

Material Safety Data Sheet

Published on - September 11, 2001

The following 8 pages contain the Material Safety Data Sheet (MSDS) for the Toner and OPC Drum used for Panafax UF-790.

The applicable Product Order Number is:

- **UG-5510** - Toner Cartridge ([Toner](#) and [OPC Drum](#)).

Matsushita Graphic Communication Systems, Inc.

Document System Products Division

9-1 Hiraide Industrial Park, Utsunomiya City, Tochigi, 321-8502 Japan
TEL : Japan (0) 28-683-6660, FAX : Japan (0) 28-662-8393

Material Safety Data Sheet

Page: 1 of 4

MSDS No.: 021-000155

Date : 11th September, 2001

SECTION 1 PRODUCT IDENTIFICATION

Product Name : Toner, Toner Cartridge UG-5510 for Panasonic Facsimile machine
Model UF-790
Product No. : UG-5510 Toner

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS (Common Name)	CAS #	PROPORTION (% by wt.)	OSHA PEL	ACGIH TLV	OTHER LIMITS
• Styrene acrylate copolymer	27136-15-8	> 56.0	None established	None established	None
• Iron oxide	1317-61-9	< 40.0	None established	None established	None
• Polypropylene	9010-79-1	< 4.0	None established	None established	None

SECTION 3 HAZARDOUS IDENTIFICATION

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

POTENTIAL HEALTH EFFECTS:

EYE EFFECTS : Solid or dusts may cause irritation or corneal injury.

SKIN EFFECTS : Essentially nonirritating to skin.
Skin absorption is unlikely due to physical properties.

INGESTION EFFECTS : Oral toxicity is believed to be low.

INHALATION EFFECTS : Minimal irritation to respiratory track may occur.

FIRE AND EXPLOSION

SENSITIVITY TO MECHANICAL IMPACT: None
SENSITIVITY TO STATIC CHARGE: None

SECTION 4 FIRST AID MEASURES

EYES: Flush eyes immediately with plenty of water for at least 15minutes.

SKIN: Flush with plenty of water. Use soap.

INGESTION: No adverse effects anticipated by this route of exposure incidental to proper handling.

INHALATION: Remove to fresh air. If effects occur, consult medical personnel.

SECTION 5 FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: No data available.

FLAMMABLE LIMITS: No data available.

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

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

SECTION 6 ACCIDENTIAL 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.

SECTION 7 HANDLING AND STORAGE

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 for most conditions.

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

May toners be preferred to use or to handle at the suitable place without concerning about smudges to which are given rise by releasing them.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: For most conditions, no respiratory protection should be needed; however, in dusty atmospheres, use an approved dust respirator.

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

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

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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

SECTION 10 STABILITY AND REACTIVITY

STABILITY: This is a stable product.
INCOMPATIBILITY: (Special materials avoid) None
HAZARDOUS DECOMPOSITION PRODUCTS: CO or NO_x (by high heat and fire)
HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

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 a study in rats 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 exposures.

SECTION 12 ECOLOGICAL INFORMATION

None.

SECTION 13 DISPOSAL CONSIDERATION

WASTE DISPOSAL METHOD: Waste must be disposed of in accordance with country and local environmental regulations.

SECTION 14 TRANSPORT INFORMATION

This is not a hazardous product.

UN CLASS: Not regulated.

DOT Class: Not regulated.

SECTION 15 REGULATORY INFORMATION

USA INFORMATION :

TSCA (Toxic Substance Control Act): All chemical substances in this product comply with all applicable rules or orders under TSCA.

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.

Matsushita Graphic Communication Systems, Inc.

Document System Products Division

9-1 Hiraide Industrial Park, Utsunomiya City, Tochigi, 321-8502 Japan
TEL : Japan (0) 28-683-6660, FAX : Japan (0) 28-662-8393

Material Safety Data Sheet

Page: 1 of 4

MSDS No.: 021-000156

Date : 11th September, 2001

SECTION 1 PRODUCT IDENTIFICATION

Product Name : OPC DRUM, Toner Cartridge UG-5510 for Panasonic Facsimile machine, Model UF-790
Product No. : UG-5510 OPC DRUM

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS #	PROPORTION (% by wt.)	OSHA PEL	ACGIH TLV	OTHER LIMITS
• Aluminum alloy		94.0 - 98.0	Not applicable for drum	Not applicable for drum	None
• Titanium dioxide	13463-67-7	0.5 - 2.0	Not applicable for drum	Not applicable for drum	None
• Binder resin		0.5 - 2.0	Not applicable for drum	Not applicable for drum	None
• Organic semiconductor		0.3 - 0.8	Not applicable for drum	Not applicable for drum	None

SECTION 3 HAZARDOUS IDENTIFICATION

EMERGENCY OVERVIEW : Greenish blue colored aluminum cylinder, with no odor.

POTENTIAL HEALTH EFFECTS:

EYE EFFECTS : Not applicable under intended use.

SKIN EFFECTS : No corroding or irritating effect is expected at usual use as a photosensitive drum.

