

Material Safety Data Sheet

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Revised :

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

PRODUCT NAME : Toner Cartridge for Panasonic Facsimile Transceiver, Model
UF-5600 & UF-4600

PRODUCT NUMBER : UG-3391

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SECTION 2 HAZARDOUS IDENTIFICATION

EMERGENCY OVERVIEW : Fine black powder.

EU CLASSIFICATION : Not classified as hazardous.

POTENTIAL HEALTH EFFECTS :

EYE EFFECTS : Mild irritant.

SKIN EFFECTS : None currently known.

INGESTION EFFECTS : May be harmful if swallowed.

INHALATION EFFECTS : Minimal respiratory tract irritation may occur as with
exposure to large amounts of any non-toxic dust.
May cause cough and raise phlegm.

CHRONIC EFFECTS : Not aware of any health effects associated with toner under
its intended use.

CARCINOGENICITY : Carbon black is reclassified as a group 2B by IARC, but
inhalation test using a typical toner showed no association
between toner exposure and animal tumors.

SPECIFIC HAZARDS : Dust explosion (like most finely divided organic powders)

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS #	PROPORTION (% by wt.)	EC #	SYMBOLS	R PHRASE
• Polyester Resin	Trade secret	80 - 90		None	None
• Organic pigment-1	Trade secret	1 - 10		None	None
• Organic pigment-2	Trade secret	1 - 5		None	None
• Carbon black	1333-86-4	1 - 5	215-609-9	None	None
• Polypropylene	Trade secret	1 - 5		None	None
• Wax	Trade secret	1 - 5		None	None
• Amorphous silica	Trade secret	< 2		None	None

SECTION 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.
Get medical attention/advice if you feel unwell.

IN CASE OF SKIN CONTACT : Gently wash with plenty of soap and water.

IF exposed or concerned: Get medical attention/advice.
Get medical attention/advice if you feel unwell.

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.
Get medical attention/advice if you feel unwell.

IN CASE OF INGESTION : IF exposed or concerned: Get medical attention/advice.
Get medical attention/advice if you feel unwell.

SECTION 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 FIRE FIGHTERS : Use goggles in combination with dust mask, and another protection as appropriate to situation.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, 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 : 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

SECTION 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 adequate ventilation. Wash thoroughly after handling.
If needed, 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 PACKAGING MATERIALS : No information available

SECTION 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): 3.5 mg/m³ TWA [Carbon black]
10 mg/m³ TWA (inhalable particles, recommended); 3 mg/m³ TWA (respirable particles, recommended) [Particulates (insoluble or poorly soluble) not otherwise specified (PNOS)]

OSHA (PEL): 3.5 mg/m³ TWA [Carbon black]
15 mg/m³ TWA (total dust); 5 mg/m³ 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

SECTION 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 LIMITS : UPPER LIMIT : No information available
LOWER LIMIT : No information available

VAPOUR PRESSURE : No information available

VAPOUR DENSITY : No information available

DENSITY (SPECIFIC GRAVITY): 1.2 g/mL (20°C)(68°F)

SOLUBILITY

WATER SOLUBILITY : Insoluble
SOLVENT SOLUBILITY : Partially soluble in toluene, chloroform and tetrahydrofuran.

PARTITION COEFFICIENT: n-OCTANOL / WATER (log Pow): No information available

AUTO-IGNITION 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

SECTION 10 STABILITY AND REACTIVITY

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

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE INHALATION TOXICITY : No data

IRRITANT EFFECT ON EYES : No data

IRRITANT EFFECT ON SKIN : No data

MUTAGENICITY : No data

CARCINOGENICITY :

In 1996, the IARC reevaluated carbon black as a GROUP 2B carcinogen (possible human carcinogen). This evaluation is given to carbon black for which there is inadequate human evidence, but sufficient animal evidence. The latter is based upon the development of lung tumors in rat receiving chronic inhalation exposures to free carbon black at level that induce particle overload of the lung.

Studies performed in animal models other than rats have not demonstrated an association between carbon black and lung tumors. Moreover, a two-year cancer bioassay using a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development in rats.

CHRONIC EFFECTS :

In study in rats (H. Muhle) by chronic inhalation exposure to a typical toner, a mild to moderate degree of lung fibrosis was observed in 92% of the rats in the high concentration (16mg/m³) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4mg/m³) exposure group.

But no pulmonary change was reported in the lowest (1mg/m³) exposure group, the most relevant level to potential human exposure.

SECTION 12 ECOLOGICAL INFORMATION

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

SECTION 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.

SECTION 14 TRANSPORT 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).

SECTION 15 REGULATORY INFORMATION

INFORMATION ON THE LABEL :
SYMBOL & INDICATION : Not required.
SPECIAL PROVISIONS OF ANNEX V TO DIRECTIVE 1999/45/EC : Not required.

SECTION 16 OTHER INFORMATION

REFERENCES :

IARC(1996) IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol. 65, Printing Process and Printing Inks, Carbon Black and Some Nitro Componds. Lyon, PP.149-261.

H.Muhle, B.Bellmann, O.Creutzenberg, C.Dasenbrock, H.Ernst, R.Kilpper, J.C.Mackenzie, P.Morrow, U.Mohr, S.Takenaka and R.Mermelstein (1991) Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats. Fundamental and Applied Toxicology 17, pp.280-299.

Information on this data sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions.