

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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. HAZARDS IDENTIFICATION

MOST IMPORTANT HAZARDS AND EFFECTS

GHS CLASSIFICATION

PHYSICAL AND CHEMICAL HAZARDS	: Not classified
HEALTH HAZARDS	
ACUTE TOXICITY (Oral)	: Not classified
ACUTE TOXICITY (Dermal)	
ACUTE TOXICITY (Inhalation)	: Not applicable(Vapours)
SKIN CORROSION / IRRITATION	: Not classified
SERIOUS EYE DAMAGE / EYE IRRITATION	: Not classified
RESPIRATORY SENSITIZATION	: Classification not possible
SKIN SENSITIZATION	: Not classified
GERM CELL MUTAGENICITY	: Classification not possible
CARCINOGENICITY	: Category 2
REPRODUCTIVE TOXICITY	: Classification not possible
SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY	
- SINGLE EXPOSURE	: Classification not possible
- REPEATED EXPOSURE	: Category 1(lung)
ASPIRATION HAZARD	: Classification not possible
ENVIRONMENTAL HAZARDS	
HAZARDOUS TO THE AQUATIC ENVIRONMENT	
- ACUTE TOXICITY	: Classification not possible
- CHRONIC TOXICITY	: Classification not possible

GHS LABEL ELEMENTS

PICTOGRAMS OR SYMBOLS



SIGNAL WORD

: Danger

HAZARD STATEMENTS

: Suspected of causing cancer

Causes damage to organs through prolonged or repeated exposure (lung)

PRECAUTIONARY STATEMENTS

PREVENTION

: Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

RESPONSE

Do not breathe dust/fume/gas/mist/vapours/spray.
 Do not eat, drink or smoke when using this product.
 Wash thoroughly after handling.
 if needed, use personal protective equipment as required.
 : IF IN EYES: Rinse cautiously with water for several minutes.
 Remove contact lenses, If present and easy to do.
 Continue rinsing.

STORAGE

IF ON SKIN: Gently wash with plenty of soap and water.
 IF exposed or concerned: Get medical attention/advice.
 : Store locked up.

DISPOSAL

Protect from sun. Store in a well-ventilated room (under 40 C)

SAFE HANDLING ADVICE

: Passed to a licensed waste contractor.

3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE OR MIXTURE : Mixture

INGREDIENTS AND CONCENTRATION RANGE

Ingredients	Concentration Range(%)	CAS RN
Polyester resin	75 - 90	Trade Secret
Wax	1 - 10	Trade Secret
Carbon black	2 - 10	1333-86-4
Silica	1 - 5	Trade Secret

4. FIRST-AID MEASURES

IN CASE OF INHALATION : Remove to fresh air and keep at rest in a position comfortable for breathing.
 IF exposed or concerned : Get medical attention/advice.
 IN CASE OF SKIN CONTACT : Gently wash with plenty of soap and water.
 IF exposed or concerned : Get medical attention/advice.
 IN CASE OF EYE CONTACT : Rinse cautiously with water for several minutes. Remove contact lenses.
 If present and easy to do. Continue rinsing.
 IF exposed or concerned : Get medical attention/advice.
 IN CASE OF INGESTION : Call a POISON CENTER or doctor/physician if you feel unwell.
 IF exposed or concerned : Get medical attention/advice.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA : Water Spray, powder
 NOT SUITABLE EXTINGUISHING MEDIA : No information available
 SPECIFIC HAZARDS : May produce irritating or toxic gases in a fire.
 SPECIFIC METHODS : Keep away from sources of ignition and use appropriate extinguishing media.
 Fight fire from upwind position if possible.
 PROTECTION OF FIREFIGHTERS : Use goggles in combination with dust mask, and another protection as appropriate to situation.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PREAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURE	: Use mask, goggles and protective gloves. Large spills : Remove person to safety. Ensure adequate ventilation. Treat from upwind position.
ENVIRONMENTAL PRECAUTIONS directly.	: Do not discharge into the drains, surface waters or ground water
METHODS FOR CLEANING UP	: Prevent dispersion of dust. Sweep or vacuum by dust-explosion-proof type cleaner.
PREVENTION OF SECONDARY HAZARDS	: No information available

