Revision: September 1, 2016.

INFORMATION ON THIS FORM IS PROPRIETARY INFORMATION AND FURNISHED SOLELY FOR THE USE OF OUR CUSTOMERS.

# SECTION 1: Identification of the substance/preparation and of the company/undertaking

Product details

Trade name

: RM HG-A ROYAL GOLD BLUISH

SDS number

: G150203

Application of the substance / the preparation : Printing Ink

#### Manufacturer/Supplier:

MITSUBOSHI PRINTING INK CO.,LTD.

HIGASHI 1-103 HAMADERAFUNAO-CHO NISHIKU SAKAI OSAKA 5928341 JAPAN

PHONE: +81-72-261-8250 FAX: +81-72-264-1421

EMERGENCY PHONE: +81-72-261-8250

#### SECTION 2 : Hazards identification

#### **GHS Classification**

Physical hazards Flammable liquids	Category Not classified
Health hazards	Category
Acute toxicity - oral	Classification not possible
Acute toxicity - dermal	Classification not possible
Acute toxicity - inhalation (gas)	Not applicable
Acute toxicity - inhalation (vapor)	Classification not possible
Acute toxicity - inhalation (dust, mist)	Classification not possible
Skin corresion/irritation	Category 1A
Serious eye damage/eye irritation	Classification not possible
Respiratory sensitization	Classification not possible
Skin sensitization	Classification not possible
Germ cell mutagenicity	Classification not possible
Carcinogenicity	Classification not possible
Toxic to reproduction	Classification not possible
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Classification not possible
Aspiration hazard	Not applicable
En incomental hazarda	Category
Environmental hazards	Classification not possible
Hazardous to the aquatic environment – acute	10 000 00 000 000 000 000 000 000 000 0
Hazardous to the aquatic environment - chronic	Classification not possible

<sup>-</sup> Other hazards that mentioned above are Not applicable or Classification Not possible.

Revision: September 1, 2016.

Trade name:

RM HG-A ROYAL GOLD BLUISH

#### **GHS Label Elements**

Symbols:





Signal word

: Warning

Hazard statement

May cause an allergic skin reaction.

: H317 : H335

May cause respiratory irritation.

**Precautionary Statements** 

General

: Be sure to read Safety Data Sheet (SDS) in use.

Prevention

: P233 Keep container tightly closed.

: P261

Avoid breathing dust/fume/gas/mist/vapours/spray.

: P271

Use only outdorrs or in a well-ventilated area.

: P272

Contaminated work clothing should not be allowed out of the workplace.

: P280

Wear protective gloves/protective clothing/eye protection/face protection.

Response

: P302+P352 IF ON SKIN: Wash with plenty of soap and water.

: P332+P313

If skin irritation occurs: Get medical advice/attention.

: P321 Sp

Specific treatment (see Section 4 on this SDS).

: P362+364

Take off contaminated clothing and wash before reuse.

P304+P340

IF INHALED: Remove victim to fresh air and keep at rest in a position

confortable for breathing.

P312

Call a POISON CENTER or doctor/physician if you feed unwell.

Disposal

: P501

Dispose of contents / container by entrust to the industrial waste disposal

contractors who obtain permission of the prefectural governors.

#### SECTION 3: Composition/information on ingredients

Classification of Substance or Mixture

: Mixture

Chemical name or General name

: Offset Printing Ink

Substance	CAS No.	EINECS No.	Content
Copper	7440-50-8	231-159-6	25-35%
Zinc	7440-66-6	231-175-3	5-15%
Pigment	5102-83-0	225-822-9	1-3%
Synthetic resin	N/A	N/A	25-35%
Vegetable oil	8001-22-7	232-274-4	5-15%
Mineral oil	N/A	N/A	10-20%
Additives	N/A	N/A	< 2%

SECTION 4: First-aid measures

If inhaled : Remove person to fresh air and keep confortable for breathing.

. Remove person to fresh all and keep comortable for bre

: Get medical advice/attention if you feel unwell.

If on skin

: Wash with plenty of water and soap.

: If skin irritation or rash occurs ; Get medical advice/attention.

