

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: UM-120AC White [uni-ball Signo Angelic Colour]

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

Creation Date : November 18, 2005
Revision Date : April 27, 2012
File No. : 067438A Rev. 2.5.01.03

2. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Preparation

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
Resin	Registered	Registered	Registered	10- 30
Titanium dioxide	13463-67-7	Registered	2366755	10- 30
Additives	Registered	Registered	Polymer Registered	10- 30
Triethanolamine	102-71-6	Registered	2030498	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10

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

3. HAZARDS IDENTIFICATION

Most important hazards : Not available.

Specific hazards : Not available.

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 1.0-1.3g]

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 children.

: 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 : (Information of components.)

metals

Titanium dioxide

strong oxidizers

Additive

acids, metals, oxidizing materials

Triethanolamine

oxidizing materials, bases, acids, reducing agents, metals

Ethylene glycol

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m3(Total dust)	Titanium dioxide
ACGIH	10mg/m3 TWA	Titanium dioxide
	5mg/m3 TWA	Triethanolamine
	100mg/m3 ceiling (particulate)(aerosol)	Ethylene glycol
EC	6mg/m3	Titanium dioxide
	52mg/m3(20ppm) TWA,	Ethylene glycol
	104mg/m3(40ppm) STEL(skin)	

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[]: Information of components.

Physical state and form	: Middle viscous liquid.
Colour	: White.
Odour	: None odour.
pH	: 8.5-9.0
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Triethanolamine/ 315.5 C]
Explosion limits	: Not applicable. [Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.2±0.05 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 54-57%

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 : (Information of components.)

metals	Titanium dioxide
strong oxidizers	Additive
acids, metals, oxidizing materials	Triethanolamine
oxidizing materials, bases, acids, reducing agents,	Ethylene glycol

Hazardous decomposition products : (Information of components.)

oxides of carbon, water	common decomposition products
oxides of titanium.	Titanium dioxide
corrosive acrolein.	Additive
oxides of nitrogen.	Triethanolamine

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	>5000mg/kg-Rat >24000mg/kg-Rat 2200mg/kg-Rabbit, 5846mg/kg-Mouse 1650mg/kg-Cat, 4700mg/kg-Rat	Resin Titanium dioxide Triethanolamine Ethylene glycol
Inhalation LC50	6820mg/m ³ -4H-Rat	Titanium dioxide
Skin LD50	>5000mg/kg-Rabbit >16mL/kg-Rat 9530uL/kg-Rabbit	Resin Triethanolamine Ethylene glycol

Local effects	dehydration Irritant:skin, eye Irritant:inhalation, skin, eye	Additive Triethanolamine Ethylene glycol
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Chronic toxicity and long term toxicity

Repeated or prolonged contact may cause skin sensitization. The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).	Triethanolamine Ethylene glycol
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Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	irritation,headache irritation,cough sore throat,difficulty breathing	Resin Titanium dioxide / Ethylene glycol Triethanolamine
Skin contact	irritation sensitization irritation,redness irritation,dry	Resin Additive Triethanolamine Ethylene glycol
Eye contact	irritation irritation,redness irritation,corneal swelling	Resin Titanium dioxide / Ethylene glycol Triethanolamine
Ingestion	physiologically inert,intestinal burns,gastrointestinal irritation nausea,vomiting	Titanium dioxide Triethanolamine Ethylene glycol

Specific effects	IARC Group 3	Titanium dioxide / Triethanolamine
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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) : Triethanolamine / Ethylene glycol

EU labeling

25%<=Xn;R22 : Ethylene glycol

R22: Harmful if swallowed.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : Triethanolamine / Ethylene glycol

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 : (April 27, 2012). 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-120AC Yellow [uni-ball Signo Angelic Colour]

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

Creation Date : November 18, 2005
 Revision Date : April 27, 2012
 File No. : 067439A Rev. 2.5.01.03

2. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Preparation

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	30- 50
Resin	Registered	Registered	Registered	10- 30
Titanium dioxide	13463-67-7	Registered	2366755	10- 30
Additives	Registered	Registered	Polymer Registered	10- 30
Coloring agent	Registered	Registered	Registered	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10
Triethanolamine	102-71-6	Registered	2030498	< 10

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

3. HAZARDS IDENTIFICATION

Most important hazards : Not available.

