact information

Product name: PMC 22K GOLD

Company: MITSUBISHI MATERIALS TRADING CORPORATION

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## 2.Hazards identification

### GHS classification

|   |   |                        |
|---|---|------------------------|
| Physical and<br>chemical hazards                                  | Sort of Gunpowder                           | Out of classification  |
|   | Combustibility, Ignition gas                | Out of classification  |
|   | Combustibility, Ignition aerosol            | Out of classification  |
|   | Oxidizing gas                               | Out of classification  |
|   | High pressure gas                           | Out of classification  |
|   | Ignition liquid                             | Impossible to classify |
|   | Combustibility solid                        | Impossible to classify |
|   | Self reaction chemical                      | Out of classification  |
|   | Spontaneous combustion liquid               | Out of classification  |
|   | Spontaneous combustion solid                | Impossible to classify |
|   | Self heating chemical                       | Impossible to classify |
|   | Water reaction combustibility chemical      | Impossible to classify |
|   | Oxidizing liquid                            | Out of classification  |
|   | Oxidizing solid                             | Out of classification  |
|   | Organic dioxide                             | Out of classification  |
|   | Metal corrosive substance                   | Impossible to classify |
|   | Adverse human health<br>effects             | Acute toxicity(Oral)   |
| Acute toxicity(Dermal)  |   | Out of classification  |
| Acute toxicity(Inhalation: Gas)                                   |   | Out of classification  |
| Acute toxicity(Inhalation: Steam)                                 |   | Out of classification  |
| Acute toxicity(Inhalation: Dust)                                  |   | Impossible to classify |
| Acute toxicity(Inhalation: Mist)                                  |   | Impossible to classify |
| Skin corrosive, Irritation  |   | Out of classification  |
| Heavy injuries to eyes, Irritation                                |   | Out of classification  |
| Sensitization of respiratory organs                               |   | Impossible to classify |
| Sensitization of skin   |   | Out of classification  |
| Variation of germ cell  |   | Impossible to classify |
| Carcinogenicity   |   | Impossible to classify |
| Genital toxicity  |   | Out of classification  |
| Specific target organs, General toxicity<br>(Single exposure)     | Out of classification                       |                        |
| Specific target organs, General toxicity<br>(Repetition exposure) | Out of classification                       |                        |
| Environmental effects   | Hazardous of Inhalational respiratory organ | Impossible to classify |
|   | Acute hazardous to the                      | Impossible to classify |
|   | Chronic hazardous to the                    | Impossible to classify |
|   | Hazardous to the ozone                      | Impossible to classify |

### Label element

Symbol -

Alert Words: -

Hazards information: Can be hazardous by long-term influence.  
May cause an allergic skin reaction.

Specific danger/hazard When the product is heated to a high temperature, organic binder's gas may be generated.

Caution:

[Safety Measure] Though rare, it is possible for some individuals to experience skin rash or itchiness after contact with PMC sterling.  
If you have a reaction, discontinue use and consult a physician.  
Wash hands after use; do not ingest and keep out of the reach of children.  
Take care to avoid burn injury.

[First aid] In case of inhaling, move sufferers to place filled with fresh air, and let repose with posture easy to breath.  
If having indisposition, arrange for transport to nearest medical facility for examination and treatment by a physician.  
If on skin: wash with plenty of soap and water.  
If skin irritation or rash occurs: get medical advice/attention.  
If get into eyes: gently rinse the affected eyes with clean water, in case of

- wearing contact lens, better to remove them.  
 If constant eye irritation: receive medical treatment.  
 If chemical exposure or its risk: receive medical treatment.  
 [Storage] Keep in room temperature, avoid high temperature and humidity  
 Do not put it in a refrigerator  
 [Disposal] No information

