

Panasonic Communications Co., Ltd.
Office Network Company

9-1 Hiraide Industrial Park, Utsunomiya City, Tochigi, 321-8502 Japan
TEL : Japan (0) 28-663-3285, FAX : Japan (0) 28-663-2398

Material Safety Data Sheet

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MSDS No.: 021-000612

Date : 29 July, 2005

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

Product Name: Toner of UG-3221 and UG-3222 Toner Cartridge, UG-3220 Process Unit for Panasonic Facsimile machine Model UF-490, UF-4000 and UF-4100

Product No.: Toner of UG-3221 and UG-3222 Toner Cartridge, UG-3220 Process Unit

Contact: Panasonic Testing Center
Winsberggring 15 / 22525 Hamburg Germany
Tel: +49-(0)40-85383-590

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS #	PROPORTION (% by wt.)	EC #	SYMBOLS	R PHRASE
Styrene acrylate copolymer		> 47.0		None	None
Iron oxide		< 45.0		None	None
Polypropylene		< 4.0		None	None
Paraffin wax		< 4.0		None	None

SECTION 3 HAZARDOUS IDENTIFICATION

EMERGENCY OVERVIEW: Odorless black powder.
Not a high flammable, but when suspended in air, is combustible as with most organic powders.

POTENTIAL HEALTH EFFECTS:

EYES: Solid or dusts may cause irritation or corneal injury.

SKIN CONTACT: Essentially nonirritating to skin.

SKIN ABSORPTION: Skin absorption is unlikely due to physical properties.

INGESTION: Oral toxicity is believed to be low.

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/CARCINOGENICITY: Not aware of any health effects associated with toner under its intended use.

FIRE AND EXPLOSION:

SENSITIVITY TO MECHANICAL IMPACT : None

SENSITIVITY TO STATIC CHARGE : None

SECTION 4 FIRST AID MEASURES

EYE CONTACT: Any material that contacts the eye should be washed out immediately with water.
Get medical attention if symptoms occur.

SKIN CONTACT: Wash after each contact.
Get medical attention if symptoms occur.

INHALATION: If symptomatic, remove to fresh air.
Get medical attention if symptoms persist.

INGESTION: If swallowed, drink 1-2 glasses of water and immediately induce vomiting. Get medical attention.

SECTION 5 FIRE FIGHTING MEASURES

FLASH POINT: No data available.

FLAMMABLE LIMITS: No data available.

EXTINGUISHING MEDIA: Water fog, dry chemical, foam or CO₂.

HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, Carbon dioxide and Smoke

FIRE AND EXPLOSION HAZARDS: If dispersed in air, like most finely divided organic powders, may form an explosive mixture.

SECTION 6 ACCIDENTIAL RELEASE MEASURES

Minimize the release of particulates. Wear personal protective equipment. Sweep up or vacuum spilled toner and carefully transfer into sealed waste container. Sweep slowly to minimize generation of dust during cleanup. If a vacuum is used, the motor must be rated as dust tight. Residue can be removed with soap and water. Garments may be washed or dry cleaned, after removal of loose toner.

SECTION 7 HANDLING AND STORAGE

HANDLING: Avoid creating dust. Clean up all spills promptly.
Inhalation and contact with skin or eyes should be avoided.
Provide general ventilation. Good general ventilation should be sufficient of most conditions.

STORAGE: Store in a cool, well ventilated place away from flames and spark-producing equipment.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES: ACGIH TLV= 10mg/m³(Total dust)
OSHA PEL= 15mg/m³(Total dust), 5mg/m³(Respirable dust)

ENGINEERING CONTROLS: Good general ventilation is recommended.

RESPIRATORY PROTECTION: Not required under normal conditions. For use other than in normal operating procedures (such as in the event of large spill), goggles and respirators may be required.

SKIN PROTECTION: Not required under normal conditions.

EYE PROTECTION: Not required under normal conditions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Black fine powder
ODOR: None
pH: Not applicable
VAPOR PRESSURE (mg Hg.): Not applicable
VAPER DENSITY (AIR=1): Not applicable
EVAPORATION RATE: Not applicable
BOILING POINT (°C): Not applicable
SOFTENING POINT (°C): Not applicable
SOLUBILITY IN WATER: Negligible
SPECIFIC GRAVITY (H₂O=1): 1.6

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable
HAZARDOUS REACTIONS: Dust explosion, like most finely divided organic powders.
CONDITIONS TO AVOID: Electronic discharge, throwing into fire.
MATERIALS TO AVOID: Oxidizing materials.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, Carbon dioxide and Smoke.

SECTION 11 TOXICOLOGICAL INFORMATION

HEALTH EFFECTS FROM EXPOSURE: No symptoms expected with intended use.
ACUTE TOXICITY:
INHALATION: Finely divided solid. Avoid exposure to dust.
EYES: No specific hazard known. May cause temporary irritation.
SKIN: Low hazard for recommended handling.
INGESTION: Expected to be a low ingestion hazard.
MUTAGENICITY: Negative in the Ames test
CARCINOGENICITY:
No carcinogen or potential carcinogen, according to IARC Monographs, NTP, OSHA(USA) regulation and EU Directive.

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

No data available.

SECTION 13 DISPOSAL CONSIDERATION

METHOD OF DISPOSAL: When disposing of the waste or recovered material, consult federal, state and/or local regulations for the proper disposal method.

SECTION 14 TRANSPORT INFORMATION

UN CLASS: None allocated.
DOT CLASS: None allocated.
TDG CLASS: None allocated.

SECTION 15 REGULATORY INFORMATION

CLASSIFICATION and LABELLING ACCORDING TO EU DIRECTIVES:

CLASSIFICATION: Not classified as hazardous.

SPECIAL PROVISIONS OF ANNEX V TO DIRECTIVE 1999/45/EC:

Contains "hydrogen bis[1-[(5-chloro-2-hydroxyphenyl)azo]-2-naphtholato
(2-)] chromate(1-)". May produce an allergic reaction.

SECTION 16 OTHER INFORMATION

HMIS RATING: The National Paint and Coating Association(USA)

HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0

REFERENCES:

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.