Specific hazards : Not available.

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 1.0-1.3g]

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 children.

: 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 : (Information of components.)

metals

Titanium dioxide

strong oxidizers

Additive

acids, metals, oxidizing materials

Triethanolamine

oxidizing materials, bases, acids, reducing agents, metals

Ethylene glycol

oxidizing materials

Coloring agent

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m ³ (Total dust)	Titanium dioxide
ACGIH	10mg/m ³ TWA 5mg/m ³ TWA 100mg/m ³ ceiling (particulate)(aerosol)	Titanium dioxide Triethanolamine Ethylene glycol
EC	6mg/m ³ 52mg/m ³ (20ppm) TWA, 104mg/m ³ (40ppm) STEL(skin)	Titanium dioxide Ethylene glycol
JAIH	2mg/m ³ (Respirable fraction), 8mg/m ³ (Total dust)	Coloring agent

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Middle viscous liquid.
Colour	: Yellow.
Odour	: None odour.
pH	: 8.5-9.0
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Triethanolamine/ 315.5 C]
Explosion limits	: Not applicable. [Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.2±0.05 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 53-56%

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 : (Information of components.)

metals	Titanium dioxide
strong oxidizers	Additive
acids, metals, oxidizing materials	Triethanolamine
oxidizing materials, bases, acids, reducing agents,	Ethylene glycol
oxidizing materials	Coloring agent

Hazardous decomposition products : (Information of components.)

oxides of carbon, water	common decomposition products
oxides of titanium.	Titanium dioxide
corrosive acrolein.	Additive
oxides of nitrogen.	Triethanolamine
oxides of nitrogen, carbon, halogenated compounds.	Coloring agent

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	>5000mg/kg-Rat >24000mg/kg-Rat 2200mg/kg-Rabbit, 5846mg/kg-Mouse 1650mg/kg-Cat, 4700mg/kg-Rat	Resin / Coloring agent Titanium dioxide Triethanolamine Ethylene glycol
Inhalation LC50	6820mg/m ³ -4H-Rat	Titanium dioxide
Skin LD50	>5000mg/kg-Rabbit >16mL/kg-Rat 9530uL/kg-Rabbit	Resin Triethanolamine Ethylene glycol

Local effects

dehydration	Additive
Irritant:skin, eye	Triethanolamine
Irritant:inhalation, skin, eye	Ethylene glycol

Chronic toxicity and long term toxicity

Repeated or prolonged contact may cause skin sensitization.	Triethanolamine
The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).	Ethylene glycol

Signs and Symptos of overexposure and aggravated by exposure

Inhalation	irritation,headache irritation,cough sore throat,difficulty breathing irritation	Resin Titanium dioxide / Ethylene glycol Triethanolamine Coloring agent
Skin contact	irritation sensitization irritation,redness irritation,dry	Resin Additive Triethanolamine Ethylene glycol
Eye contact	irritation irritation,redness irritation,corneal swelling	Resin Titanium dioxide / Ethylene glycol Triethanolamine
Ingestion	physiologically inert,intestinal burns,gastrointestinal irritation nausea,vomiting vomiting,diarrhea	Titanium dioxide Triethanolamine Ethylene glycol Coloring agent

Specific effects

IARC Group 3	Titanium dioxide / Triethanolamine
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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) : Triethanolamine / Ethylene glycol

EU labeling

25%≤Xn;R22 : Ethylene glycol

R22: Harmful if swallowed.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : Triethanolamine / Ethylene glycol

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 : (April 27, 2012). 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-120AC Orange [uni-ball Signo Angelic Colour]

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

Creation Date : November 18, 2005
 Revision Date : April 27, 2012
 File No. : 067440A Rev. 2.5.01.03

2. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Preparation

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	30- 50
Resin	Registered	Registered	Registered	10- 30
Titanium dioxide	13463-67-7	Registered	2366755	10- 30
Additives	Registered	Registered	Polymer Registered	10- 30
Coloring agent	Registered	Registered	Registered	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10
Triethanolamine	102-71-6	Registered	2030498	< 10

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

3. HAZARDS IDENTIFICATION

Most important hazards : Not available.

