

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: UM-120NM Blue [uni-ball Signo NOBLE METAL]

JAPAN

Manufacture's name : MITSUBISHI PENCIL CO.,LTD.
 Address : 5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN
 Telephone number : 03-3458-6281 Telefax number : 03-3450-0363

AUSTRALIA

Australian importer : Mitsubishi Pencil Australia
 ABN : 31 085 515 671
 Address : 674 Lorimar Street, Port Melbourne VIC 3207
 Telephone Number : 03 9646 5630
 Emergency Telephone Number: 03 9646 5630
 (Monday to Friday 9:00am - 5.00pm, general information only)

Creation Date : July 1, 2014
 Revision Date :
 File No. : 067446A_Aus Rev. 3.6.02.01

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements : -

Other hazards : Not available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Mixture

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
1,2-Propanediol	57-55-6	Registered	2003380	10- 30
Aluminum paste	7429-90-5	Registered	2310723	< 10
Coloring agent	Registered	Registered	Registered	< 10
Additives	Registered	Registered	Polymer Registered	< 10

Other parts : Other parts are excluded from 'chemical substances'.

4. FIRST-AID MEASURES

Inhalation:

Not applicable.

(Due to its low vapor pressure. Inhalation is unlikely at room temperature.)

Skin contact:

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eye contact:

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion:

If swallowed, seek medical advice, and show the MSDS to the physician then.

[Ink quantity of product : about 1.1g]

5. FIRE-FIGHTING MEASURES

Fire and explosion measures : Slight fire hazard.

Extinguishing media:

Suitable : regular dry chemical, carbon dioxide, water, regular foam.

Large fires : Use regular foam or flood with fine water spray.

Fire fighting

: The Products is no flammable.

Use extinguishing agents appropriate for surrounding fire.

Avoid inhalation of material or combustion by-products.

Stay upwind and keep out of low areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Not available.

Environmental precautions : Do not wash away into shower or water way.

Methods for cleaning up : Wipe off by dry cloth and wash with water.

: In accordance with national, state and local regulations.

7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards.

Keep separated from incompatible substances.

Handling:

Technical measures : Don't swallow ink.

: Recap after use.

: Don't shake.

: Keep out of the reach of infants.

: Avoid contact with skin and eyes.

Precautions : Not available.

Safe handling advice : Not available.

Storage:

Technical measures : Keep away from oxidizing materials, ignition sources and high temperature.

Storage condition : Avoid direct sunlight.

: Do not leave the products in high temperature space.

: Recommended temperature: 0-30 C.

Incompatible products : Not available.

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m ³ (total dust), 5mg/m ³ (respirable fraction), 5mg/m ³ (pyro powders)	Aluminum paste
ACGIH	10mg/m ³ TWA(metal particulate), 5mg/m ³ TWA (pyro powders)	Aluminum paste
EC	Not available.	

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Liquid.
Colour	: Blue.
Odour	: None odour.
pH	: about 8.4
Boiling point	: Not available. [Water/100 C]
Melting point	: <-10 C
Flash point	: Not applicable.
Autoignition temperature	: Not applicable.
Explosion limits	: Not applicable.
Density	: 1.1-1.2 / 25 C
Vapour density (air=1)	: Not applicable.
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 84-87%

10. STABILITY AND REACTIVITY

Stability	: Stability.
Hazardous reactions	: Will not occur.
Conditions to avoid	: Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.
Materials to avoid	: Not available.
Hazardous decomposition products	: Not available.

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	20000mg/kg-Rat >2000mg/kg-Rat >5000mg/kg-Rat	1,2-Propanediol Coloring agent Aluminum paste
Inhalation LC50	Not available.	
Skin LD50	20800mg/kg-Rabbit	1,2-Propanediol

Local effects	Irritant/inhalation dehydration	Aluminum paste Additive
Chronic toxicity and long term toxicity		
Lungs may be affected by repeated or prolonged exposure to dust particles. The substance may have effects on the nervous system, resulting in impaired functions.		Aluminum paste
Signs and Symptoms of overexposure and aggravated by exposure		
Inhalation	nausea,headache irritation,cough	1,2-Propanediol Aluminum paste
Skin contact	irritation,allergic reaction irritation,itching sensitization	1,2-Propanediol Aluminum paste Additive
Eye contact	irritation,pain irritation,eye damage	1,2-Propanediol Aluminum paste
Ingestion	allergic reaction,vomiting irritation,digestive disorders	1,2-Propanediol Aluminum paste
Specific effects	Not available.	

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATIONS

Waste from residues : Disposal in accordance with all current regulations and standards.
Contaminated packaging : Not applicable.

14. TRANSPORT INFORMATION

HS Code : 960810

15. REGULATORY INFORMATION

Regulations (Information of components)

Hazardous chemicals (OSHA HCS)

: Aluminum paste

EU labeling : Not restricted.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : 1,2-Propanediol / Aluminum paste

Hazard and safety information

Products are manufactured in accordance with ISO 8124-3 " Safety of Toys - Part 3"

16. OTHER INFORMATION

This sheet completes the technical sheet of use but it doesn't replace it.

