

MATERIAL SAFETY DATA SHEET

[1.CHEMICAL PRODUCT AND COMPANY IDENTIFICATION]

PRODUCT NAME : INK-M55

COMPANY : Samsung Electronics Company

416, Maetan-3Dong, Yeongtong-Gu, Suwon-City, Gyeonggi-Do, Korea 443-742

TELEPHONE NO. : 82-31-200-8311 EMERGENCY TELEPHONE NO. : 82-31-200-8311

[2.COMPOSITION / INFORMATION ON INGERDIENTS]

COMPONENT	PERCENT (wt.)	CAS#	OSHA PEL	ACGIH TLV
Carbon Black	1-6	1333-86-4	3.5 mg/m3 (1)	3.5 mg/m3 (1)
Acrylic Terpolymer	0.1-2	(2)	(3)	(3)
Water Soluble Organic Solvents	10-20	(2)	(3)	(3)
Hydroxylated Alkane	1-10	(2)(4)	(3)	(3)
Acrylic Resin	0.1-5	(2)	(3)	(3)
Water	>55	7732-18-5	(3)	(3)

Notes: (1) Total dust (measured as carbon black).

(2) Trade secret of patented molecule.

(3) Specific workplace exposure limits have not been established.

(4) New Jersey Trade Secret Registration Number (NJTSRN) 80100451-5004.

[3.HAZARDS IDENTIFICATION]

The following information is based on testing of the ink and on the characteristics of component chemicals:

Primary Routes of Entry: Skin contact, ingestion of ink.

Signs and Symptoms of Exposure: Ink stains on skin or mucus membranes (mouth, eyes &

nose) may cause discomfort.

Medical Conditions Aggravated by Exposure: None known at intended levels of use.

POTENTIAL HEALTH EFFECTS:

Inhalation:	Short Term Exposure	 If ink mist is inhaled, respiratory tract irritation
		may occur.
	Long Term Exposure	 No adverse chronic effects expected.
Skin Contact:	Short Term Exposure	 Ink may be slightly irritating to the skin.
	Long Term Exposure	 No adverse chronic effects expected. Not a
		dermal sensitizer.
Eye Contact:	Short Term Exposure	 Not an eye irritant.
	Long Term Exposure	 No adverse chronic effects expected.
Ingestion:	Short Term Exposure	 Low oral toxicity.
	Long Term Exposure	 No adverse chronic effects known or expected,
		but based on component characteristics,
		gastrointestinal effects, liver and kidney
		toxicity, and CNS effects are possible if large
		quantities of ink are repeatedly ingested.



[4.FIRST-AID MEASURES]

Inhalation: Remove to fresh air. Seek medical attention if breathing becomes difficult. **Skin Contact:** Remove contaminated clothing. Flush affected area with water. Seek medical attention if irritation develops and persists.

Eye Contact: Flush immediately with plenty of water. Remove contact lenses and continue flushing for at least 15 minutes. Seek medical attention if irritation develops and persists. **Ingestion:** Immediately rinse mouth out with plenty of water. If within 30 minutes after ingestion, give victim a small glass of water or milk (NEVER give anything by mouth to an unconscious person). Contact physician or poison center. Do not induce vomiting unless instructed to do so by a physician or poison center.

[5.FIRE-FIGHTING MEASUARES]

Flash Point: Not applicable. Autoignition: Not applicable.

Flammability Limits (%): Not applicable.

Extinguishing Media: Water, foam, carbon dioxide or dry chemical.

Firefighting: Fire may produce small amounts of hazardous decomposition products such as carbon dioxide, carbon monoxide, and unidentified organics. NIOSH approved self-contained

breathing apparatus may be required if a large volume of ink is involved.

Fire and Explosion Hazard: No unusual fire or explosion hazards are known for this product. **Hazardous Combustion Products:** Oxides of carbon, organic acids, low molecular weight

organics.

[6.ACCIDENTAL RELEASE MEASURES]

Occupational Spill: Absorb small ink spills with cloth or paper towels or other suitable material. Place in a container for disposal. For large spills, dike around spill with absorbent material. Transfer contaminated diking material to separate, suitable containers for recovery or disposal. Ventilate area and wash spill site after material pickup is complete. Unless specifically permitted, keep waste out of sewers, watershed and waterways.\

[7.HANDLING AND STORAGE]

STORE IN COOL, DRY PLACE

[8.EXPOSURE CONTROLS / PERSONAL PROTECTION]

Ventilation: Mechanical room ventilation.

Eye Protection: None needed for intended use in printer.

Protective Clothing: None needed for intended use in printer.

Gloves: None needed for intended use in printer.

[9.PHYSICAL AND CHEMICAL PROPERTIES]

Description: Black liquid with faint odor. Freezing Point: Approx.-12 to -150C

Pressurized: No pH: 7.0-8.5

Water Solubility: Fully Miscible Percent Volatile: Approx. 18.7

Evaporation Rate (Butylacetate=1): Approx. 3.5 Specific Gravity: Approx. 1.0 mg/l

Vapor Density (Air=1): Approx. 1.6



[10.REACTIVITY AND STABILITY]

Conditions to Avoid: None known. Incompatibilities: None known.

Hazardous Decomposition: Oxides of carbon, acid gases, low molecular weight organics.

Polymerization: This product will not polymerize.

[11.TOXICOLOGICAL INFORMATION]

Acute Toxicity: Not expected to be acutely toxic; LD50 (oral, rat) expected to be >2000 mg/kg. **Chronic Toxicity:** Not expected to be chronically toxic based on component information, volume, concentration, and intended use. Pure carbon black, a minor component of this ink, has been listed by IARC as group 2B (possible carcinogen). This classification is based on rat "lung particulate overload" studies performed with airborne particulate carbon black. Ink is not listed by **IARC, NTP**, or **OSHA**.

[12.ECOLOGICAL INFORMATION]

No data available.

[13.DISPOSAL CONSIDERATIONS]

This product is not a listed or hazardous waste in accordance with Federal Regulation 40 CFR Part 261. If discarded, this product would not be a hazardous waste either by listing or by characteristic. However, it is the responsibility of the product user to determine at the time of disposal whether a material has been contaminated and should be classified as a hazardous waste. In accordance with RCRA 40 CFR Sections 264.314 and 265.314, the placement of any liquid in landfills is prohibited. Disposal is subject to local, state and federal regulations.

[14.TRANSPORTATION INFORMATION]

DOT PROPER SHIPPING NAME: Not regulated as hazardous material.

[15.REGULATORY INFORMATION]

All ingredients are registered under the **Toxic Substances Control Act (TSCA)** or under polymer exemption.

All ingredients are exempt, registered or considered registered (polymers) under the **European Inventory of Existing Commercial Chemical Substances (EINECS/ELINCS).**

Preparation not classified as dangerous (EU Directives 67/548/EEC; 1999/45/EC).

All ingredients are listed on or are considered polymers under the **Canadian Domestic Substances List (DSL) or Non Domestic Substances List (NDSL).**

None of the product ingredients are listed as **Emergency Planning and Community Right-to-Know Act (EPCRA) - Section 302: Extremely Hazardous Substances (EHS)**.

None of the product components are present above the minimum quantities of listed chemicals in **EPCRA Section 313 Supplier Notification.**

This product contains no known materials at levels which the State of California has found to cause cancer, birth defects or other reproductive harm - California Proposition 65.



[16.OTHER INFORMATION]

Disclaimer: Data is most current known to Lexmark at the time of preparation and is believed to be accurate. No warranty as to its accuracy or completeness is expressed or implied.