If in eye

: Rinse cautiously with clean water immediately.

: If eye irritation continues; Get medical advice/attention.

Revision: September 1, 2016.

Trade name:

RM HG-A ROYAL GOLD BLUISH

SECTION 5 : Fire-fighting measures

Suitable extinguishing agents

: Powder, Form, Carbon dioxide, Water, Dry sand, Misty agent.

Unsuitable extinguishing agents

: Straight stream

Special hazards

: Move containers to safe places immediately.

#### SECTION 6 : Accidental release measures

#### Personal precautions

Protective equipment and emergency procedures

- : Ventilate well until completely-processed if indoor.
- : Wear protective equipment when the work.
- : Evacuate people downwind.
- : Keep unnecessary personnel away from pollution area by such loping.
- : Clear immediately neaby ignition sources.

### Environmental precautions

: Avoid release to the environment.

Methods/Equipment of contaminant and purification.

: Wash away the contaminated place with plenty of water and dispersing agent after collecting spillage in an empty container.

#### SECTION 7: Handling and storage

#### Handling

Technical countermeasure

: Conduct the facility measures in Section 8. Wear protective equipment.

Local exhaust/General ventilation : Seal the source or install general ventilation device if indoor.

Precaution for safe handling : Close a container each use. (For prevention of drying or ink film)

: If on clothing, make the stain go away.

: Wash hands and rinse mouth thoroughly after handling.

: Burn up or dispose of the waste clothwiping this product immediately.

#### Storage

Conditions for safe storage

: If over designed, comply with the fire prevention ordinance.

: Store away from iginition sources.

: Protect from sunlight.

: Store in a cool and well-ventilated place.

#### Exposure controls / personal protection SECTION 8 :

Control parameters of Compositional substances

: Not set

	Control parameter	ACGIH	
Copper		1mg/m³ (powder)	
Mineral oil		5mg/m³ (oil mist)	

Revision: September 1, 2016.

Trade name:

#### RM HG-A ROYAL GOLD BLUISH

Equipment provision

: Install ventilation device if generated mist or vapor.

Protective equipment

Respiratory protection

: Use a mask in case mist or vapor is produced.

Protection of hands

: Protective gloves

Eye protection

: Protective eye protection

Skin protection

: Protective clothing, protective boots

#### SECTION 9: Physical and chemical properties

Inforamtion on basic physical and chemical properties

Appearance

: Pasty (golden color)

Smell

: Oily

Boiling point/Initial boiling point

: 250°C

Flash point

: 154°C

Specific Gravity

: 1.4-1.7g/cc

Solubility

: Insoluble in water, soluble in organic solvent.

Physical or chemical properties of components:

, injection of the	Boiling point	Flash point	Ignition point	Density	Solubility in water	Explosion limit
Copper	2566°C			8.96g/m³	Insoluble	
Zinc	907°C			7.13g/m³	Insoluble	
Mineral oil	296-317°C	160°C	200-410°C	0.817g/m³	Insoluble	1-7%

# SECTION 10 : Stability and reactivity

Chemical stability

: Oxidative polymerization slowly in contact with air.

Conditions to avoid

: No findings

Hazardous decomposition products

: Generation of toxic gas like CO/NOX by combustion.

### SECTION 11: Toxicological information

Toxicological information as production

: No toxicological information as a product.

Toxicological information of components:

	Acute toxicity (oral)	Acute toxicity (dermal)	Acute toxicity (gas)	Acute toxicity (vapor)
Copper and	Classification	Classification	Classification	Classification not possible
its compound Mineral oil	not possible  Not classified	not possible Not classified	not possible Not classified	Not classified

	Acute toxicity	Skin corrosion	Serious eye	Respiratory
	(dust, mist)	/irritation	damage/irritation	sensitization
Copper and	Classification	Category 1A	Classification	Classification
its compound	not possible	Oategory 1A	not possible	not possible
Mineral oil	Not classified	Not classified	Not classified	Not classified

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	Skin sensitization	Germ cell	Carcinogenicity	Toxic to
		mutagenicity		reproduction
Copper and	Classification	Classification	Classification	Classification
its compound	not possible	not possible	not possible	not possible
Mineral oil	Not classified	Not classified	Not classified	Not classified

