

MATERIAL SAFETY DATA SHEET

[1.CHEMICAL PRODUCT AND COMPANY IDENTIFICATION]

PRODUCT NAME : ML-2010D3
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 INGREDIENTS]

SUBSTANCE OR PREPARATION : Preparation
INGREDIENTS AND :
CONCENTRATION RANGE

Ingredients	Concentration Range(%)	CAS RN
Black Toner		

INGREDIENTS CONTRIBUTING TO : None
THE HAZARD

[3.HAZARDS IDENTIFICATION]

FIRE AND EXPLOSION HAZARD : May cause risk of dust explosion.
POTENTIAL HEALTH EFFECTS : To the best of our investigation, No special hazards have to be
ENVIRONMENTAL EFFECTS : To the best of our investigation, No special hazards have to be

MOST IMPORTANT HAZARDS :

ADVERSE HUMAN HEALTH : To the best of our investigation, no special hazards have to be mentioned.
EFFECTS

ENVIRONMENTAL EFFECTS : To the best of our investigation, no information about adverse effect in
the environment available.

PHYSICAL AND CHEMICAL : May cause risk of dust explosion.
HAZARDS

CLASS NAME FOR MSDS : Not applicable

[4.FIRST-AID MEASURES]

IN CASE OF INHALATION : Remove person to fresh air. If necessary seek medical attention.
IN CASE OF SKIN CONTACT : Wash material off the skin with plenty of water and soap. If necessary
seek medical attention.
IN CASE OF EYE CONTACT : Immediately hold eyelids open and flush with a stream of water for at
least 15 minutes. If necessary seek medical attention.
IN CASE OF INGESTION : Seek medical attention. Never give anything by mouth to an
unconscious person. If possible, rinse out mouth and give one or two
glasses of water or milk to drink.

[5.FIRE-FIGHTING MEASURES]

EXTINGUISHING MEASURES	: Risk of producing harmful gases such as carbon monoxide and nitrogen oxides.Avoid inhalation of smoke or gases.
EXTINGUISHING AGENTS	: In case of small fire use powder, carbon dioxide In case of large fire shut off air by spraying with water or foam.
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 protections as appropriate to situation.

[6.ACCIDENTAL RELEASE MEASURES]

PERSONAL PRECAUTIONS	: Use mask, goggles and protective gloves. Large spills : Remove person to safety. Ensure adequate ventilation. Treat from upwind position.
ENVIRONMENTAL PRECAUTIONS	: Do not discharge into the drains, surface waters or ground water directly.
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	: Handle in well-ventilated areas. Use safety glasses and protective gloves as appropriate to situation. Wash hands and face and gargle after handling. Prevent generation of dust. This material may cause risk of dust explosion.

STORAGE

STORAGE CONDITIONS	: Keep container tightly closed. Protect from sun. Store in a well-ventilated room (under 40 C).
PACKAGING MATERIALS	: No information available

[8.EXPOSURE CONTROLS / PERSONAL PROTECTION]

ENGINEERING MEASURES	: Facilities storing or utilizing this material should be equipped with an
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eyewash facility and a safety shower.

Use local exhaust ventilation, in case of generation of dust.

LIMIT VALUES

ACGIH(TLV) : TWA 3.5mg/m3,(2003 year edition)

Carbon black

TWA 2mg/m3,(2003 year edition)

Paraffin wax fume

OSHA(PEL) : PEL 3.5mg/m3,(2002 year edition)

Carbon black

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 : Full-body suit

PROTECTION

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 data available

MELTING POINT : No data available

DECOMPOSITION : No data available

TEMPERATURE

FLASH POINT : No data available

AUTOIGNITION TEMPERATURE : No data available

EX PLOSION PROPERTIES

EXPLOSION : UPPER LIMIT No data available LOWER LIMIT No data available

VAPOUR PRESSURE : No data available

VAPOUR DENSITY : No data available

DENSITY : 1.2 g/mL (20°C) (68°F)

SO LUBILITY

WATER SOLUBILITY : Insoluble

SOLVENT SOLUBILITY : Partially soluble in toluene, chloroform and tetrahydrofurane.

OCTANOL/WATER PARTITION : No data available

COEFFICIENT

OTHER DATA : No data available

[10. STABILITY AND REACTIVITY]



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

[11.TOXICOLOGICAL INFORMATION]

ACUTE TOXICITY	: Oral, rat, LD50 : > 2000 mg/kg
LOCAL EFFECTS	:
CORROSIVITY	: No information available
SKIN IRRITATION	: No information available
EYE IRRITATION	: No information available
SENSITIZATION	: No information available
CHRONIC TOXICITY/LONG TERM TOXICITY	: No information available
CARCINOGENICITY	: No information available
IARC	: Group2B, (2003 year edition) Carbon black
NTP	: Not established
OSHA	: Not established
MUTAGENICITY	: Ames test (TA98,TA100,TA1535,TA1537,TA1538, WP2uvrA) : Negative
TERATOGENICITY	: No information available
REPRODUCTION TOXICITY	: No information available
OTHER DATA	: No information available

[12.ECOLOGICAL INFORMATION]

MOBILITY	: No information available
PERSISTENCE/ DEGRADABILITY	: No information available
BIOACCUMULATION	: No information available
ECOTOXICITY	:
AQUATIC TOXICITY	: No information available
OTHER DATA	: No information available

[13.DISPOSAL CONSIDERATIONS]

Review "HANDLING AND STORAGE (Section 7)".
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.



UN CLASS/UN NUMBER : Not applicable
PRECAUTIONS : 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.

[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

[16.OTHER INFORMATION]

REFERENCE : -Safety data sheet for chemical products - Part 1: Content and order of sections(ISO 11014-1)
-International Chemical Safety Cards(ICSC) (Compiler's Guide)(1994)

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