The information contained in this sheet are based knowledge of the products at the data : (July 1, 2014). They are given quite sincerely.

Moreover the attention of the users is drawn on the risks possibly taken, when a product is used for other utilization than these which it is intended.

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: UM-120NM Red [uni-ball Signo NOBLE METAL]

JAPAN

Manufacture's name : MITSUBISHI PENCIL CO.,LTD.
 Address : 5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN
 Telephone number : 03-3458-6281 Telefax number : 03-3450-0363

AUSTRALIA

Australian importer : Mitsubishi Pencil Australia
 ABN : 31 085 515 671
 Address : 674 Lorimar Street, Port Melbourne VIC 3207
 Telephone Number : 03 9646 5630
 Emergency Telephone Number: 03 9646 5630
 (Monday to Friday 9:00am - 5.00pm, general information only)

Creation Date : July 1, 2014
 Revision Date :
 File No. : 067447A_Aus Rev. 3.6.04.01

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
 No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements : -

Other hazards : Not available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Mixture

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
1,2-Propanediol	57-55-6	Registered	2003380	10- 30
Aluminum paste	7429-90-5	Registered	2310723	< 10
Additives	Registered	Registered	Polymer Registered	< 10
Coloring agent	Registered	Registered	Registered	< 1

Other parts : Other parts are excluded from 'chemical substances'.

4. FIRST-AID MEASURES

Inhalation:

Not applicable.

(Due to its low vapor pressure. Inhalation is unlikely at room temperature.)

Skin contact:

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eye contact:

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion:

If swallowed, seek medical advice, and show the MSDS to the physician then.

[Ink quantity of product : about 1.1g]

5. FIRE-FIGHTING MEASURES

Fire and explosion measures : Slight fire hazard.

Extinguishing media:

Suitable : regular dry chemical, carbon dioxide, water, regular foam.

Large fires : Use regular foam or flood with fine water spray.

Fire fighting : The Products is no flammable.

Use extinguishing agents appropriate for surrounding fire.

Avoid inhalation of material or combustion by-products.

Stay upwind and keep out of low areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Not available.

Environmental precautions : Do not wash away into shower or water way.

Methods for cleaning up : Wipe off by dry cloth and wash with water.

: In accordance with national, state and local regulations.

7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards.

Keep separated from incompatible substances.

Handling:

Technical measures : Don't swallow ink.

: Recap after use.

: Don't shake.

: Keep out of the reach of infants.

: Avoid contact with skin and eyes.

Precautions : Not available.

Safe handling advice : Not available.

Storage:

Technical measures : Keep away from oxidizing materials, ignition sources and high temperature.

Storage condition : Avoid direct sunlight.

: Do not leave the products in high temperature space.

: Recommended temperature: 0-30 C.

Incompatible products : Not available.

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m ³ (total dust), 5mg/m ³ (respirable fraction), 5mg/m ³ (pyro powders)	Aluminum paste
ACGIH	10mg/m ³ TWA(metal particulate), 5mg/m ³ TWA (pyro powders)	Aluminum paste
EC	Not available.	

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Liquid.
Color	: Red.
Odor	: None odor.
pH	: about 8.4
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable.
Autoignition temperature	: Not applicable.
Explosion limits	: Not applicable.
Density	: 1.1-1.2 / 25 C
Vapor density (air=1)	: Not applicable.
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 88-91%

10. STABILITY AND REACTIVITY

Stability	: Stability.
Hazardous reactions	: Will not occur.
Conditions to avoid	: Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.
Materials to avoid	: Not available.
Hazardous decomposition products	: Not available.

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	20000mg/kg-Rat >5000mg/kg-Rat >=5000mg/kg-Rat	1,2-Propanediol Aluminum paste Coloring agent
Inhalation LC50	Not available.	
Skin LD50	20800mg/kg-Rabbit	1,2-Propanediol
Local effects	Irritant:inhalation dehydration	Aluminum paste Additive

Chronic toxicity and long term toxicity

Lungs may be affected by repeated or prolonged exposure to dust particles. The substance may have effects on the nervous system, resulting in impaired functions.

Aluminum paste

Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	nausea,headache irritation,cough irritation	1,2-Propanediol Aluminum paste Coloring agent
Skin contact	irritation,allergic reaction irritation,itching sensitization redness,swelling	1,2-Propanediol Aluminum paste Additive Coloring agent
Eye contact	irritation,pain irritation,eye damage	1,2-Propanediol Aluminum paste
Ingestion	allergic reaction,vomiting irritation,digestive disorders nausea,vomiting	1,2-Propanediol Aluminum paste Coloring agent

Specific effects Not available.

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATIONS

Waste from residues : Disposal in accordance with all current regulations and standards.
Contaminated packaging : Not applicable.

