

# Material Safety Data Sheet

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MSDS No. : 021-001123

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## 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 NUMBER : Toner of UG-3221 and UG-3222 Toner Cartridge, UG-3220 Process Unit

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## SECTION 2 HAZARDOUS IDENTIFICATION

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

EU CLASSIFICATION : Not classified as dangerous.

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 : Minimal irritation to respiratory track may occur.

FIRE AND EXPLOSION :

SENSITIVITY TO MECHANICAL IMPACT : None

SENSITIVITY TO STATIC CHARGE : None

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS #	PROPORTION (% by wt.)	EC #	SYMBOLS	R PHRASE
• Styrene-acrylate copolymer		> 44.0		None	None
• Iron oxide	1309-38-2	< 40.0	215-169-8	None	None
• Polypropylene		< 4.0		None	None
• Paraffine wax		< 3.0		None	None
• Amorphous silica		< 1.0		None	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 is occur.

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

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#### **SECTION 5 FIRE FIGHTING MEASURES**

FLASH POINT : Not applicable.

FLAMMABLE LIMITS : Not applicable.

EXTINGUISHING MEDIA : Water fog, dry chemical, foam or CO<sub>2</sub>.

HAZARDOUS COMBUSTION PRODUCTS : Carbon monoxide, Carbon dioxide and Smoke

FIRE-FIGHTING EQUIPMENT : Wear full bunker gear including a positive pressure self-contained breathing apparatus in case of burning in large quantities.

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#### **SECTION 6 ACCIDENTAL RELEASE MEASURES**

Minimize the release of particulates. Wear personal protective equipment.  
Do not use vacuum cleaner.  
After by lightly spraying with water to prevent development of dust, spills should be swept up or wiped up. Then residuals can be removed with soap and water. Preferred to use the material in a place, covering up the floor and surrounding matters with suitable sheets such as paper, in a case of being not fit to scrub the floor with water. These used sheets should be wrapped up in spills and transfer into a suitable container for disposal.  
Garments may be washed or dry cleaned, after removal of loose toner.

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#### **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.

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#### **SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

EXPOSURE GUIDELINES : ACGIH TLV= 10mg/m<sup>3</sup>(Total dust), 3mg/m<sup>3</sup>(Respirable dust)  
OSHA PEL= 15mg/m<sup>3</sup>(Total dust), 5mg/m<sup>3</sup>(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 : No precautions should be needed under normal use.

EYE PROTECTION : No precautions should be needed under normal use.

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**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

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APPEARANCE : Black fine powder  
ODOR : None  
pH : Not applicable  
VAPOR PRESSURE (mg Hg.): Not applicable  
VAPOR DENSITY (AIR = 1): Not applicable  
% VOLATILE : Not applicable  
BOILING POINT (°C): Not applicable  
MELTING POINT (°C): Not applicable  
SOLUBILITY IN WATER : Negligible  
SPECIFIC GRAVITY (H<sub>2</sub>O=1): 1.6

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**SECTION 10 STABILITY AND REACTIVITY**

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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.

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**SECTION 11 TOXICOLOGICAL INFORMATION**

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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/m<sup>3</sup>) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4mg/m<sup>3</sup>) exposure group.  
But no pulmonary change was reported in the lowest (1mg/m<sup>3</sup>) exposure group, the most relevant level to potential human exposure.

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**SECTION 12 ECOLOGICAL INFORMATION**

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No data available.

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**SECTION 13 DISPOSAL CONSIDERATIONS**

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

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**SECTION 14 TRANSPORT INFORMATION**

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TRANSPORT INFORMATION : This is not a hazardous product.  
UN No. : None allocated.

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**SECTION 15 REGULATORY INFORMATION**

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

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**SECTION 16 OTHER INFORMATION**

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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.

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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.