### 3. Chemical composition and data on components

#### Chemical substance

| Chemical name or | Abbreviation | Content | Law Concerning the               | Industrial Safety and Health Law                                 | CAS No.   |
|------------------|--------------|---------|----------------------------------|--|-----------|
| Gold             | Au           | 85%     | Except from the law (as element) | Not applicable   | 7440-57-5 |
| Silver           | Ag           | 8%      | Except from the law (as element) | Article 18.2, Attached Table 9-137 of Cabinet order (as element) | 7440-22-4 |
| Water            | H2O          | 5%      | -                                | -  | 7732-18-5 |
| organic binder   | -            | balance | -                                | -  | -         |

### 4. First-aid measures

- Inhalation: Move sufferers to place filled with fresh air, and let repose with posture easy to breath.  
 If having indisposition, arrange for transport to nearest medical facility for examination and treatment by a physician.
- Skin contact: If skin irritation or rash occurs: Get medical advice/attention.
- Eye contact: Gently rinse the affected eyes with clean water. In case of wearing contact lens, better to remove them.  
 Arrange for transport to nearest medical facility for examination and treatment by a physician.
- Ingestion: Brush away or rinse inside a mouth with water, and see a doctor.  
 If having indisposition, arrange for transport to nearest medical facility for examination and treatment by a physician.
- Expected acute symptom or in behind: Follow doctor's instruction whether or not to induce vomiting when unconscious.  
 Influence of long-term or repetition exposure: Likely to give arise discoloration (silver stain; silver intoxication) of eyes, nose, throat or skin.  
 Eye: Irritate mucous membrane, red and sore eye.
- Most important indications or symptom: No information.
- Protection for rescuer: No information.
- Special caution for physician: No information.

### 5. Fire-fighting measures

- Extinguish media: Water, powder, CO2  
 Forbidden extinguish media: No information.

### 6. Accidental release measures

- Caution for the human body, protective and emergency measure: No information.
- Caution for the environment: No information.
- Retrieve, Neutralization: Sweep leakages and retrieve empty containers. Afterward dispose it.
- Containment and cleaning way : Stop leaking if not in danger.
- Prevention of secondary disaster: No information.

### 7. Handling and storage

- Handling:
- Technical measure: Do appropriate engineering controls and use proper personal protective equipment as indicated in Section 8.
- Ventilation: Do appropriate ventilation as indicated in Section 8.
- Caution for safety handling: Obtain special instructions before use.  
 Do not eat, drink or smoke while using.  
 Use at well-ventilated area only.  
 Wash hands carefully after use.  
 Make efforts to keep the working place tidy and in order, and keep away from fire.
- Avoidance of contact: Refer to Section 10.
- Storage:
- Technical measure: Keep in room temperature, avoid high temperature and humidity
- Conditions to storage: Do not put it in a refrigerator
- Materials of containers or package: No information

### 8. Exposure control and personal protection

- |   | [Au]   | [Ag]                              |
|---|--------|-----------------------------------|
| Control concentration:  | No set | No set                            |
| Allowance concentration (Exposure limit, Biological exposure indicator) : ACGIH | -      | TLV-TWA :<br>0.1mg/m <sup>3</sup> |

|                                |   |
|--------------------------------|---|
| Engineering Controls:          | In case of having dust, use ventilation device.<br>Use adequate ventilation in the sintering process, because of having gas from organic binder and carbon oxide. |
| Personal Protective Equipment: |   |
| Hands:                         | Wear appropriate protective gloves.   |
| Eyes:                          | Wear appropriate protective eyeglasses (standard glasses type, standard glasses with side board type, goggles type) or face shield.                               |
| Skin and Body:                 | Wear appropriate protective face protections.   |
| Sanitary measure:              | Wash hands carefully after use.   |