Specific hazards : Not available.

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 1.0-1.3g]

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 children.
: 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 : (Information of components.)

metals	Titanium dioxide
strong oxidizers	Additive
acids, metals, oxidizing materials	Triethanolamine
oxidizing materials, bases, acids, reducing agents, metals	Ethylene glycol
oxidizing materials	Coloring agent

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m3(Total dust) 15mg/m3 PEL (Nuisance Dust)	Titanium dioxide Coloring agent
ACGIH	10mg/m3 TWA 5mg/m3 TWA 100mg/m3 ceiling (particulate)(aerosol) 10mg/m3 (Nuisance particulate)	Titanium dioxide Triethanolamine Ethylene glycol Coloring agent
EC	6mg/m3 52mg/m3(20ppm) TWA, 104mg/m3(40ppm) STEL(skin)	Titanium dioxide Ethylene glycol

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[]: Information of components.

Physical state and form : Middle viscous liquid.

Colour : Orange.

Odour : None odour.

pH : 8.5-9.0

Boiling point : Not available. [Water/ 100 C]

Melting point : <-10 C

Flash point : Not applicable. [Ethylene glycol/ 111 C(CC)]

Autoignition temperature : Not applicable. [Triethanolamine/ 315.5 C]

Explosion limits : Not applicable.

[Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]

Density : 1.2±0.05 / 25 C

Vapour density (air=1) : Not available. [Ethylene glycol/ 2.1]

Solubility in water : Soluble.

Evaporation rate : Not available.

Volatile : 53-56%

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 : (Information of components.)

metals	Titanium dioxide
strong oxidizers	Additive
acids, metals, oxidizing materials	Triethanolamine
oxidizing materials, bases, acids, reducing agents,	Ethylene glycol
oxidizing materials	Coloring agent

Hazardous decomposition products : (Information of components.)

oxides of carbon, water	common decomposition products
oxides of titanium.	Titanium dioxide
corrosive acrolein.	Additive
oxides of nitrogen.	Triethanolamine / Coloring agent

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	>5000mg/kg-Rat >24000mg/kg-Rat 2200mg/kg-Rabbit, 5846mg/kg-Mouse 1650mg/kg-Cat, 4700mg/kg-Rat	Resin / Coloring agent Titanium dioxide Triethanolamine Ethylene glycol
Inhalation LC50	6820mg/m ³ -4H-Rat	Titanium dioxide
Skin LD50	>5000mg/kg-Rabbit >16mL/kg-Rat 9530uL/kg-Rabbit	Resin Triethanolamine Ethylene glycol

Local effects

dehydration	Additive
Irritant:skin, eye	Triethanolamine
Irritant:inhalation, skin, eye	Ethylene glycol

Chronic toxicity and long term toxicity

Repeated or prolonged contact may cause skin sensitization.	Triethanolamine
The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).	Ethylene glycol

Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	irritation,headache irritation,cough sore throat,difficulty breathing irritation	Resin Titanium dioxide / Ethylene glycol Triethanolamine Coloring agent
Skin contact	irritation sensitization irritation,redness irritation,dry allergic contact dermatitis	Resin Additive Triethanolamine Ethylene glycol Coloring agent
Eye contact	irritation irritation,redness irritation,corneal swelling	Resin Titanium dioxide / Ethylene glycol Triethanolamine
Ingestion	physiologically inert,intestinal burns,gastrointestinal irritation nausea,vomiting	Titanium dioxide Triethanolamine Ethylene glycol / Coloring agent

Specific effects

IARC Group 3	Titanium dioxide / Triethanolamine
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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) : Triethanolamine / Ethylene glycol

EU labeling

25%≤Xn;R22 : Ethylene glycol

R22: Harmful if swallowed.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : Triethanolamine / Ethylene glycol

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 : (April 27, 2012). 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-120AC Green [uni-ball Signo Angelic Colour]

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

Creation Date : November 18, 2005
 Revision Date : April 27, 2012
 File No. : 067441A Rev. 2.5.02.03

2. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Preparation

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	30- 50
Resin	Registered	Registered	Registered	10- 30
Titanium dioxide	13463-67-7	Registered	2366755	10- 30
Additives	Registered	Registered	Polymer Registered	10- 30
Coloring agent	Registered	Registered	Registered	< 10
Triethanolamine	102-71-6	Registered	2030498	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10

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

3. HAZARDS IDENTIFICATION

Most important hazards : Not available.

