

# MATERIAL SAFETY DATA SHEET

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## SECTION 1. Identification

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1.1 Product name : Paint Marker

1.2 Color : white, black, red, yellow, blue, green, violet, pink, orange, gold, silver

1.3 Supplier's details

- Name : KANGNAM KPI Co., Ltd.

- Address : 325-1, 1Ga, Palbok-dong, Deokjin-ku, Cheonju City, Chonbuk, Korea

- Phone number : 82-63-210-4114

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## SECTION 2. Hazard identification

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2.1 Classification of the substance or mixture

Flammable liquids category 3

Acute toxicity, Dermal : category 4

Acute toxicity, Inhalation : category 4

Skin corrosion/irritation : category 2

Serious eye damage/eye irritation : category 2

Specific target organ toxicity-Single exposure : category 3

Specific target organ toxicity-Repeated exposure category 1

2.2 Label elements



Hazard pictograms

Signal word : Danger

Hazard statements H226 Flammable liquid and vapour

H312 Harmful in contact with skin

H315 Causes skin irritation

H319 Causes serious eye irritation

H332 Harmful if inhaled

H336 May cause drowsiness or dizziness

H372 Causes damage to organs through prolonged or repeated exposure

Precautionary statements :

Prevention P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking

P233 Keep container tightly closed

P242 Use only non-sparking tools

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash hand thoroughly after handling.

P270 Do not eat, drink or smoke when using this product

P271 Use only outdoors or in a well-ventilated area

P281 Use personal protective equipment as required

Response P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P308+P313 IF exposed or concerned: Get medical advice/attention.

P314 Get medical advice/attention if you feel unwell.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

Storage P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal P501 Dispose of contents/container to in accordance with local/regional/national/international regulation

2.3 Other hazards which do not result in classification : No data available

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### SECTION 3. Composition/information on ingredients

Ingredient name	CAS No.	Wt %
Dimethylbenzen	1330-20-7	30 ~ 50
n-Butanol	71-36-3	5 ~ 10
Titanium Dioxide	13463-67-7	10 ~ 30
Dyestuff	-	1 ~ 10
Resins	Trade secret	10 ~ 30
Pigment	-	5 ~ 20

\* The exact percentage (concentration) of composition has been withheld as a trade secret.

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### SECTION 4. First-aid measures

#### 4.1 Description of first aid measures

Inhalation : Move exposed person to fresh air. Get medical attention.

If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : Wash out mouth with water. Move exposed person to fresh air. Get medical attention.

If material has been swallowed and the exposed person is conscious, give small quantities of water to drink.

Stop if the exposed person feels sick as vomiting may be dangerous.

If unconscious, place in recovery position and get medical attention immediately. Never give anything by mouth to an unconscious person.

Skin : Flush contaminated skin with plenty of water.

Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Eye : Immediately flush eyes with plenty of water. Get medical attention if irritation occurs.

Check for and remove any contact lenses. Continue to rinse for at least 20 minutes.

4.2 Most important symptoms/effects, acute and delayed : in section 11

4.3 Indication of immediate medical attention and special treatment needed, if necessary : No data available

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### SECTION 5. Fire-fighting measures

5.1 Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

5.2 Specific hazards arising from the chemical :

In a fire or if heated, a pressure increase will occur and the container may burst

Decomposition products may include the following materials – carbon oxides

5.3 Special protective actions for fire-fighters :

Fire-fighters should wear appropriate protective equipment and self contained breathing apparatus

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## **SECTION 6. Accidental release measures**

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6.1 Personal precautions, protective equipment and emergency procedures :

Eliminate all ignition sources. Stop leak if safe to do so. Avoid breathing vapour or mist.

6.2 Environmental precautions :

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

6.3 Methods and materials for containment and cleaning up :

Small spill – Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

Large spill – Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas.

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## **SECTION 7. Handling and storage**

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7.1 Precautions for safe handling : Do not breathe vapour or mist. Avoid contact with eyes, skin and clothing.