## 9. Physical and chemical properties

|   | [Au]                   | [Ag]                   |
|---|------------------------|------------------------|
| Odor:   | Odorless               | Odorless               |
| pH :  | No data                | No data                |
| Melting point,  | 1063°C(Melting Point)  | 962°C(Melting Point)   |
| Coagulating point:                                      |                        |                        |
| Boiling point, Initial boiling point and Boiling range: | 2970°C (Boiling Point) | 2212°C (Boiling Point) |
| Flash point:  | No data                | No data                |
| Explosion range:  | No data                | No data                |
| Steam pressure:   | -                      | -                      |
| Steam density(Air=1):                                   | No data                | No data                |
| Specific Gravity:                                       | 19.3g/cm <sup>3</sup>  | 10.5g/cm <sup>3</sup>  |
| Solubility:   | Insoluble(Water)       | Insoluble(Water)       |
| Octanol/Water Partition Coefficient:                    | No data                | No data                |
| Spontaneous combustion temperature:                     | No data                | No data                |
| Decomposition temperature:                              | No data                | No data                |
| Threshold of odor:                                      | No data                | No data                |
| Evaporation speed (Butyl acetate= 1):                   | No data                | No data                |
| Combustion property(Solid, Gas):                        | No data                | No data                |
| Viscosity:  | No data                | No data                |

## 10. Stability and reactivity

|   |  |
|---|--|
| Chemical Stability:                     | Stable at room temperature and in the air. |
| Incompatibilities with Other Materials: | No information                             |
| Conditions to Avoid:                    | avoid high temperature and humidity        |
| Hazardous Polymerization:               | No information                             |
| Hazardous Decomposition Products:       | No information                             |

## 11. Toxicological information

|   |   |     |                  |            |
|---|---|-----|------------------|------------|
| Acute toxicity:   | Oral  | Rat | LD <sub>50</sub> |            |
|   | [Ag]  |     |                  | >5,000mg/k |
|   | [Organic binder]                              |     |                  | >5,000mg/k |
| Skin corrosive, Irritation:                                     | No data.                                      |     |                  |            |
| Heavy injuries to eyes·Irritation:                              |   |     |                  |            |
| Sensitization of respiratory organs or                          | Sensitization of respiratory organs: No data. |     |                  |            |
| Variation of germ cell :  | Sensitization of skin: No data.               |     |                  |            |
| Carcinogenicity:  | No data                                       |     |                  |            |
| Genital toxicity:   | No data                                       |     |                  |            |
| Specific target organs, General toxicity (Single exposure):     | No data                                       |     |                  |            |
| Specific target organs, General toxicity (Repetition exposure): | No data                                       |     |                  |            |
| Hazardous of Inhalational respiratory organs :                  | No data                                       |     |                  |            |

## 12. Ecological information

|   |  |
|---|--|
| Acute hazardous to the aquatic Environmental:   | Impossible to classify because of insufficient data. |
| Chronic hazardous to the aquatic Environmental: | Impossible to classify because of insufficient data. |
| Ecological toxicity:                            | No data  |
| Hazardous to the ozone layer:                   | No data  |

## 13. Disposal considerations

|  |         |
|--|---------|
| The rest of waste, contaminated vessel : | No data |
|--|---------|

## 14. Transport information

## International regulations:

|                                      |  |
|--------------------------------------|--|
| UN classification:                   | Not applicable to the criteria for classification. |
| UN number:                           | Not applicable to the criteria for classification. |
| UN proper shipping                   | Not applicable to the criteria for classification. |
| Packing group:                       | Not applicable to the criteria for classification. |
| Marine pollutant:                    | Not applicable to the criteria for classification. |
| Domestic regulations:                | Refer to laws and regulation that are applied.     |
| Special precautions:                 | No information                                     |
| Emergency response guideline number: | No information                                     |

## 15. Regulations

## In Japan

|   |   |
|---|---|
| Industrial Safety and Health Act (Result of Mutagenicity) | Ag and its water-soluble compounds: Article 18-2, Attached Table 9-137 of Cabinet order |
| PRTR order  | Ag: class I designated chemical substance   |
| Export trade control order                                | Not Identified  |

## 16. Other information

The information is revised by the new knowledge. Although the information herein is based on the best of our knowledge, we cannot guarantee the accuracy or completeness of the information contained.