Specific hazards : Not available.

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 1.0-1.3g]

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 children.

: 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 : (Information of components.)

metals

Titanium dioxide

strong oxidizers

Additive

oxidizing materials

Coloring agent

acids, metals, oxidizing materials

Triethanolamine

oxidizing materials, bases, acids, reducing agents, metals

Ethylene glycol

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m3(Total dust) 15mg/m3 PEL (Nuisance Dust)	Titanium dioxide Coloring agent
ACGIH	10mg/m3 TWA 10mg/m3 (Nuisance particulate) 5mg/m3 TWA 100mg/m3 ceiling (particulate)(aerosol)	Titanium dioxide Coloring agent Triethanolamine Ethylene glycol
EC	6mg/m3 52mg/m3(20ppm) TWA, 104mg/m3(40ppm) STEL(skin)	Titanium dioxide Ethylene glycol

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Middle viscous liquid.
Colour	: Green.
Odour	: None odour.
pH	: 8.5-9.0
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Triethanolamine/ 315.5 C]
Explosion limits	: Not applicable. [Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.2±0.05 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 51-54%

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 : (Information of components.)

metals	Titanium dioxide
strong oxidizers	Additive
oxidizing materials	Coloring agent
acids, metals, oxidizing materials	Triethanolamine
oxidizing materials, bases, acids, reducing agents,	Ethylene glycol

Hazardous decomposition products : (Information of components.)

oxides of carbon, water	common decomposition products
oxides of titanium.	Titanium dioxide
corrosive acrolein.	Additive
cyanide, oxides of nitrogen.	Coloring agent
oxides of nitrogen.	Triethanolamine

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	>5000mg/kg-Rat >24000mg/kg-Rat ≥5000mg/kg-Rat 2200mg/kg-Rabbit, 5846mg/kg-Mouse 1650mg/kg-Cat, 4700mg/kg-Rat	Resin Titanium dioxide Coloring agent Triethanolamine Ethylene glycol
Inhalation LC50	6820mg/m ³ -4H-Rat	Titanium dioxide
Skin LD50	>5000mg/kg-Rabbit >16mL/kg-Rat 9530uL/kg-Rabbit	Resin Triethanolamine Ethylene glycol

Local effects

dehydration	Additive
Irritant:skin, eye	Triethanolamine
Irritant:inhalation, skin, eye	Ethylene glycol

Chronic toxicity and long term toxicity

Repeated or prolonged contact may cause skin sensitization.	Triethanolamine
The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).	Ethylene glycol

Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	irritation,headache irritation,cough irritation sore throat,difficulty breathing	Resin Titanium dioxide / Ethylene glycol Coloring agent Triethanolamine
Skin contact	irritation sensitization irritation,redness irritation,dry	Resin / Coloring agent Additive Triethanolamine Ethylene glycol
Eye contact	irritation irritation,redness irritation,corneal swelling	Resin / Coloring agent Titanium dioxide / Ethylene glycol Triethanolamine
Ingestion	physiologically inert,intestinal gastric disturbances burns,gastrointestinal irritation nausea,vomiting	Titanium dioxide Coloring agent Triethanolamine Ethylene glycol

Specific effects	IARC Group 3	Titanium dioxide / Triethanolamine
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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) : Triethanolamine / Ethylene glycol

EU labeling

25%<=Xn;R22 : Ethylene glycol

R22: Harmful if swallowed.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : Triethanolamine / Ethylene glycol

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 : (April 27, 2012). 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-120AC Violet [uni-ball Signo Angelic Colour]

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

Creation Date : November 18, 2005
Revision Date : April 27, 2012
File No. : 067442A Rev. 2.5.01.03

2. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Preparation

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	30- 50
Resin	Registered	Registered	Registered	10- 30
Titanium dioxide	13463-67-7	Registered	2366755	10- 30
Additives	Registered	Registered	Polymer Registered	10- 30
Coloring agent	Registered	Registered	Registered	< 10
Triethanolamine	102-71-6	Registered	2030498	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10

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

3. HAZARDS IDENTIFICATION

Most important hazards : Not available.