7. HANDLING AND STORAGE

HANDLING TECHNICAL MEASURES	: Facilities Storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
PRECAUTIONS	: Avoid inhalation of fine dust.
SAFE HANDLING ADVICE	: Use an adequate ventilation. Wash thoroughly after handling. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. This material may cause risk of dust explosion.
STORAGE SUITABLE STORAGE CONDITIONS	: Keep container tightly closed. Protect from sun. Store in a well-ventilated room(under 40 °C) Store locked up.
SAFE PACKAGINH MATERIALS	: No information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING MEASURES	: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use local exhaust ventilation, in case of generation of dust.
LIMIT VALUES ACGIH(TLV)	: 3.5mg/m ³ TWA Carbon black TWA 2mg/m ³ Paraffin wax fume 10mg/m ³ TWA (inhalable particles, recommended);3mg/m ³ TWA (respirable particles, recommended)(Particulates (insoluble or poorly soluble) not otherwise specified (PNOS))
OSHA(PEL)	: 3.5mg/m ³ TWA Carbon black 15mg/m ³ TWA (total dust);5mg/m ³ TWA(respirable fraction) (Particulates not otherwise regulated)
PERSONAL PROTECTIVE EQUIPMENT RESPIRATORY PROTECTION	: Use dust mask, as appropriate to situation.
HAND PROTECTION	: Rubber gloves
EYE PROTECTION	: Safety glasses with side shield(Safety goggles or Face shield)
SKIN AND BODY PROTECTION	: Full-body suit
HYGIENE MEASURES	: No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATES

FORM	: Pulverizing powder
COLOUR	: Black
ODOUR	: Odourless
pH	: No data available

SPECIFIC TEMPERATURES/TEMPERATURE RANGES

AT WHICH CHANGES IN PHYSICAL STATE OCCUR

BOILING POINT	: No information available
MELTING POINT	: No information available
FLASH POINT	: No data available

FLAMMABILITY OR EXPLOSIVE PROPERTIES

FLAMMABILITY OR EXPLOSIVE	: UPPER LIMIT: No information available LOWER LIMIT: No information available
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LIMITS

VAPOUR PRESSURE	: No information available
VAPOUR DENSITY	: No information available
SPECIFIC GRAVITY(DENSITY) : 1.2 g/mL (20 °C) (68 °F)	

SOLUBILITY

WATER SOLUBILITY	: Insoluble
SOLVENT SOLUBILITY	: Partially soluble in toluene, chloroform and tetrahydrofurane.
PARTITION COEFFICIENT :n-	: No information available
OCTANOL/WATER (log Pow)	: No information available
AUTOIGNITION TEMPERATURE	: No information available
DECOMPOSITION TEMPERATURE	: No information available
ODOUR THRESHOLD	: No information available
EVAPORATION RATE	: No information available
FLAMMABILITY (SOLID, GAS)	: No information available
VISCOSITY	: No information available
OTHER DATA	: No information available

10. REACTIVITY AND STABILITY

CHEMICAL STABILITY	: Stable in general.
POSSIBILITY OF HAZARDOUS REACTIONS	: Stable.
CONDITIONS TO AVOID	: No information available
INCOMPATIBLE MATERIALS	: No information available
HAZARDOUS DECOMPOSITION PRODUCTS	: No information available
OTHERS	: No information available

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Oral	
INFORMATION ON PRODUCT	: Rat, LD50 : > 5000mg/kg
Dermal	
INFORMATION ON PRODUCT	: No information available
INFORMATION ON INGREDIENTS	: No information available
Inhalation	
INFORMATION ON PRODUCT	: No information available