14. TRANSPORT INFORMATION

HS Code : 960810

15. REGULATORY INFORMATION**Regulations (Information of components)**

Hazardous chemicals (OSHA HCS)

: Aluminum paste

EU labeling : Not restricted.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : 1,2-Propanediol / Aluminum paste

Hazard and safety information

Products are manufactured in accordance with ISO 8124-3 " Safety of Toys - Part 3"

16. OTHER INFORMATION

This sheet completes the technical sheet of use but it doesn't replace it.
The information contained in this sheet are based knowledge of the products at the data : (July 1, 2014). They are given quite sincerely.
Moreover the attention of the users is drawn on the risks possibly taken, when a product is used for other utilization than these which it is intended.

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: UM-120NM Green [uni-ball Signo NOBLE METAL]

JAPAN

Manufacture's name : MITSUBISHI PENCIL CO.,LTD.
 Address : 5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN
 Telephone number : 03-3458-6281 Telefax number : 03-3450-0363

AUSTRALIA

Australian importer : Mitsubishi Pencil Australia
 ABN : 31 085 515 671
 Address : 674 Lorimar Street, Port Melbourne VIC 3207
 Telephone Number : 03 9646 5630
 Emergency Telephone Number: 03 9646 5630
 (Monday to Friday 9:00am - 5.00pm, general information only)

Creation Date : July 1, 2014
 Revision Date :
 File No. : 067448A_Aus Rev. 3.6.04.01

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
 No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements : -
 Other hazards : Not available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Mixture

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
1,2-Propanediol	57-55-6	Registered	2003380	10- 30
Aluminum paste	7429-90-5	Registered	2310723	< 10
Coloring agent	Registered	Registered	Registered	< 10
Additives	Registered	Registered	Polymer Registered	< 10

Other parts : Other parts are excluded from 'chemical substances'.

4. FIRST-AID MEASURES

Inhalation:

Not applicable.
 (Due to its low vapor pressure. Inhalation is unlikely at room temperature.)

Skin contact:

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eye contact:

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion:

If swallowed, seek medical advice, and show the MSDS to the physician then.

[Ink quantity of product : about 1.1g]

5. FIRE-FIGHTING MEASURES

Fire and explosion measures : Slight fire hazard.

Extinguishing media:

Suitable : regular dry chemical, carbon dioxide, water, regular foam.

Large fires : Use regular foam or flood with fine water spray.

Fire fighting

: The Products is no flammable.

Use extinguishing agents appropriate for surrounding fire.

Avoid inhalation of material or combustion by-products.

Stay upwind and keep out of low areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Not available.

Environmental precautions : Do not wash away into shower or water way.

Methods for cleaning up : Wipe off by dry cloth and wash with water.

: In accordance with national, state and local regulations.

7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards.

Keep separated from incompatible substances.

Handling:

Technical measures : Don't swallow ink.

: Recap after use.

: Don't shake.

: Keep out of the reach of infants.

: Avoid contact with skin and eyes.

Precautions : Not available.

Safe handling advice : Not available.

Storage:

Technical measures : Keep away from oxidizing materials, ignition sources and high temperature.

Storage condition : Avoid direct sunlight.

: Do not leave the products in high temperature space.

: Recommended temperature: 0-30 C.

Incompatible products : Not available.

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m ³ (total dust), 5mg/m ³ (respirable fraction), 5mg/m ³ (pyro powders)	Aluminum paste
ACGIH	10mg/m ³ TWA(metal particulate), 5mg/m ³ TWA (pyro powders)	Aluminum paste
EC	Not available.	

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Liquid.
Color	: Green.
Odor	: None odor.
pH	: about 8.4
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable.
Autoignition temperature	: Not applicable.
Explosion limits	: Not applicable.
Density	: 1.1-1.2 / 25 C
Vapor density (air=1)	: Not applicable.
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 84-87%

10. STABILITY AND REACTIVITY

Stability	: Stability.
Hazardous reactions	: Will not occur.
Conditions to avoid	: Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.
Materials to avoid	: Not available.
Hazardous decomposition products	: Not available.

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	20000mg/kg-Rat >2000mg/kg-Rat >5000mg/kg-Rat	1,2-Propanediol Coloring agent Aluminum paste
Inhalation LC50	Not available.	
Skin LD50	20800mg/kg-Rabbit	1,2-Propanediol

16. OTHER INFORMATION

This sheet completes the technical sheet of use but it doesn't replace it.
The information contained in this sheet are based knowledge of the products
at the data : (July 1, 2014). They are given quite sincerely.
Moreover the attention of the users is drawn on the risks possibly taken,
when a product is used for other utilization than these which it is intended.