7.2 Conditions for safe storage, including any incompatibilities :

Keep container tightly closed when not in use. Keep in the original container. Store in cool place

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## **SECTION 8. Exposure controls/personal protection**

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8.1 Control parameters (Exposure limit values in the air of the work place or biological limit value) :

TWA 100ppm (xylene), TWA 10ppm (titanium dioxide)

8.2 Appropriate engineering controls : Use with adequate ventilation

8.3 Individual protection measures, such as personal protective equipment (PPE)

- Eye protection : Safety glasses
  - Skin protection : Handle with gloves
  - Body protection : Impervious clothing
  - Respiratory protection : full-face respirator
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## **SECTION 9. Physical and chemical properties**

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9.1 Appearance (physical state, colour etc) : Color liquid

9.2 Odour : Xylene like

9.3 Odour threshold : No data available

9.4 pH : No data available

9.5 Melting point/freezing point : No data available

9.6 Boiling point and boiling range : 110 ~ 125 °C

9.7 Flash point : 60 °C

9.8 Evaporation rate : No data available

9.9 Flammability (solid, gas) : No data available

9.10 Upper/lower flammability or explosive limits : No data available

9.11 Vapour pressure : No data available

9.12 Vapour density : No data available

9.13 Relative density : 0.9 ~ 1.2

9.14 Solubility (ies) : insoluble

9.15 Partition coefficient n-octanol/water : No data available

9.16 Auto-ignition temperature : > 400 °C

9.17 Decomposition temperature : No data available

9.18 Viscosity : 10 ~ 50 (20°C, cps)

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## **SECTION 10. Stability and reactivity**

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10.1 Reactivity : This material is considered to be non reactive under normal use conditions

Highly flammable liquid and vapour, In a fire or if heated, a pressure increase will occur and the container may burst

10.2 Chemical stability : stable under normal use conditions

10.3 Possibility of hazardous reactions : No data available

10.4 Conditions to avoid : heat, sparks, open flames, hot surfaces. – No smoking

10.5 Incompatible materials : No data available

10.6 Hazardous decomposition products :

Under normal conditions of storage and use, hazardous decomposition products should not be produced

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## **SECTION 11. Toxicological information**

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11.1 Information on the likely routes of exposure : No data available

11.2 Information on toxicological effects

Acute toxicity (Oral) : LD50 3500mg/kg Rat (xylene), LD50 >10000mg/kg Rat (titanium dioxide)

Acute toxicity (Dermal) : LD50 ≥4350 mg/kg Rabbit (xylene), LD50 >10000mg/kg Rabbit (titanium dioxide)

Acute toxicity (Inhalation) : LC 28mg/l 4hr Rat (xylene), LC50 6.82mg/l 4hr Rat (titanium dioxide)

Skin corrosion/irritation : mild irritant

Serious eye damage/irritation : mild irritant

Respiratory or skin sensitization : No data available

Germ cell mutagenicity : negative

Carcinogenicity : No data available

Reproductive toxicity : No data available

Specific target organ toxicity-single exposure : May cause drowsiness or dizziness

Specific target organ toxicity-repeated exposure : nose irritation, eye irritation, chronic headaches, dyspnoea

Aspiration hazard : No data available

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## **SECTION 12. Ecological information**

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12.1 Toxicity : fish LC50 13.4mg/l 96hr (xylene)

12.2 Persistence and degradability : No data available

12.3 Bioaccumulative potential : BCF 50~58 (xylene)

12.4 Mobility in soil : log Kow 3.12 ~ 3.2 (xylene)

12.5 Other adverse effects : No data available

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## **SECTION 13. Disposal considerations**

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13.1 Disposal methods

Dispose of contents/container to in accordance with local/regional/national/international regulation

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## **SECTION 14. Transport information**

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14.1 UN Number : 1263

14.2 UN Proper Shipping Name : Paint Marker.

14.3 Transport hazard classes : 3

14.4 Packing group, if applicable : 2

14.5 Environmental hazards : None

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14.6 Special precautions for user : None

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**SECTION 15. Regulatory information**

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15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture :  
No data available

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**SECTION 16. Other information**

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16.1 Reference : Korea occupational safety and health agency (KOSHA)  
National Chemicals Information System (NCIS)  
Korea dangerous material inventory management system  
HSDB, IUCLID, ECB-ESIS, ECOTOX, IATC, ACGIH, ICSC, SIDS, SIAM

16.2 Number of revision and Date of revision : 2018-04-19 (ver. 4)