# Material Safety Data Sheet

## SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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|---|---|
| COMPANY NAME | Samsung Huetone., Co., Ltd. |
| COMPANY ADDRESS | 63, 7BEON-GIL, HWANGGEUM 3-RO,<br>YANGCHON-EUP, GIMPO-Si, GYEONGGI-DO, SOUTH KOREA<br>Tel. +82-31-944-4494 Fax. +82-31-987-3362 |
| PRODUCT NAME | K HARDENER |
| CHARACTERISTICS | High viscosity, mild odor |
| PRODUCT USAGE | Screen printing Hardener |
| CREATION DATE | 2020-01-28 |

## SECTION 2 – HAZARDS IDENTIFICATION SUMMARY

**IF IN EYES**: May cause eye irritation / inflammation

**IF ON SKIN**: May cause skin irritation or inflammation

**IF INHALED:** May cause dizziness. May cause headache if inhaled heavily.

**IF SWALLOWED**: May cause vomit and paralysis

**OTHER CHRONIC SYMPTOMS:** No officially reported symptoms

HAZARD COMMUNICATION SIGN(S):



Hazards

H224 – Extremely flammable liquid and vapour

H300 – Fatal if swallowed

H312 – Harmful in contact with skin

H331 – Toxic if inhaled

H411 – Toxic to aquatic life with long lasting effects

Preventions:

P102 – Keep out of reach of children

P201 – Obtain special instructions before use

P210 – Keep away from heat/sparks/open flames/ hot surface – No smoking

P260 – Do not breathe dust/fumes/gas/mist/vapours/spray

P262 – Do not get in eyes, on skin, or on clothing

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

P271 - Use only outdoors or in a well-ventilated area

P273 – Avoid release to the environment

P280 – Wear protective gloves/protective clothing/eye protection/face protection

Response:

P301+P310 - IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician

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

P312 – Call a POISON CENTRE or doctor/physician if you feel unwell

Storage: P402+P233 – Store in a well-ventilated place. Keep container tightly closed

P410+P403 – Protect from sunlight. Store in a well-ventilated place

Disposal: P501 – All disposal practices must be in accordance with local, national and international regulations.

## SECTION 3 – COMPOSITION, INFORMATION OF INGREDIENTS

| INGREDIENT | CAS NO. | WEIGHT PERCENT |
|---|---|---|
| Urethane Resin | 61789-63-7 | 70 ~ 80 |
| Ethyl Acetate | 141-78-6 | 25 ~ 30 |
| Xylene Di Isocyanate | 3634-83-1 | 1 ~ 5 |
| 2,6-Di-buthyl-p-cresol | 128-37-0 | 1 ~ 5 |
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## SECTION 4 – FIRST AID MEASURES

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING:**Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF INHALED:** Move person to fresh air, if person is not breathing, call 119 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

**IN CASE OF FIRE:** Use CO2/dry chemical or foam for extinction. Water can be used to cool and protect exposed material

**ADDITIONAL INFORMATION**: Note to physician: treat symptomatically

## SECTION 5 – FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:** Use CO2, foam, dry chemical, dirt, sand, or water spray (Avoid inflammable materials)

**FIRE AND EXPLOSION HAZARD:** Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.

**FIRE FIGHTING INSTRUCTIONS:** Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff. Minimize use of water to prevent environmental contamination.

**FIRE FIGHTING EQUIPMENT:** Self-contained breathing apparatus with full facepiece.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

**PROTECTIVE MEASURESAND EQUIPMENT:**
Whenever possible, one must wear protective clothing which is resistant to all the potentially hazardous chemicals to which one may be exposed while performing a particular task. Avoid contact with skin, eyes or clothing. Eliminate all sources of heat, sparks, pilot lights, static electricity and open flames.

**IN CASE OF SPILLS OR LEAKS:** Clean up spills immediately. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

**SMALL SPILL:** Absorb small spills on sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal.

**LARGE SPILL:** Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify, and scrape up for disposal. After removal, clean contaminated area thoroughly with water. Pick up wash liquid with additional absorbent and place in a disposable container.

This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Minimize use of water to prevent environmental contamination

## SECTION 7 – HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN!

**HANDLING:** Use only in a well-ventilated area. Minimize dust generation and accumulation. Stir well and test before using.