INFORMATION ON INGREDIENTS	: No information available
SKIN CORROSION / IRRITATION	
INFORMATION ON PRODUCT	: Rabbit, undiluted, 4 hours semi-occluded application test (OECD404): Not classified
SERIOUS EYE DAMAGE/IRRITATION	
INFORMATION ON PRODUCT	: Rabbit, undiluted, OECD405 : Not classified
RESPIRATORY OR SKIN SENSITIZATION	
RESPIRATORY	
INFORMATION ON PRODUCT	: No information available
INFORMATION ON INGREDIENTS	: No information available
SKIN	
INFORMATION ON PRODUCT	: Guinea pig, Guinea Pig Maximization Test : Negative
MUTAGENICITY (GERM CELL MUTAGENICITY)	
INFORMATION ON PRODUCT	: Ames test (TA98, TA100, TA1535, TA1537, TA1538, WP2uvrA) : Negative
INFORMATION ON INGREDIENTS	: No information available
CARCINOGENICITY	
INFORMATION ON PRODUCT	: No information available
INFORMATION ON INGREDIENTS	: Carbon black : Category 2;Ref.(1)
IARC	: Group 3 : Not classifiable as to its carcinogenicity to humans Silica, amorphous Group 2B : Possibly carcinogenic to humans. Carbon black Group 2B : Possibly carcinogenic to humans. Titanium dioxide
NTP	: Not listed
EU	: Not listed
OSHA	: Not listed
REPRODUCTION TOXICITY	
INFORMATION ON PRODUCT	: No information available
INFORMATION ON INGREDIENTS	: No information available
SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY	
- SINGLE EXPOSURE	
INFORMATION ON PRODUCT	: No information available
INFORMATION ON INGREDIENTS	: No information available
- REPEATED EXPOSURE	
INFORMATION ON PRODUCT	: No information available
INFORMATION ON INGREDIENTS	: Carbon black : Category 1 (lung); Ref.(1)
ASPIRATION HAZARD	
INFORMATION ON PRODUCT	: No information available
INFORMATION ON INGREDIENTS	: No information available
OTHER INFORMATION	: No information available

12. ECOLOGICAL INFORMATION

ECOTOXICITY	: No information available
PERSISTENCE / DEGRADABILITY	: No information available
MOBILITY IN SOIL	: No information available
BIOACCUMULATION POTENTIAL	: No information available
OTHER ADVERSE EFFECTS	: No information available

13. DISPOSAL CONSIDERATIONS

Review "HANDLING AND STORAGE(Section7)"
Passed to a licensed waste contractor.
This product may cause risk of dust explosion.

Dispose of waste in accordance with local, state and federal regulations.

14. TRANSPORTATION INFORMATION

Follow all regulations in your country or region.

INTERNATIONAL REGULATIONS

UN CLASS / UN NUMBER : Not applicable

SPECIAL PRECAUTIONS FOR USER : Review "ACCIDENTAL RELEASE MEASURES(Section 6)".
Review "HANDLING AND STORAGE (Section 7)".
Ensure containers without breakage or leakage.
Ensure containers tightly fixed.
Follow all regulations in your country or region.
Avoid heating(keep under 40 C).

15. REGULATORY INFORMATION

Follow all regulations in your country or region.

INVENTORIES	: ENCS(Japan)	Yes
	TSCA(USA)	Yes
	EINECS(EU)	No(ELINCS)
	AICS(Australia)	Yes
	DSL(Canada)	No(NDSL)
	ECL(Korea)	Yes
	PICCS(Philippines)	Yes
	IECSC(China)	Yes

16. OTHER INFORMATION

REFERENCES : -Safety data sheet for chemical product – Part 1 : Content and order of sections(ISO 11014-1)
-International Chemical Safety Cards(ICSC) (Compiler's Guide) (1994)
(1) GHS Classification Database, National Institute of Technology and Evaluation (NITE)

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