	Specific target organ toxicity (single exposure)	Specific target organ toxicity (repeated exposure)	Aspiration hazard
Copper and	Category 3	Classification	Classification
its compound	(Respiratory tract irritation)	not possible	not possible
Mineral oil	Not classified	Not classified	Category 1

#### SECTION 12: Ecological information

#### Ecological information as production:

Ecological information as production:				
	Hazardous to the aquatic	Hazardous to the aquatic		
	environment (acute)	environment (acute)		
Copper and	Classification	Classification		
its compound	not possible	not possible		
Mineral oil	Not classified	Not classified		

#### SECTION 13: Disposal consideration

Entrust to waste disposers licensed from such prefectural governors or to local governments if they dispose. Do not release the drainage cleasing container, equipment or devise on the ground or to water ditches directory. Keep container tightly closed for contents not to outflow when toppling.

#### SECTION 14: Transport information

Japan domestic regulations

UN number : N/A

Land regulatory information : Comply with transportation specified by the Fire Defense Law,

Industrial Safety and Health Law, or Poison Law.

Maritime regulatory information

: Comply with transportation specified by Ship Safety Act.

Aviation regulatory information

: Comply with transportation specified by Civil Aeronautics Act.

Transport/Additional information

: Not dangerous according to IMDG/IATA/ADR/AND.

#### SECTION 15: Regulatory information

•Industrial Safety and Health Act : Notified substances ; 2 of Article 57

• Fire Service Act; Fire Prevention Ordinace : Specified flammable material (flammable solid type)

- ·Law concerning Pollutant Release and Transfer Register (PRTR Law)
- Waste Management and Public Cleansing Act
- ·Safety, health and environmental regulations/legislation specific for the substance or mixture.
  - : This product complies with Japanese regulations. Follow all regulations in your country.

Revision: September 1, 2016.

Trade name:

RM HG-A ROYAL GOLD BLUISH

SECTION 16: Other information

This "SAFETY DATA SHEET" is not safety warranty. If used this product, take appropriate measures to actual condition on user's own responsibility referring to this "SAFETY DATA SHEET".

And the content of "SAFETY DATA SHEET" may change according to revising laws and regulations and/or new knowledge

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## SECTION 1: Identification of the substance/preparation and of the company/undertaking

Product details

Trade name

: RM HG-A ROYAL GOLD REDDISH

SDS number

: G150204

Application of the substance / the preparation : Printing Ink

#### Manufacturer/Supplier:

MITSUBOSHI PRINTING INK CO.,LTD.

HIGASHI 1-103 HAMADERAFUNAO-CHO NISHIKU SAKAI OSAKA 5928341 JAPAN

PHONE: +81-72-261-8250

FAX: +81-72-264-1421

EMERGENCY PHONE: +81-72-261-8250

# SECTION 2 : Hazards identification

#### **GHS** Classification

Physical hazards Flammable liquids	<u>Category</u> Not classified
Health hazards	<u>Category</u>
Acute toxicity - oral	Classification not possible
Acute toxicity - dermal	Classification not possible
Acute toxicity - inhalation (gas)	Not applicable
Acute toxicity - inhalation (vapor)	Classification not possible
Acute toxicity - inhalation (dust, mist)	Classification not possible
Skin corresion/irritation	Category 1A
Serious eye damage/eye irritation	Classification not possible
Respiratory sensitization	Classification not possible
Skin sensitization	Classification not possible
Germ cell mutagenicity	Classification not possible
Carcinogenicity	Classification not possible
Toxic to reproduction	Classification not possible
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Classification not possible
Aspiration hazard	Not applicable
Environmental hazards	Category
Hazardous to the aquatic environment – acute	Classification not possible
Hazardous to the aquatic environment - chronic	Classification not possible

<sup>-</sup> Other hazards that mentioned above are Not applicable or Classification Not possible.

Revision: September 1, 2016.