INGESTION EFFECTS : Not applicable under intended use.

INHALATION EFFECTS : Not applicable under intended use.

CHRONIC EFFECTS : Not identified.

MEDICAL CONDITIONS GENERALLY KNOWN TO BE AGGRAVATED BY EXPOSURE:
Not identified.

SECTION 4 FIRST AID MEASURES

EYE CONTACT : Flush with plenty of water
SKIN CONTACT : In case of contact, wash with soap and water.
INHALATION : If needed, get medical attention.
INGESTION : If needed, get medical attention.
NOTE TO PHYSICIANS : None

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA : Dry chemical, CO₂, Foam or water.
UNSUITABLE EXTINGUISHING MEDIA: None
SPECIAL FIRE FIGHTING PROCEDURES: None
UNUSUAL FIRE AND EXPLOSION HAZARDS: None
FLASH POINT (°C): Not applicable.
FLAMMABLE LIMITS : Not applicable.
AUTOIGNITION TEMPERATURE (°C): Not applicable.
FLAMMABILITY: Not applicable.
AUTOFLAMMABILITY: None
EXPLOSIVE PROPERTIES: None
OXIDIZING PROPERTIES: None
HAZARDOUS COMBUSTION PRODUCTS : CO, CO₂
OTHER PROPERTIES: None

SECTION 6 ACCIDENTIAL RELEASE MEASURES

METHOD FOR CLEANING UP : Not applicable under intended use.
PERSONAL PRECAUTIONS : Not applicable under intended use.
ENVIRONMENTAL PRECAUTIONS : Not applicable under intended use.

SECTION 7 HANDLING AND STORAGE

HANDLING : None of safe handling advice.

STORAGE : Keep at temperature not exceeding 45 °C.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES : None.
ENGINEERING CONTROLS : Not required.
RESPIRATORY PROTECTION : Not required.
SKIN PROTECTION : Not required.
EYE/FACE PROTECTION : Not required.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : Greenish blue colored aluminum cylinder
ODOR : No odor
pH : Not applicable
BOILING POINT (°C): Not applicable
MELTING POINT (°C): 100 °C or higher
DECOMPOSITION TEMPERATURE (°C): No data available
VAPOR PRESSURE (mm Hg.) : Negligible
VAPOR DENSITY (AIR = 1) : Not applicable
DENSITY/ SPECIFIC GRAVITY (H₂O=1) : No data available
SOLUBILITY IN WATER : Negligible
FAT SOLUBILITY : Partially soluble in ketones, esters and aromatic solvents
PARTITION COEFFICIENT (n-Octanol/water) : Not soluble in water and n-octanol
PERCENT VOLATILE : Negligible
EVAPORATION RATE : Not applicable

SECTION 10 STABILITY AND REACTIVITY

STABILITY : This is a stable product.
CONDITIONS TO AVOID : None
MATERIALS TO AVOID : None
HAZARDOUS DECOMPOSITION PRODUCTS : None
HAZARDOUS POLYMERIZATION : Will not occur.
CONDITIONS TO AVOID : None

SECTION 11 TOXICOLOGICAL INFORMATION

INHALATION : No data available.
INGESTION : (Data from similar drum): LD50: >2000mg/Kg(rats)
EYE : No data available.
SKIN : No data available.
SENSITIZATION : No data available.
MUTAGENICITY : (Data from similar drum): Negative (Ames Test: Salmonella typhimurium)
REPRODUCTIVE TOXICITY : No data available.
CARCINOGENICITY : No human carcinogen or potential carcinogen, according to IARC Monographs, NTP, OSHA(USA) regulation, California Proposition 65 and EU Directive.
Others : None

SECTION 12 ECOLOGICAL INFORMATION

No information indicating any adverse ecological effects.

SECTION 13 DISPOSAL CONSIDERATION

METHOD OF DISPOSAL : Dispose under conditions which meet all federal, state and local environmental control regulations.

SECTION 14 TRANSPORT INFORMATION

UN # : None.

UN SHIPPING NAME : None.

UN CLASSIFICATION : None.

UN PACKING GROUP : None.

SPECIAL PRECAUTIONS : None.

SECTION 15 REGULATORY INFORMATION

EU INFORMATION :

INFORMATION ON THE LABEL: Not required.

SPECIFIC PROVISION IN RELATION OF MAN OR THE ENVIRONMENTAL : Not regulated.

USA INFORMATION :

INFORMATION ON THE LABEL: Not required.

SARA Title § 313 : None.

CALIFORNIA PROPOSITION 65 : None.

SECTION 16 OTHER INFORMATION

Abbreviation:

"EU" stands for European union.

"OSHA PEL" stands for PEL (Permissible Exposure Limit) under Occupational safety and Health Administration.

"ACGIH TLV" stands for TLV (Threshold Limit Value) under American Conference of Governmental Industrial Hygienists.

"IARC" stands for International Agency for Research on Cancer.

"NTP" stands for National Toxicology Program (USA).

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.