Specific hazards : Not available.

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 1.0-1.3g]

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 children.

: 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 : (Information of components.)

metals

Titanium dioxide

strong oxidizers

Additive

acids, metals, oxidizing materials

Triethanolamine

oxidizing materials, bases, acids, reducing agents, metals

Ethylene glycol

oxidizing materials

Coloring agent

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m3(Total dust)	Titanium dioxide
ACGIH	10mg/m3 TWA 5mg/m3 TWA 100mg/m3 ceiling (particulate)(aerosol)	Titanium dioxide Triethanolamine Ethylene glycol
EC	6mg/m3 52mg/m3(20ppm) TWA, 104mg/m3(40ppm) STEL(skin)	Titanium dioxide Ethylene glycol
JAIH	2mg/m3(Respirable fraction), 8mg/m3(Total dust)	Coloring agent

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Middle viscous liquid.
Colour	: Violet.
Odour	: None odour.
pH	: 8.5-9.0
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Triethanolamine/ 315.5 C]
Explosion limits	: Not applicable. [Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.2±0.05 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 53-56%

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 : (Information of components.)

metals	Titanium dioxide
strong oxidizers	Additive
acids, metals, oxidizing materials	Triethanolamine
oxidizing materials, bases, acids, reducing agents,	Ethylene glycol
oxidizing materials	Coloring agent

Hazardous decomposition products : (Information of components.)

oxides of carbon, water	common decomposition products
oxides of titanium.	Titanium dioxide
corrosive acrolein.	Additive
oxides of nitrogen.	Triethanolamine
miscellaneous decomposition products.	Coloring agent

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	>5000mg/kg-Rat >24000mg/kg-Rat 2200mg/kg-Rabbit, 5846mg/kg-Mouse 1650mg/kg-Cat, 4700mg/kg-Rat >=5000mg/kg-Rat	Resin Titanium dioxide Triethanolamine Ethylene glycol Coloring agent
Inhalation LC50	6820mg/m ³ -4H-Rat	Titanium dioxide
Skin LD50	>5000mg/kg-Rabbit >16mL/kg-Rat 9530uL/kg-Rabbit	Resin Triethanolamine Ethylene glycol

Local effects

dehydration	Additive
Irritant:skin, eye	Triethanolamine
Irritant:inhalation, skin, eye	Ethylene glycol

Chronic toxicity and long term toxicity

Repeated or prolonged contact may cause skin sensitization.	Triethanolamine
The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).	Ethylene glycol

Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	irritation,headache irritation,cough sore throat,difficulty breathing irritation	Resin Titanium dioxide / Ethylene glycol Triethanolamine Coloring agent
Skin contact	irritation sensitization irritation,redness irritation,dry	Resin Additive Triethanolamine Ethylene glycol
Eye contact	irritation irritation,redness irritation,corneal swelling	Resin Titanium dioxide / Ethylene glycol Triethanolamine
Ingestion	physiologically inert,intestinal burns,gastrointestinal irritation nausea,vomiting	Titanium dioxide Triethanolamine Ethylene glycol

Specific effects

IARC Group 3	Titanium dioxide / Triethanolamine
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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) : Triethanolamine / Ethylene glycol

EU labeling

25%<=Xn;R22 : Ethylene glycol

R22: Harmful if swallowed.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : Triethanolamine / Ethylene glycol

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 : (April 27, 2012). 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-120AC Pink [uni-ball Signo Angelic Colour]

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

Creation Date : November 18, 2005
Revision Date : April 27, 2012
File No. : 067443A Rev. 2.5.01.03

2. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Preparation

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	30- 50
Resin	Registered	Registered	Registered	10- 30
Titanium dioxide	13463-67-7	Registered	2366755	10- 30
Additives	Registered	Registered	Polymer Registered	10- 30
Coloring agent	Registered	Registered	Registered	< 10
Triethanolamine	102-71-6	Registered	2030498	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10

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

3. HAZARDS IDENTIFICATION

Most important hazards : Not available.

