

Safety data sheet for chemical products

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: PC-3M Silver [POSCA]

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
 Telex number : 2422337 MBPENC J.

Creation Date : August 24, 2001
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2. COMPOSITION/INFORMATION ON INGREDIENTS

The chemical product is a substance or a preparation : Preparation

Chemical or generic name	CAS No.	TSCA	EINECS No.	Concentration range (wt%)
Water	7732-18-5	Registered	2317912	50- 80
Aluminum paste	7429-90-5	Registered	2310723	10- 30
Resin	Registered	Registered	Polymer	< 10
Ethylene glycol	107-21-1	Registered	2034733	< 10
Petroleum solvents	Registered	Registered	Registered	< 10
Additive	Registered	Registered	Registered	< 10

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

3. HAZARDS IDENTIFICATION

Most important hazards : Not available.

Specific hazards : Information of components.

<Aluminum paste>

MAJOR HEALTH HAZARDS: Causes respiratory tract irritation. May be irritating to skin and eyes. May cause convulsions.

PHYSICAL HAZARDS: Extremely flammable. May catch fire if exposed to air. May form flammable or explosive dust-air mixtures. May react with water.

<Ethylene glycol>

MAJOR HEALTH HAZARDS: respiratory tract irritation, skin irritation, eye irritation, central nervous system depression, nerve damage, kidney damage

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 3.6g]

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.

: 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.)
 acids, combustible materials, oxidizing Aluminum paste
 materials, metals, metal salts, bases,
 metal oxides, halogens, reducing
 agents, halo carbons, peroxides, metal
 oxidizing materials, bases, acids, Ethylene glycol
 reducing agents, metals
 oxidizing materials Petroleum solvents
 strong oxidizers Additive
- 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) 500ppm	Aluminum paste Petroleum solvents
ACGIH	10mg/m ³ TWA (metal particulate) 100mg/m ³ ceiling (particulate)(aerosol) 100ppm	Aluminum paste Ethylene glycol Petroleum solvents
EC	52mg/m ³ (20ppm) TWA(skin), 104mg/m ³ (40ppm) STEL(skin)	Ethylene glycol

Personal protective equipment : Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

[] : Information of components.

- Physical state and form : Middle viscous liquid.
 Color : Silver.
 Odor : Faint odor.
 pH : about 8.6
 Boiling point : Not available. [Water/ 100 C]
 Melting point : <-10 C
 Flash point : Not applicable. [Petroleum solvents/ 40 C]
 Auto ignition temperature : Not applicable. [Petroleum solvents/ 245 C]
 Explosion limits : Not applicable.
 [Lower flammable limit / 1% , Upper flammable limit / 7% <Petroleum solvents>]
 Density : about 1.1 / 25 C
 Vapor density (air=1) : Not available. [Petroleum solvents/ 5.3]
 Solubility in water : Soluble.
 Evaporation rate : Not available.
 Volatile : 74-77%

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.)
acids, combustible materials, oxidizing materials, metals, metal salts, bases, metal oxides, halogens, reducing agents, halo carbons, peroxides, metal carbides	Aluminum paste
oxidizing materials, bases, acids, reducing agents, metals	Ethylene glycol
oxidizing materials	Petroleum solvents
strong oxidizers	Additive
Hazardous decomposition products	: (Information of components.)
oxides of carbon, water	common decomposition products
hydrocarbon gases, oxides of aluminum.	Aluminum paste
various organic fragments.	Petroleum solvents

11. TOXICOLOGICAL INFORMATION

(Information of components)

Acute toxicity

Ingestion LD50	>5000mg/kg-Rat 1650mg/kg-Cat, 4700mg/kg-Rat 28000mg/kg-Rat	Aluminum paste Ethylene glycol Petroleum solvents
Inhalation LC50	Not available.	
Skin LD50	9530uL/kg-Rabbit 28000m g /kg-Rabbit	Ethylene glycol Petroleum solvents

Local effects	Irritant:inhalation Irritant:inhalation, skin, eye	Aluminum paste Ethylene glycol
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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
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,cough irritation,nausea	Aluminum paste / Ethylene glycol Petroleum solvents
Skin contact	irritation,itching irritation,dry irritation,headache irritation	Aluminum paste Ethylene glycol Petroleum solvents Additive

Eye contact	irritation,eye damage irritation,redness irritation	Aluminum paste Ethylene glycol Additive
Ingestion	irritation,digestive disorders nausea,vomiting irritation,nausea	Aluminum paste Ethylene glycol Petroleum solvents
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 : 960820

15. REGULATORY INFORMATION

Regulations (Information of components)

Hazardous chemicals (OSHA HCS) : Aluminum paste / Ethylene glycol

EU labeling

F;R15-17

25%<=Xn;R22

10%<=Xn;R65

Aluminum paste

Ethylene glycol

Petroleum solvents

CANADA Hazardous Products Act - Ingredient Disclosure List

1%over

Aluminum paste / Ethylene glycol

Hazard and safety information

Products are manufactured in accordance with European regulation EN71 part 3

Products are manufactured in accordance with ELV directive of EU.

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 : (March 18, 2009). 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.