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Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: UM-120NM Violet [uni-ball Signo NOBLE METAL]

JAPAN

Manufacturer's name : MITSUBISHI PENCIL CO.,LTD.
 Address : 5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN
 Telephone number : 03-3458-6281 Telefax number : 03-3450-0363

AUSTRALIA

Australian importer : Mitsubishi Pencil Australia
 ABN : 31 085 515 671
 Address : 674 Lorimar Street, Port Melbourne VIC 3207
 Telephone Number : 03 9646 5630
 Emergency Telephone Number: 03 9646 5630
 (Monday to Friday 9:00am - 5.00pm, general information only)

Creation Date : July 1, 2014
 Revision Date :
 File No. : 067449A_Aus Rev. 3.6.02.01

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements : .

Other hazards : Not available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Mixture

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
1,2-Propanediol	57-55-6	Registered	2003380	10- 30
Aluminum paste	7429-90-5	Registered	2310723	< 10
Coloring agent	Registered	Registered	Registered	< 10
Additives	Registered	Registered	Polymer Registered	< 10

Other parts : Other parts are excluded from 'chemical substances'.

4. FIRST-AID MEASURES

Inhalation:

Not applicable.

(Due to its low vapor pressure. Inhalation is unlikely at room temperature.)

Skin contact:

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eye contact:

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion:

If swallowed, seek medical advice, and show the MSDS to the physician then.

[Ink quantity of product : about 1.1g]

5. FIRE-FIGHTING MEASURES

Fire and explosion measures : Slight fire hazard.

Extinguishing media:

Suitable : regular dry chemical, carbon dioxide, water, regular foam.

Large fires : Use regular foam or flood with fine water spray.

Fire fighting : The Products is no flammable.

Use extinguishing agents appropriate for surrounding fire.

Avoid inhalation of material or combustion by-products.

Stay upwind and keep out of low areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Not available.

Environmental precautions : Do not wash away into shower or water way.

Methods for cleaning up : Wipe off by dry cloth and wash with water.

: In accordance with national, state and local regulations.

7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards.

Keep separated from incompatible substances.

Handling:

Technical measures : Don't swallow ink.

: Recap after use.

: Don't shake.

: Keep out of the reach of infants.

: Avoid contact with skin and eyes.

Precautions : Not available.

Safe handling advice : Not available.

Storage:

Technical measures : Keep away from oxidizing materials, ignition sources and high temperature.

Storage condition : Avoid direct sunlight.

: Do not leave the products in high temperature space.

: Recommended temperature: 0-30 C.

Incompatible products : Not available.

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m ³ (total dust), 5mg/m ³ (respirable fraction), 5mg/m ³ (pyro powders)	Aluminum paste
ACGIH	10mg/m ³ TWA(metal particulate), 5mg/m ³ TWA (pyro powders)	Aluminum paste
EC	Not available.	

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Liquid.
Color	: Violet.
Odor	: None odor.
pH	: about 8.4
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable.
Autoignition temperature	: Not applicable.
Explosion limits	: Not applicable.
Density	: 1.1-1.2 / 25 C
Vapor density (air=1)	: Not applicable.
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 87-90%

10. STABILITY AND REACTIVITY

Stability	: Stability.
Hazardous reactions	: Will not occur.
Conditions to avoid	: Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.
Materials to avoid	: Not available.
Hazardous decomposition products	: Not available.

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	20000mg/kg-Rat >5000mg/kg-Rat >=5000mg/kg-Rat	1,2-Propanediol Aluminum paste Coloring agent
Inhalation LC50	Not available.	
Skin LD50	20800mg/kg-Rabbit	1,2-Propanediol
Local effects	Irritant:inhalation dehydration	Aluminum paste Additive

Chronic toxicity and long term toxicity

Lungs may be affected by repeated or prolonged exposure to dust particles. The substance may have effects on the nervous system, resulting in impaired functions.

Aluminum paste

Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	nausea,headache irritation,cough irritation	1,2-Propanediol Aluminum paste Coloring agent
Skin contact	irritation,allergic reaction irritation,itching sensitization	1,2-Propanediol Aluminum paste Additive
Eye contact	irritation,pain irritation,eye damage	1,2-Propanediol Aluminum paste
Ingestion	allergic reaction,vomiting irritation,digestive disorders	1,2-Propanediol Aluminum paste

Specific effects Not available.

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATIONS

Waste from residues : Disposal in accordance with all current regulations and standards.
Contaminated packaging : Not applicable.

14. TRANSPORT INFORMATION

HS Code : 960810

15. REGULATORY INFORMATION**Regulations (Information of components)**

Hazardous chemicals (OSHA HCS)

: Aluminum paste

EU labeling : Not restricted.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : 1,2-Propanediol / Aluminum paste

Hazard and safety information

Products are manufactured in accordance with ISO 8124-3 " Safety of Toys - Part 3"

16. OTHER INFORMATION

This sheet completes the technical sheet of use but it doesn't replace it.
The information contained in this sheet are based knowledge of the products at the data : (July 1, 2014). They are given quite sincerely.
Moreover the attention of the users is drawn on the risks possibly taken, when a product is used for other utilization than these which it is intended.