Specific hazards : Not available.

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 1.0-1.3g]

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 children.

: 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 : (Information of components.)

metals

Titanium dioxide

strong oxidizers

Additive

acids, metals, oxidizing materials

Triethanolamine

oxidizing materials, bases, acids, reducing agents, metals

Ethylene glycol

oxidizing materials

Coloring agent

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m3(Total dust) 5mg/m3(Respirable fraction), 15mg/m3(Total dust) [Nuisance Dust]	Titanium dioxide Coloring agent
ACGIH	10mg/m3 TWA 100mg/m3 ceiling (particulate)(aerosol) 5mg/m3 TWA 10mg/m3 (Nuisance particulate)	Titanium dioxide Ethylene glycol Triethanolamine Coloring agent
EC	6mg/m3 52mg/m3(20ppm) TWA, 104mg/m3(40ppm) STEL(skin)	Titanium dioxide Ethylene glycol

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Middle viscous liquid.
Colour	: Pink.
Odour	: None odour.
pH	: 8.5-9.0
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Triethanolamine/ 315.5 C]
Explosion limits	: Not applicable. [Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.2±0.05 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 53-56%

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 : (Information of components.)

metals	Titanium dioxide
strong oxidizers	Additive
acids, metals, oxidizing materials	Triethanolamine
oxidizing materials, bases, acids, reducing agents,	Ethylene glycol
oxidizing materials	Coloring agent

Hazardous decomposition products : (Information of components.)

oxides of carbon, water	common decomposition products
oxides of titanium.	Titanium dioxide
corrosive acrolein.	Additive
oxides of nitrogen.	Triethanolamine / Coloring agent

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	>5000mg/kg-Rat >24000mg/kg-Rat 2200mg/kg-Rabbit, 5846mg/kg-Mouse 1650mg/kg-Cat, 4700mg/kg-Rat >=5000mg/kg-Rat	Resin Titanium dioxide Triethanolamine Ethylene glycol Coloring agent
Inhalation LC50	6820mg/m ³ -4H-Rat	Titanium dioxide
Skin LD50	>5000mg/kg-Rabbit >16mL/kg-Rat 9530uL/kg-Rabbit >3000mg/kg-Rabbit	Resin Triethanolamine Ethylene glycol Coloring agent

Local effects

dehydration	Additive
Irritant:skin, eye	Triethanolamine
Irritant:inhalation, skin, eye	Ethylene glycol

Chronic toxicity and long term toxicity

Repeated or prolonged contact may cause skin sensitization.	Triethanolamine
The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).	Ethylene glycol

Signs and Symptos of overexposure and aggravated by exposure

Inhalation	irritation,headache irritation,cough sore throat,difficulty breathing	Resin Titanium dioxide / Ethylene glycol Triethanolamine
Skin contact	irritation sensitization irritation,redness irritation,dry	Resin Additive Triethanolamine Ethylene glycol
Eye contact	irritation irritation,redness irritation,corneal swelling	Resin Titanium dioxide / Ethylene glycol Triethanolamine
Ingestion	physiologically inert,intestinal burns,gastrointestinal irritation nausea,vomiting	Titanium dioxide Triethanolamine Ethylene glycol

Specific effects	IARC Group 3	Titanium dioxide / Triethanolamine
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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) : Triethanolamine / Ethylene glycol

EU labeling

25%<=Xn;R22 : Ethylene glycol

R22: Harmful if swallowed.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : Triethanolamine / Ethylene glycol

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 : (April 27, 2012). 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-120AC Red [uni-ball Signo Angelic Colour]

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

Creation Date : November 18, 2005
Revision Date : April 27, 2012
File No. : 067444A Rev. 2.5.01.03

2. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Preparation

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	30- 50
Resin	Registered	Registered	Registered	10- 30
Titanium dioxide	13463-67-7	Registered	2366755	10- 30
Additives	Registered	Registered	Polymer Registered	10- 30
Coloring agent	Registered	Registered	Registered	< 10
Triethanolamine	102-71-6	Registered	2030498	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10

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

3. HAZARDS IDENTIFICATION

Most important hazards : Not available.