Trade name:

RM HG-A ROYAL GOLD REDDISH

#### **GHS Label Elements**

Symbols:





Signal word

Warning

Hazard statement

: H317 May cause an allergic skin reaction.

: H335

May cause respiratory irritation.

**Precautionary Statements** 

General

: Be sure to read Safety Data Sheet (SDS) in use.

Prevention

: P233 Keep container tightly closed.

: P261

Avoid breathing dust/fume/gas/mist/vapours/spray.

: P271

Use only outdorrs or in a well-ventilated area.

: P272

Contaminated work clothing should not be allowed out of the workplace.

: P280

Wear protective gloves/protective clothing/eye protection/face protection.

Response

P302+P352

IF ON SKIN: Wash with plenty of soap and water.

: P332+P313

If skin irritation occurs: Get medical advice/attention.

: P321 Sp

Specific treatment (see Section 4 on this SDS).

: P362+364

Take off contaminated clothing and wash before reuse.

P304+P340

IF INHALED: Remove victim to fresh air and keep at rest in a position

confortable for breathing.

P312

Call a POISON CENTER or doctor/physician if you feed unwell.

Disposal

: P501

Dispose of contents / container by entrust to the industrial waste disposal

contractors who obtain permission of the prefectural governors.

#### SECTION 3: Composition/information on ingredients

Classification of Substance or Mixture

: Mixture

Chemical name or General name

: Offset Printing Ink

Substance	CAS No.	EINECS No.	Content
Copper	7440-50-8	231-159-6	25-35%
Zinc	7440-66-6	231-175-3	5-15%
Pigment	5102-83-0	225-822-9	1-3%
Synthetic resin	N/A	N/A	25-35%
Vegetable oil	8001-22-7	232-274-4	5-15%
Mineral oil	N/A	N/A	10-20%
Additives	N/A	N/A	< 2%

#### SECTION 4: First-aid measures

If inhaled : Remove person to fresh air and keep confortable for breathing.

: Get medical advice/attention if you feel unwell.

If on skin

: Wash with plenty of water and soap.

: If skin irritation or rash occurs; Get medical advice/attention.

If in eye

: Rinse cautiously with clean water immediately.

: If eye irritation continues ; Get medical advice/attention.

Revision: September 1, 2016.

Trade name:

RM HG-A ROYAL GOLD REDDISH

SECTION 5 : Fire-fighting measures

Suitable extinguishing agents

: Powder, Form, Carbon dioxide, Water, Dry sand, Misty agent.

Unsuitable extinguishing agents

: Straight stream

Special hazards

: Move containers to safe places immediately.

### SECTION 6: Accidental release measures

#### Personal precautions

Protective equipment and emergency procedures

- : Ventilate well until completely-processed if indoor.
- : Wear protective equipment when the work.
- : Evacuate people downwind.
- : Keep unnecessary personnel away from pollution area by such loping.
- : Clear immediately neaby ignition sources.

#### Environmental precautions

: Avoid release to the environment.

Methods/Equipment of contaminant and purification.

: Wash away the contaminated place with plenty of water and dispersing agent after collecting spillage in an empty container.

#### SECTION 7: Handling and storage

#### Handling

Technical countermeasure : Conduct the facility measures in Section 8. Wear protective equipment.

Local exhaust/General ventilation : Seal the source or install general ventilation device if indoor.

Precaution for safe handling : Close a container each use. (For prevention of drying or ink film)

: If on clothing, make the stain go away.

: Wash hands and rinse mouth thoroughly after handling.

: Burn up or dispose of the waste clothwiping this product immediately.

#### Storage

Conditions for safe storage : If over designed, comply with the fire prevention ordinance.

: Store away from iginition sources.

: Protect from sunlight.

: Store in a cool and well-ventilated place.

#### SECTION 8: Exposure controls / personal protection

Control parameters of Compositional substances

: Not set

	Control parameter	ACGIH
Copper		1mg/m³ (powder)
Mineral oil		5mg/m³ (oil mist)

Revision: September 1, 2016.

Trade name:

#### RM HG-A ROYAL GOLD REDDISH

Equipment provision

: Install ventilation device if generated mist or vapor.