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: UM-120NM Pink [uni-ball Signo NOBLE METAL]

JAPAN

Manufacture's name : MITSUBISHI PENCIL CO.,LTD.
 Address : 5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN
 Telephone number : 03-3458-6281 Telefax number : 03-3450-0363

AUSTRALIA

Australian importer : Mitsubishi Pencil Australia
 ABN : 31 085 515 671
 Address : 674 Lorimar Street, Port Melbourne VIC 3207
 Telephone Number : 03 9646 5630
 Emergency Telephone Number: 03 9646 5630
 (Monday to Friday 9:00am - 5.00pm, general information only)

Creation Date : July 1, 2014
 Revision Date :
 File No. : 067450A_Aus Rev. 3.6.03.01

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
 No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements : -
 Other hazards : Not available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Mixture

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
1,2-Propanediol	57-55-6	Registered	2003380	10- 30
Aluminum paste	7429-90-5	Registered	2310723	< 10
Coloring agent	Registered	Registered	Registered	< 1
Polyethylene glycol nonylphenylether	9016-45-9	Registered	Registered	< 1
Resins	Registered	Registered	Polymer Registered	< 10
Additives	Registered	Registered	Polymer Registered	< 10

Other parts : Other parts are excluded from 'chemical substances'.

4. FIRST-AID MEASURES

Inhalation:

Not applicable.

(Due to its low vapor pressure. Inhalation is unlikely at room temperature.)

Skin contact:

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eye contact:

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion:

If swallowed, seek medical advice, and show the MSDS to the physician then.

[Ink quantity of product : about 1.1g]

5. FIRE-FIGHTING MEASURES

Fire and explosion measures : Slight fire hazard.

Extinguishing media:

Suitable : regular dry chemical, carbon dioxide, water, regular foam.

Large fires : Use regular foam or flood with fine water spray.

Fire fighting

: The Products is no flammable.

Use extinguishing agents appropriate for surrounding fire.

Avoid inhalation of material or combustion by-products.

Stay upwind and keep out of low areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Not available.

Environmental precautions : Do not wash away into shower or water way.

Methods for cleaning up : Wipe off by dry cloth and wash with water.

: In accordance with national, state and local regulations.

7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards.

Keep separated from incompatible substances.

Handling:

Technical measures : Don't swallow ink.

: Recap after use.

: Don't shake.

: Keep out of the reach of infants.

: Avoid contact with skin and eyes.

Precautions : Not available.

Safe handling advice : Not available.

Storage:

Technical measures : Keep away from oxidizing materials, ignition sources and high temperature.

Storage condition : Avoid direct sunlight.
 : Do not leave the products in high temperature space.
 : Recommended temperature: 0-30 C.
 Incompatible products : Not available.
 Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m ³ (total dust), 5mg/m ³ (respirable fraction), 5mg/m ³ (pyro powders)	Aluminum paste
ACGIH	10mg/m ³ TWA(metal particulate), 5mg/m ³ TWA (pyro powders)	Aluminum paste
EC	Not available.	

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form : Liquid.
 Color : Pink.
 Odor : None odor.
 pH : about 8.4
 Boiling point : Not available. [Water/ 100 C]
 Melting point : <-10 C
 Flash point : Not applicable.
 Autoignition temperature : Not applicable.
 Explosion limits : Not applicable.
 Density : 1.1-1.2 / 25 C
 Vapor density (air=1) : Not applicable.
 Solubility in water : Soluble.
 Evaporation rate : Not available.
 Volatile : 82-85%

10. STABILITY AND REACTIVITY

Stability : Stability.
 Hazardous reactions : Will not occur.
 Conditions to avoid : Avoid heat, flames, sparks and other sources of ignition.
 : Avoid contact with incompatible materials.
 Materials to avoid : Not available.
 Hazardous decomposition products : Not available.

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	20000mg/kg-Rat >5000mg/kg-Rat 2950mg/kg-Mouse	1,2-Propanediol Aluminum paste Coloring agent
Inhalation LC50	Not available.	
Skin LD50	20800mg/kg-Rabbit	1,2-Propanediol

Local effects

Irritant:inhalation
dehydration
Aluminum paste
Additive

Chronic toxicity and long term toxicity

Lungs may be affected by repeated or prolonged exposure to dust particles. The substance may have effects on the nervous system, resulting in impaired functions.
Aluminum paste

Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	nausea,headache irritation,cough	1,2-Propanediol Aluminum paste
Skin contact	irritation,allergic reaction irritation,itching sensitization burns, corrosive	1,2-Propanediol Aluminum paste Additive Coloring agent
Eye contact	irritation,pain irritation,eye damage	1,2-Propanediol Aluminum paste
Ingestion	allergic reaction,vomiting irritation,digestive disorders	1,2-Propanediol Aluminum paste
Specific effects	IARC Group 3	Resin

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATIONS

Waste from residues : Disposal in accordance with all current regulations and standards.
Contaminated packaging : Not applicable.