Specific hazards : Not available.

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 1.0-1.3g]

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 children.

: 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 : (Information of components.)

metals

Titanium dioxide

strong oxidizers

Additive

acids, metals, oxidizing materials

Triethanolamine

oxidizing materials, bases, acids, reducing agents, metals

Ethylene glycol

oxidizing materials

Coloring agent

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m3(Total dust)	Titanium dioxide
ACGIH	10mg/m3 TWA 100mg/m3 ceiling (particulate)(aerosol) 5mg/m3 TWA	Titanium dioxide Ethylene glycol Triethanolamine
EC	6mg/m3 52mg/m3(20ppm) TWA, 104mg/m3(40ppm) STEL(skin)	Titanium dioxide Ethylene glycol
JAIH	2mg/m3(Respirable fraction), 8mg/m3(Total dust)	Coloring agent

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[]: Information of components.

Physical state and form	: Middle viscous liquid.
Colour	: Red.
Odour	: None odour.
pH	: 8.5-9.0
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Triethanolamine/ 315.5 C]
Explosion limits	: Not applicable. [Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.2±0.05 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 53-56%

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 : (Information of components.)

metals	Titanium dioxide
strong oxidizers	Additive
acids, metals, oxidizing materials	Triethanolamine
oxidizing materials, bases, acids, reducing agents,	Ethylene glycol
oxidizing materials	Coloring agent

Hazardous decomposition products : (Information of components.)

oxides of carbon, water	common decomposition products
oxides of titanium.	Titanium dioxide
corrosive acrolein.	Additive
oxides of nitrogen.	Triethanolamine / Coloring agent

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	>5000mg/kg-Rat >24000mg/kg-Rat 2200mg/kg-Rabbit, 5846mg/kg-Mouse 1650mg/kg-Cat, 4700mg/kg-Rat >=5000mg/kg-Rat	Resin Titanium dioxide Triethanolamine Ethylene glycol Coloring agent
Inhalation LC50	6820mg/m ³ -4H-Rat	Titanium dioxide
Skin LD50	>5000mg/kg-Rabbit >16mL/kg-Rat 9530uL/kg-Rabbit	Resin Triethanolamine Ethylene glycol

Local effects

dehydration	Additive
Irritant:skin, eye	Triethanolamine
Irritant;inhalation, skin, eye	Ethylene glycol

Chronic toxicity and long term toxicity

Repeated or prolonged contact may cause skin sensitization.	Triethanolamine
The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).	Ethylene glycol

Signs and Symptos of overexposure and aggravated by exposure

Inhalation	irritation,headache irritation,cough sore throat,difficulty breathing irritation	Resin Titanium dioxide / Ethylene glycol Triethanolamine Coloring agent
Skin contact	irritation sensitization irritation,redness irritation,dry redness,swelling	Resin Additive Triethanolamine Ethylene glycol Coloring agent
Eye contact	irritation irritation,redness irritation,corneal swelling	Resin Titanium dioxide / Ethylene glycol Triethanolamine
Ingestion	physiologically inert,intestinal burns,gastrointestinal irritation nausea,vomiting	Titanium dioxide Triethanolamine Ethylene glycol / Coloring agent

Specific effects

IARC Group 3	Titanium dioxide / Triethanolamine
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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) : Triethanolamine / Ethylene glycol

EU labeling

25%<=Xn;R22 : Ethylene glycol

R22: Harmful if swallowed.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : Triethanolamine / Ethylene glycol

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 : (April 27, 2012). 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-120AC Blue [uni-ball Signo Angelic Colour]

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

Creation Date : November 18, 2005
Revision Date : April 27, 2012
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2. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Preparation

Chemical nature: Component parts : Ink

Chemical or generic name	CAS No.	TSCA	EINECSNo.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	30- 50
Resin	Registered	Registered	Registered	10- 30
Titanium dioxide	13463-67-7	Registered	2366755	10- 30
Additives	Registered	Registered	Polymer Registered	10- 30
Coloring agent	Registered	Registered	Registered	< 10
Triethanolamine	102-71-6	Registered	2030498	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10

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

3. HAZARDS IDENTIFICATION

Most important hazards : Not available.

