

No. 9 Haikou Road Huaian, Jiangsu, China Tel: 0086-517-83797527 Fax: 0086-517-83797529

According to ECRegulation 1907/2006 (REACH), 1272/2008 (CLP) & 453/2010 Date of issue : 07.09.2011 – Version : EU_EN/2 – Print date : February 2014

Material Safety Data Sheet

1.INDETIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Indentifier

| Trade name | : Metasilver KT-89520 | |
|---|-----------------------|--|
| Relevant identified uses of the substance | | |
| or mixture and uses advised against | : colouring agent | |
| Uses advised against | : not known | |
| Details of the supplier of the safety | | |
| data sheet | | |
| Manufacturer: Kolortek Co., Ltd. | | |
| 2. HAZARD IDENTIFICATION | | |

Classification of the substance or mixture

| According to Regulation (EC) No. 1272/2008(CLP) | : not classified |
|--|------------------|
| According to Directive 67/548/EEC & | |
| Directive 1999/45/EC | : not classified |
| Additional information | : not available |
| Label elements | |
| GHS label elements | : not applicable |
| Hazard pictogram(s) | : not applicable |
| Signal word(s) | : not applicable |
| Hazard statement(s) | : not applicable |
| Precautionary statement(s) | : not applicable |
| Other hazards | : not known |

3.COMPOSITION/INFORMATION ON INGREDIENTS

Chemical family: calcium-aluminum borosilicate-silver. Contains no hazardous ingredients

| Commen chemical name | CAS No. | EINECS | Colour | Chemical | Hazard classification |
|-------------------------------|------------|-----------|--------|-------------|------------------------|
| | | No. | Index | composition | According to directive |
| | | | | | 67/548/EEC & Directive |
| | | | | | 1999/45/EC, Regulation |
| | | | | | (EC) |
| | | | | | No. 1272/2008(CLP) |
| Calcium-aluminum borosilicate | 65997-17-3 | 266-046-0 | | 88-97 | Not classified |
| Silver | 7440-22-4 | 231-131-3 | 77820 | 3-12 | Not classified |



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| Description of first aid measures | |
|---|---|
| Inhalation: in case of accident by inhalation | : remove causality to fresh air and keep at rest |
| Skin contact | : wash affected skin with plenty of water |
| Eye contact | : if contact with eyes directly, flush with gently flowing fresh wate |
| | thoroughly; If eye irritation persists, get medical advice/attention |
| Ingestion | : if ingested, wash out mouth with water, drink milk or egg white |
| Notes to physician | : no special measures are required |
| Most important systems and effects, | |
| Both acute and delayed | |
| Actue | : none |
| Long term (repeated) | : may cause irritation to the respiratory system. Cough. Increased |
| | difficulty in breathing |
| Indication of immediate medical attention a | and special treatment needed |
| Recommended | :a. Chest XRay |
| | b. Lung functionality tests |
| 5. FIREFIGHTING MEASURES | |
| | |
| Extinguishing media | |
| uitable extinguishing media : e | extinguish with waterspray, foam or dry chemical |
| nsuitable extinguishing media : o | carbon dioxide |

Special hazards arising from the substance or mixture

| Thermal hazards | : noncombustible. None anticipated |
|-------------------------|--|
| Advice for firefighters | : fire fighters should wear complete protective clothing including self- |
| | contained breathing apparatus |

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emgergency procedures

| Personal precautions | : do not breathe dust | |
|-------------------------------|---|--|
| Personal protection equipment | : wear appropriate personal protective equipment, avoid direct contact | |
| In case of emergency | : a self contained breathing apparatus and suitable protective clothing should be | |
| | worn in fire conditions | |
| Environmental precautions | : do not allow to enter drains, sewers or watercourses | |
| Methods and material for | | |
| Containment and cleaning up | : collect mechanically and dispose of according to Section 13. Use vacuum | |
| | equipment for collecting spilt materials, where practicable | |
| Reference to other sections | : see sections 8 and 13 | |



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Precautions for safe handling : avoid breathing dust Conditions for safe storage including any incompatibilities : keep container in a wellventilated place Specific end use(s) : not known