14. TRANSPORT INFORMATION

HS Code : 960810

15. REGULATORY INFORMATION

Regulations (Information of components)

Hazardous chemicals (OSHA HCS)

: Aluminum paste

EU labeling : Not restricted.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : 1,2-Propanediol / Aluminum paste

Hazard and safety information

Products are manufactured in accordance with ISO 8124-3 " Safety of Toys - Part 3"

16. OTHER INFORMATION

This sheet completes the technical sheet of use but it doesn't replace it.
The information contained in this sheet are based knowledge of the products
at the data : (July 1, 2014). They are given quite sincerely.
Moreover the attention of the users is drawn on the risks possibly taken,
when a product is used for other utilization than these which it is intended.

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: UM-120NM Gold [uni-ball Signo NOBLE METAL]

JAPAN

Manufacture's name : MITSUBISHI PENCIL CO.,LTD.
 Address : 5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN
 Telephone number : 03-3458-6281 Telefax number : 03-3450-0363

AUSTRALIA

Australian importer : Mitsubishi Pencil Australia
 ABN : 31 085 515 671
 Address : 674 Lorimar Street, Port Melbourne VIC 3207
 Telephone Number : 03 9646 5630
 Emergency Telephone Number: 03 9646 5630
 (Monday to Friday 9:00am - 5.00pm, general information only)

Creation Date : July 1, 2014
 Revision Date :
 File No. : 067451A_Aus Rev. 3.6.04.01

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements : -

Other hazards : Not available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Mixture

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
1,2-Propanediol	57-55-6	Registered	2003380	10- 30
Aluminum paste	7429-90-5	Registered	2310723	< 10
Coloring agents	Registered	Registered	Registered	< 10
Additives	Registered	Registered	Polymer Registered	< 10

Other parts : Other parts are excluded from 'chemical substances'.

4. FIRST-AID MEASURES

Inhalation:

Not applicable.

(Due to its low vapor pressure. Inhalation is unlikely at room temperature.)

Skin contact:

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eye contact:

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion:

If swallowed, seek medical advice, and show the MSDS to the physician then.

[Ink quantity of product : about 1.1g]

5. FIRE-FIGHTING MEASURES

Fire and explosion measures : Slight fire hazard.

Extinguishing media:

Suitable : regular dry chemical, carbon dioxide, water, regular foam.

Large fires : Use regular foam or flood with fine water spray.

Fire fighting

: The Products is no flammable.

Use extinguishing agents appropriate for surrounding fire.

Avoid inhalation of material or combustion by-products.

Stay upwind and keep out of low areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Not available.

Environmental precautions : Do not wash away into shower or water way.

Methods for cleaning up : Wipe off by dry cloth and wash with water.

: In accordance with national, state and local regulations.

7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards.

Keep separated from incompatible substances.

Handling:

Technical measures : Don't swallow ink.

: Recap after use.

: Don't shake.

: Keep out of the reach of infants.

: Avoid contact with skin and eyes.

Precautions : Not available.

Safe handling advice : Not available.

Storage:

Technical measures : Keep away from oxidizing materials, ignition sources and high temperature.

Storage condition : Avoid direct sunlight.

: Do not leave the products in high temperature space.

: Recommended temperature: 0-30 C.

Incompatible products : Not available.

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m ³ (total dust), 5mg/m ³ (respirable fraction), 5mg/m ³ (pyro powders) 15mg/m ³ PEL (Nuisance Dust)	Aluminum paste Coloring agent
ACGIH	10mg/m ³ TWA(metal particulate), 5mg/m ³ TWA (pyro powders) 10mg/m ³ (Nuisance particulate)	Aluminum paste Coloring agent
EC	Not available.	

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Liquid.
Color	: Gold.
Odor	: None odor.
pH	: about 8.4
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable.
Autoignition temperature	: Not applicable.
Explosion limits	: Not applicable.
Density	: 1.1-1.2 / 25 C
Vapor density (air=1)	: Not applicable.
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 88-91%

10. STABILITY AND REACTIVITY

Stability	: Stability.
Hazardous reactions	: Will not occur.
Conditions to avoid	: Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.
Materials to avoid	: Not available.
Hazardous decomposition products	: Not available.

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	20000mg/kg-Rat >5000mg/kg-Rat	1,2-Propanediol Aluminum paste / Coloring agent
Inhalation LC50	Not available.	
Skin LD50	20800mg/kg-Rabbit	1,2-Propanediol

16. OTHER INFORMATION

This sheet completes the technical sheet of use but it doesn't replace it.
The information contained in this sheet are based knowledge of the products
at the data : (July 1, 2014). They are given quite sincerely.
Moreover the attention of the users is drawn on the risks possibly taken,
when a product is used for other utilization than these which it is intended.

