

1 Identification

- **Product identifier**
- **Trade name:** 71-50-xx; xx= A Silver, B Gold, C Blue, D Green, E1 Purple, E2 Purple, F Red, G Bronze, H Black, I Copper and J Lime green
- **Relevant identified uses of the substance or mixture and uses advised against**
Currently no such applications are identified
- **Application of the substance / the mixture** Waterbased Metallic Marker Ink
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SHANGHAI DOKUMENTAL INK Co. Ltd.
No.18-3, Maojia Road
Luodian Town, Baoshan District
Shanghai 201908 , P.R. China
Tel.: 86-21-66864551 / 66864542
- **Information department:**
Ms. Cindy Song
Email: cindy.song@dokumental.cn
- **Emergency telephone number:**
Mr. Bruce Gindelberger
Tel.: mobile +86-13917914495
Email: bruce.gindelberger@dokumental.cn

2 Hazard(s) identification

- **Classification of the substance or mixture**
The product is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** none
- **Hazard pictograms** none
- **Signal word** none
- **Hazard statements** none
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 1
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 0
Fire = 1
Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
Mixture of the following substances, containing non-hazardous substances and colouring agents.
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7429-90-5	aluminium powder (stabilised)	2.5-10%
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- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.

(Contd. on page 2)
US

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(Contd. of page 1)

- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
No special measures required.
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 3)

US

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(Contd. of page 2)

• Eye protection: Goggles recommended during refilling.

9 Physical and chemical properties

• Information on basic physical and chemical properties	
• General Information	
• Appearance:	
Form:	Fluid
Color:	According to product specification
• Odor:	Product specific
• Odor threshold:	Not determined.
• Important information on protection of health and environment, and on safety.	
• pH-value at 20 °C (68 °F):	7.0 - 9.0
• Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
• Flash point:	101 °C (214 °F)
• Flammability (solid, gaseous):	Not applicable.
• Ignition temperature:	371 °C (700 °F)
• Decomposition temperature:	Not determined.
• Auto igniting:	Product is not selfigniting.
• Danger of explosion:	Not determined.
• Explosion limits:	
Lower:	2.6 Vol %
Upper:	12.6 Vol %
• Vapor pressure at 20 °C (68 °F):	0.1 hPa
• Density at 20 °C (68 °F):	1.04 - 1.12 g/cm ³ (8.679 - 9.346 lbs/gal)
• Relative density	Not determined.
• Vapor density	Not determined.
• Evaporation rate	Not determined.
• Solubility in / Miscibility with	
Water:	Fully miscible.
• Partition coefficient (n-octanol/water):	Not determined.
• Viscosity:	
Dynamic at 20 °C (68 °F):	8 - 9.5 mPas
Kinematic:	Not determined.
• Solvent content:	
Organic solvents:	30.7 %
Water:	39.1 %
Solids content:	18.4 %
• Other information	The physical and chemical properties given in Section 9.1 are rough data only, which are partially derived from the component's data of the mixture. These data are no binding product specifications.

10 Stability and reactivity

- Reactivity No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

(Contd. on page 4)

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(Contd. of page 3)

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

• Carcinogenic categories

- IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

- NTP (National Toxicology Program)

None of the ingredients is listed.

- OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation: Smaller quantities can be disposed of with household waste.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- UN-Number
- DOT, ADR, ADN, IMDG, IATA not applicable
- UN proper shipping name
- DOT, ADR, ADN, IMDG, IATA not applicable
- Transport hazard class(es)
- DOT, ADR, ADN, IMDG, IATA
- Class not applicable
- Packing group
- DOT, ADR, IMDG, IATA not applicable
- Environmental hazards:
- Marine pollutant: No
- Special precautions for user Not applicable.

(Contd. on page 5)
US

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(Contd. of page 4)

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
- UN "Model Regulation": not applicable

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

• Section 355 (extremely hazardous substances):
None of the ingredient is listed.

• Section 313 (Specific toxic chemical listings):
None of the ingredients is listed.

• TSCA (Toxic Substances Control Act):
All ingredients are listed.

• Proposition 65

• Chemicals known to cause cancer:
None of the ingredients is listed.

• Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

• Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

• Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

• DSL/NDSL (Canada) All ingredients are listed

• Cancerogenity categories

• EPA (Environmental Protection Agency)
None of the ingredients is listed.

• TLV (Threshold Limit Value established by ACGIH)
None of the ingredients is listed.

• MAK (German Maximum Workplace Concentration)
None of the ingredients is listed.

• NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

- GHS label elements none
- Hazard pictograms none
- Signal word none
- Hazard statements none

• National regulations:

• Technical instructions (air):

Class	Share in %
NK	25-50

- Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Date of preparation / last revision 03/21/2016 / -
- Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Civil Aviation Organisation
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative

(Contd. on page 6)

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(Contd. of page 5)

NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

• * Data compared to the previous version altered.

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