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| Control parameters | : provide adequate ventilation when using the material and follow the principles of good |
|----------------------------|--|
| | occupational hygiene to control personal exposures |
| Exposure limit values | : not known |
| Exposure controls | |
| Appropriate engineering of | controls :provide adequate ventilation to ensure that the occupational exposure limit is not |
| | exceeded. Isolate the dispersive process step away from other operations. This can be |
| | achieved by local exhaust ventilation or general ventilation |
| Individual protections m | neasures, such as personal protective equipment(PPE) |
| Hand/eye/face protection | : wear gloves, eye protection and an approved dust mask if dust is generated during |
| | handling. Goggles giving complete protection to eyes. Dust mask covering nose and mouth |
| Skin protection | apron or other light protective clothing, boots and plastic or synthetic rubber gloves: |
| Respiratory protection | : dust mask covering nose and mouth |
| Thermal hazards | : none |
| Environmental exposure of | controls : avoid dust generation. Avoid accumulation of dust |

9. PHYSICAL AND CHEMICAL PROPERTIES

| Form | : powder | |
|------------------------------|---------------------------|--|
| Colour | : Metasilver | |
| Odour | : odourless | |
| рН | : 6.0-9.0 (4% H2O) | |
| Boiling point, ° C | : not applicable | |
| Melting point, ° C | : decomposes | |
| Freezing point, ° C | : not applicable | |
| Density | : 3.1-3.5 kg/L | |
| Bulk Density | : 12-18g/100g | |
| Loss on Drying | : < 0.5 (105 ℃) | |
| Vapour pressure | : not applicable | |
| Solubility (in water) | : insoluble | |
| Particle size | : 300-3000 µm | |
| 10. STABILITY AND REACTIVITY | | |
| | | |

: there may be violent or incandescent reaction of the product with metals at high



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temperatures (e.g., aluminium; calcium; magnesium; potassium; sodium; zinc;

| lithium) | |
|------------------------------------|--|
| Chemical stability | : stable under normal conditions |
| Possibility of hazardous reactions | : none |
| Conditions to avoid | : high temperature |
| Incompatible materials | : strongly acidic, strongly alkaline, oxidizing agents |
| Decomposition products | : no information available |

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

This inorganic pigment in general is considered to be practically nontoxic.

| Acute toxicity | : not available |
|-----------------|-----------------|
| Carcinogenicity | : not available |

| Toxicity | : no data | | | |
|---|--|--|--|--|
| Persistence and degradability | : insoluble in water. This product is predicted not to degrade in soil and | | | |
| water | | | | |
| Bioaccumulative potentiall | : no data | | | |
| Mobility in soil | : not applicable | | | |
| Results of PBT and vPvB assessment : : not applicable | | | | |
| Other adverse effects : | : not known | | | |
| | | | | |

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

: dispose of contents in accordance with local, state or national legislation

14. TRANSPORT INFORMATION

Not classed as dangerous for transport.

| International Transport Regulations | ADR/RID | ADN | IMDG | ICAO/IATA |
|-------------------------------------|----------------|----------------|----------------|----------------|
| UN number | Not applicable | Not applicable | Not applicable | Not applicable |
| Proper shipping name | Not applicable | Not applicable | Not applicable | Not applicable |
| Transport hazard class(es) | Not applicable | Not applicable | Not applicable | Not applicable |
| Packing group | Not applicable | Not applicable | Not applicable | Not applicable |
| Environmental hazards | None | None | None | None |
| Special precautions for user | None | None | None | None |



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| Transport in bulk according to Annex II of MARPOL73/78 and The IBC Code | Not applicable | Not applicable | Not applicable | Not applicable | |
|---|----------------------------|----------------|----------------|----------------|--|
| Hazard label(s) | Not applicable | | | | |
| Additional information | Custom tariff No. 32061900 | | | | |

15.REGULATORY INFORMATION

According to Directive 67/548/EEC &

Directive 1999/45/EC

Safety, health and environmental

regulations/legislations specific for the

substance or mixture

:not available

: not classified as dangerous for supply/use

16. OTHER INFORMATION

Annex to the extended Safety Data Sheet (eSDS)

- ADR : European Agreement concerning international carriage of Dangerous goods by Road
- CAS : Chemical Abstracts Service
- EC : European Community
- ICAO : International Civil Aviation Organization
- IMDG : International Maritime Dangerous Goods
- IATA : International Air Transport Association

DATA SOURCES

NPIRI Raw Material Handbook, Volume 4, Pigments, Second Edition, 2001

Book on "Safe Handling of Pigments", European Edition 1995, BCMA, EPSOM ETAD, VdMi

HSDB

NIOSH ICSC

Hazardous Substance Fact Sheet, New Jersey Department of Health and Senior Service

We have described our product concerning possible safety requirements by the abovementioned information given to the best of our knowledge and experience. All data given are never meant to guarantee any quality description nor product properties