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Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: UM-120NM Silver [uni-ball Signo NOBLE METAL]

JAPAN

Manufacture's name : MITSUBISHI PENCIL CO.,LTD.
 Address : 5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN
 Telephone number : 03-3458-6281 Telefax number : 03-3450-0363

AUSTRALIA

Australian importer : Mitsubishi Pencil Australia
 ABN : 31 085 515 671
 Address : 674 Lorimar Street, Port Melbourne VIC 3207
 Telephone Number : 03 9646 5630
 Emergency Telephone Number: 03 9646 5630
 (Monday to Friday 9:00am - 5.00pm, general information only)

Creation Date : July 1, 2014
 Revision Date
 File No. : 067452A_Aus Rev. 3.6.02.01

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements : -

Other hazards : Not available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Mixture

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
1,2-Propanediol	57-55-6	Registered	2003380	10- 30
Aluminum paste	7429-90-5	Registered	2310723	< 10
Additives	Registered	Registered	Polymer Registered	< 10

Other parts : Other parts are excluded from 'chemical substances'.

4. FIRST-AID MEASURES

Inhalation:

Not applicable.

(Due to its low vapor pressure. Inhalation is unlikely at room temperature.)

Skin contact:

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eye contact:

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion:

If swallowed, seek medical advice, and show the MSDS to the physician then.

[Ink quantity of product : about 1.1g]

5. FIRE-FIGHTING MEASURES

Fire and explosion measures : Slight fire hazard.

Extinguishing media:

- | | |
|---------------|--|
| Suitable | : regular dry chemical, carbon dioxide, water, regular foam. |
| Large fires | : Use regular foam or flood with fine water spray. |
| Fire fighting | : The Products is no flammable.
Use extinguishing agents appropriate for surrounding fire.
Avoid inhalation of material or combustion by-products.
Stay upwind and keep out of low areas. |

6. ACCIDENTAL RELEASE MEASURES

- | | |
|---------------------------|---|
| Personal precautions | : Not available. |
| Environmental precautions | : Do not wash away into shower or water way. |
| Methods for cleaning up | : Wipe off by dry cloth and wash with water.
: In accordance with national, state and local regulations. |

7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards.
Keep separated from incompatible substances.

Handling:

- | | |
|-----------------------|--|
| Technical measures | : Don't swallow ink.
: Recap after use.
: Don't shake.
: Keep out of the reach of infants.
: Avoid contact with skin and eyes. |
| Precautions | : Not available. |
| Safe handling advice | : Not available. |
| Storage: | |
| Technical measures | : Keep away from oxidizing materials, ignition sources and high temperature. |
| Storage condition | : Avoid direct sunlight.
: Do not leave the products in high temperature space.
: Recommended temperature: 0-30 C. |
| Incompatible products | : Not available. |
| Packaging materials | : Not applicable. |

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m ³ (total dust), 5mg/m ³ (respirable fraction), 5mg/m ³ (pyro powders)	Aluminum paste
ACGIH	10mg/m ³ TWA(metal particulate), 5mg/m ³ TWA (pyro powders)	Aluminum paste
EC	Not available.	

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[]: Information of components.

Physical state and form	: Liquid.
Color	: Silver.
Odor	: None odor.
pH	: about 8.4
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable.
Autoignition temperature	: Not applicable.
Explosion limits	: Not applicable.
Density	: 1.1-1.2 / 25 C
Vapor density (air=1)	: Not applicable.
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 88-91%

10. STABILITY AND REACTIVITY

Stability	: Stability.
Hazardous reactions	: Will not occur.
Conditions to avoid	: Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.
Materials to avoid	: Not available.
Hazardous decomposition products	: Not available.

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	20000mg/kg-Rat >5000mg/kg-Rat	1,2-Propanediol Aluminum paste
Inhalation LC50	Not available.	
Skin LD50	20800mg/kg-Rabbit	1,2-Propanediol
Local effects	Irritant:inhalation dehydration	Aluminum paste Additive

Chronic toxicity and long term toxicity

Lungs may be affected by repeated or prolonged exposure to dust particles. The substance may have effects on the nervous system, resulting in impaired functions.

Aluminum paste

Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	nausea,headache irritation,cough	1,2-Propanediol Aluminum paste
Skin contact	irritation,allergic reaction irritation,itching sensitization	1,2-Propanediol Aluminum paste Additive
Eye contact	irritation,pain irritation,eye damage	1,2-Propanediol Aluminum paste
Ingestion	allergic reaction,vomiting irritation,digestive disorders	1,2-Propanediol Aluminum paste

Specific effects Not available.

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATIONS

Waste from residues : Disposal in accordance with all current regulations and standards.
Contaminated packaging : Not applicable.

14. TRANSPORT INFORMATION

HS Code : 960810

15. REGULATORY INFORMATION

Regulations (information of components)

Hazardous chemicals (OSHA HCS)

: Aluminum paste

EU labeling : Not restricted.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : 1,2-Propanediol / Aluminum paste

Hazard and safety information

Products are manufactured in accordance with ISO 8124-3 " Safety of Toys - Part 3"

16. OTHER INFORMATION

This sheet completes the technical sheet of use but it doesn't replace it.