Specific hazards : Not available.

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 1.0-1.3g]

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 children.

: 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 : (Information of components.)

metals

Titanium dioxide

strong oxidizers

Additive

acids, metals, oxidizing materials

Triethanolamine

oxidizing materials, bases, acids, reducing agents, metals

Ethylene glycol

oxidizing materials

Coloring agent

Packaging materials : Not applicable.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures : Not required.

Control parameters (Information of components.)

OSHA	15mg/m3(Total dust) 5mg/m3(Respirable fraction), 15mg/m3(Total dust) [Nuisance Dust]	Titanium dioxide Coloring agent
ACGIH	10mg/m3 TWA 5mg/m3 TWA 100mg/m3 ceiling (particulate)(aerosol) 10mg/m3 (Nuisance particulate)	Titanium dioxide Triethanolamine Ethylene glycol Coloring agent
EC	6mg/m3 52mg/m3(20ppm) TWA, 104mg/m3(40ppm) STEL(skin)	Titanium dioxide Ethylene glycol

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

Physical state and form	: Middle viscous liquid.
Colour	: Blue.
Odour	: None odour.
pH	: 8.5-9.0
Boiling point	: Not available. [Water/ 100 C]
Melting point	: <-10 C
Flash point	: Not applicable. [Ethylene glycol/ 111 C(CC)]
Autoignition temperature	: Not applicable. [Triethanolamine/ 315.5 C]
Explosion limits	: Not applicable. [Lower flammable limit / 3.2% , Upper flammable limit / 15.3% <Ethylene glycol>]
Density	: 1.2±0.05 / 25 C
Vapour density (air=1)	: Not available. [Ethylene glycol/ 2.1]
Solubility in water	: Soluble.
Evaporation rate	: Not available.
Volatile	: 52-55%

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 : (Information of components.)

metals	Titanium dioxide
strong oxidizers	Additive
acids, metals, oxidizing materials	Triethanolamine
oxidizing materials, bases, acids, reducing agents,	Ethylene glycol
oxidizing materials	Coloring agent
Hazardous decomposition products	: (Information of components.)
oxides of carbon, water	common decomposition products
oxides of titanium.	Titanium dioxide
corrosive acrolein.	Additive
oxides of nitrogen.	Triethanolamine / Coloring agent

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	>5000mg/kg-Rat >24000mg/kg-Rat 2200mg/kg-Rabbit, 5846mg/kg-Mouse 1650mg/kg-Cat, 4700mg/kg-Rat	Resin / Coloring agent Titanium dioxide Triethanolamine Ethylene glycol
Inhalation LC50	6820mg/m ³ -4H-Rat	Titanium dioxide
Skin LD50	>5000mg/kg-Rabbit >16mL/kg-Rat 9530uL/kg-Rabbit	Resin Triethanolamine Ethylene glycol

Local effects

dehydration	Additive
Irritant:skin, eye	Triethanolamine
Irritant:inhalation, skin, eye	Ethylene glycol

Chronic toxicity and long term toxicity

Repeated or prolonged contact may cause skin sensitization.	Triethanolamine
The substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).	Ethylene glycol

Signs and Symptoms of overexposure and aggravated by exposure

Inhalation	irritation,headache irritation,cough sore throat,difficulty breathing irritation	Resin Titanium dioxide / Ethylene glycol Triethanolamine Coloring agent
Skin contact	irritation sensitization irritation,redness irritation,dry	Resin Additive Triethanolamine Ethylene glycol
Eye contact	irritation irritation,redness irritation,corneal swelling	Resin / Coloring agent Titanium dioxide / Ethylene glycol Triethanolamine
Ingestion	physiologically inert,intestinal burns,gastrointestinal irritation nausea,vomiting gastric disturbances	Titanium dioxide Triethanolamine Ethylene glycol Coloring agent

Specific effects IARC Group 3 Titanium dioxide / Triethanolamine

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) : Triethanolamine / Ethylene glycol

EU labeling

25%<=Xn;R22 : Ethylene glycol

R22: Harmful if swallowed.

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over : Triethanolamine / Ethylene glycol

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 : (April 27, 2012). 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.