**STORAGE:** Keep container tightly closed, and store in a cool, well-ventilated place that is locked. Keep container closed when not in use. Keep away from food, feed and drinking water. Store in a well ventilated dry place away from heat.

Store above 32 F.

Wear proper safety equipment when mixing, loading or otherwise handling concentrate.

## SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

**EXPOSURE LIMITS**

| Chemical Name | MOEL | | ACGIH | |
|---|---|---|---|---|
| | TWA | STEL | TWA | STEL |
| Urethane Resin | | | | |
| Ethyl Acetate | 400ppm | | | |
| Xylene Di Isocyanate | | | | |
| 2,6-Di-buthyl-p-cresol | 2mg/$m^3$ | | 2mg/$m^3$ | |
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**ENGINEERING CONTROLS:** Proper ventilation is required when handling or using this product. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**PERSONAL PROTECTIVE EQUIPMENT:**

EYE PROTECTION - Safety goggles or glasses with side shields.

CLOTHING - Long-sleeved shirt and long pants, Chemical-resistant footwear plus socks

GLOVES - Chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride (PVC), viton

RESPIRATOR – Not required when handled under normal conditions. When handling in enclosed areas with inadequate ventilation, use a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C)

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** liquid
**Odor:** Moderate paint-like odor
**pH:** No data
**Melting Point:** No data
**Flash point:** **-2.5**°C
**Boiling Point:** No data
**Fire Point:** No data °C
**Flammability Limits:** No data
**Vapor Pressure:** No data
**Vapor Density:** No data
**Density:** No data
**Solubility:** No data
**Partition Coefficient:** No data

**Auto-Ignition Temperature:** No data
**Decomposition Temperature:** No data

## SECTION 10 – STABILITY AND REACTIVITY

**STABILITY**: Material is normally stable at moderately elevated temperatures and pressures.
**DECOMPOSITION TEMPERATURE** : Not determined.
**INCOMPATIBILITIES:** Strong acids. Alkalis. Strong oxidizing agents. Halogens and halogenated compounds. Aluminum
**POLYMERIZATION**: Will not occur.
**THERMAL DECOMPOSITION**: Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion. Under combustion conditions, oxides of the following elements will form: phosphorus.
**CONDITIONS TO AVOID**: Do not expose to excessive heat, ignition sources, or oxidizing materials. Elevated temperatures. Exposure to air. Contact with strong oxidizers. Acids.

## SECTION 11 – TOXOLOGICAL INFORMATION

| Chemical Name | Oral LD50 | Skin LD50 | Inhalation LD50 |
|---|---|---|---|
| Urethane Resin | | | |
| Ethyl Acetate | 5620mg/kg | 18000mg/kg | 100mg/l |
| Xylene Di Isocyanate | 5350mg/kg | | |
| 2,6-Di-buthyl-p-cresol | 1559mg/kg | 2000mg/kg | |
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- No experimental data of the product available.
- Respiratory exposure to the solvents lead to coughing, headache, dizziness, sickness, vomiting and drowsiness.
- Long term exposure may lead to effects on the nervous system.
- Frequent or continuous skin contact may cause irritation and may lead to dermatitis.

## SECTION 12 – ECOLOGICAL INFORMATION

No experimental data of the product available.

## SECTION 13 – DISPOSAL CONSIDERATION

Do not contaminate water, food or feed by storage or disposal.

**WASTE:** Dispose of in accordance with applicable Federal, state and local laws and regulations.

**RECOMMENDATION**: Controlled incineration is recommended.

**REFILL**: Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Do not reuse this container for any other purpose.

## SECTION 14 – TRANSPORT INFORMATION

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| 1) UN NO. | 1263 |
| 2) UN CLASS | 3 |
| 3) PACKING GROUP | II |

## SECTION 15 – REGULATORY INFORMATION

Occupational Safety and Health Act: Clause 41

Toxic Chemicals Control Act: N/A

Safety Control of Dangerous Substances Act: Type 4, Type 2(Petroleum)

Enforcement Decree of the Wastes Control Act: Applicable to designated waste according to the Act

Other domestic or international regulations: No records

## SECTION 16 – OTHER INFORMATION

**DISCLAIMER:** The information presented herein is based on available data from reliable sources and is correct to the best of Samsung Huetone's knowledge. Samsung Huetone makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions.

**REVISED DATE:** May, 2019