The information contained in this sheet are based knowledge of the products at the data : (July 1, 2014). They are given quite sincerely.

Moreover the attention of the users is drawn on the risks possibly taken, when a product is used for other utilization than these which it is intended.

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: UM-120NM Bronze [uni-ball Signo NOBLE METAL]

JAPAN

Manufacture's name : MITSUBISHI PENCIL CO.,LTD.
 Address : 5-23-37, HIGASHIOHI, SHINAGAWA, TOKYO, JAPAN
 Telephone number : 03-3458-6281 Telefax number : 03-3450-0363

AUSTRALIA

Australian importer : Mitsubishi Pencil Australia
 ABN : 31 085 515 671
 Address : 674 Lorimar Street, Port Melbourne VIC 3207
 Telephone Number : 03 9646 5630
 Emergency Telephone Number: 03 9646 5630
 (Monday to Friday 9:00am - 5.00pm, general information only)

Creation Date : July 1, 2014
 Revision Date :
 File No. : 067453A_Aus Rev. 3.6.04.01

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
 No hazardous product as specified in Directive 67/548/EEC or 1999/45/EC

Label elements : -
 Other hazards : Not available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Mixture

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
1,2-Propanediol	57-55-6	Registered	2003380	10- 30
Aluminum paste	7429-90-5	Registered	2310723	< 10
Coloring agent	Registered	Registered	Registered	< 10
Additives	Registered	Registered	Polymer Registered	< 10

Other parts : Other parts are excluded from 'chemical substances'.

4. FIRST-AID MEASURES

Inhalation:

Not applicable.
 (Due to its low vapor pressure. Inhalation is unlikely at room temperature.)

Skin contact:

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eye contact:

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion:

If swallowed, seek medical advice, and show the MSDS to the physician then.

[Ink quantity of product : about 1.1g]

5. FIRE-FIGHTING MEASURES

Fire and explosion measures : Slight fire hazard.

Extinguishing media:

- | | |
|---------------|--|
| Suitable | : regular dry chemical, carbon dioxide, water, regular foam. |
| Large fires | : Use regular foam or flood with fine water spray. |
| Fire fighting | : The Products is no flammable.
Use extinguishing agents appropriate for surrounding fire.
Avoid inhalation of material or combustion by-products.
Stay upwind and keep out of low areas. |

6. ACCIDENTAL RELEASE MEASURES

- | | |
|---------------------------|---|
| Personal precautions | : Not available. |
| Environmental precautions | : Do not wash away into shower or water way. |
| Methods for cleaning up | : Wipe off by dry cloth and wash with water.
: In accordance with national, state and local regulations. |

7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards.
Keep separated from incompatible substances.

Handling:

- | | |
|-----------------------|--|
| Technical measures | : Don't swallow ink.
: Recap after use.
: Don't shake.
: Keep out of the reach of infants.
: Avoid contact with skin and eyes. |
| Precautions | : Not available. |
| Safe handling advice | : Not available. |
| Storage: | |
| Technical measures | : Keep away from oxidizing materials, ignition sources and high temperature. |
| Storage condition | : Avoid direct sunlight.
: Do not leave the products in high temperature space.
: Recommended temperature: 0-30 C. |
| Incompatible products | : Not available. |
| Packaging materials | : Not applicable. |

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m ³ (total dust), 5mg/m ³ (respirable fraction), 5mg/m ³ (pyro powders) 15mg/m ³ PEL (Nuisance Dust)	Aluminum paste Coloring agent
ACGIH	10mg/m ³ TWA(metal particulate), 5mg/m ³ TWA (pyro powders) 10mg/m ³ (Nuisance particulate)	Aluminum paste Coloring agent
EC	Not available.	

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Liquid.
Color	: Bronze.
Odor	: None odor.
pH	: about 8.4
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable.
Autoignition temperature	: Not applicable.
Explosion limits	: Not applicable.
Density	: 1.1-1.2 / 25 C
Vapor density (air=1)	: Not applicable.
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 88-91%

10. STABILITY AND REACTIVITY

Stability	: Stability.
Hazardous reactions	: Will not occur.
Conditions to avoid	: Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.
Materials to avoid	: Not available.
Hazardous decomposition products	: Not available.

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	20000mg/kg-Rat >5000mg/kg-Rat ≥5000mg/kg-Rat	1,2-Propanediol Aluminum paste / Coloring agent Resin
Inhalation LC50	Not available.	
Skin LD50	20800mg/kg-Rabbit	1,2-Propanediol

16. OTHER INFORMATION

This sheet completes the technical sheet of use but it doesn't replace it.
The information contained in this sheet are based knowledge of the products
at the data : (July 1, 2014). They are given quite sincerely.
Moreover the attention of the users is drawn on the risks possibly taken,
when a product is used for other utilization than these which it is intended.

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