Protective equipment

Respiratory protection

: Use a mask in case mist or vapor is produced.

Protection of hands

: Protective gloves

Eve protection

: Protective eye protection

Skin protection

: Protective clothing, protective boots

#### SECTION 9: Physical and chemical properties

Inforamtion on basic physical and chemical properties

Appearance

: Pasty (golden color)

Smell

: Oily

Boiling point/Initial boiling point

: 250°C

Flash point

: 154°C

Specific Gravity

: 1.4-1.7g/cc

Solubility

: Insoluble in water, soluble in organic solvent.

Physical or chemical properties of components:

	Boiling point	Flash point	Ignition point	Density	Solubility in water	Explosion limit
Copper	2566°C			8.96g/m³	Insoluble	
Zinc	907°C			7.13g/m³	Insoluble	
Mineral oil	296-317°C	160°C	200-410°C	0.817g/m³	Insoluble	1-7%

#### SECTION 10: Stability and reactivity

Chemical stability

: Oxidative polymerization slowly in contact with air.

Conditions to avoid

: No findings

Hazardous decomposition products

Generation of toxic gas like CO/NOX by combustion.

#### SECTION 11: Toxicological information

Toxicological information as production

: No toxicological information as a product.

Toxicological information of components:

	Acute toxicity	Acute toxicity	Acute toxicity	Acute toxicity
	(oral)	(dermal)	(gas)	(vapor)
Copper and	Classification	Classification	Classification	Classification
its compound	not possible	not possible	not possible	not possible
Mineral oil	Not classified	Not classified	Not classified	Not classified

	Acute toxicity	Skin corrosion	Serious eye	Respiratory
	(dust, mist)	/irritation	damage/irritation	sensitization
Copper and its compound	Classification not possible	Category 1A	Classification not possible	Classification not possible
Mineral oil	Not classified	Not classified	Not classified	Not classified

Revision: September 1, 2016.

Trade name :	RM HG-A ROYAL GOLD REDDISH
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	Skin sensitization	Germ cell	Carcinogenicity	Toxic to
		mutagenicity		reproduction
Copper and	Classification	Classification	Classification	Classification
its compound	not possible	not possible	not possible	not possible
Mineral oil	Not classified	Not classified	Not classified	Not classified

	Specific target organ toxicity (single exposure)	Specific target organ toxicity (repeated exposure)	Aspiration hazard
Copper and	Category 3	Classification	Classification
its compound	(Respiratory tract irritation)	not possible	not possible
Mineral oil	Not classified	Not classified	Category 1

#### SECTION 12: Ecological information

Ecological information as production:

	Hazardous to the aquatic	Hazardous to the aquatic
	environment (acute)	environment (acute)
Copper and	Classification	Classification
its compound	not possible	not possible
Mineral oil	Not classified	Not classified

#### SECTION 13: Disposal consideration

Entrust to waste disposers licensed from such prefectural governors or to local governments if they dispose. Do not release the drainage cleasing container, equipment or devise on the ground or to water ditches directory. Keep container tightly closed for contents not to outflow when toppling.

#### SECTION 14: Transport information

Japan domestic regulations

UN number : N/A

Land regulatory information : Comply with transportation specified by the Fire Defense Law,

Industrial Safety and Health Law, or Poison Law.

Maritime regulatory information : Comply with transportation specified by Ship Safety Act.

: Comply with transportation specified by Civil Aeronautics Act.

• Transport/Additional information : Not dangerous according to IMDG/IATA/ADR/AND.

#### SECTION 15: Regulatory information

Aviation regulatory information

•Industrial Safety and Health Act : Notified substances ; 2 of Article 57

• Fire Service Act; Fire Prevention Ordinace : Specified flammable material (flammable solid type)

- \*Law concerning Pollutant Release and Transfer Register (PRTR Law)
- •Waste Management and Public Cleansing Act
- · Safety, health and environmental regulations/legislation specific for the substance or mixture.
  - : This product complies with Japanese regulations. Follow all regulations in your country.

Revision: September 1, 2016.

Trade name:

RM HG-A ROYAL GOLD REDDISH

SECTION 16 : Other information

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