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Material Safety Data Sheet

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MSDS No.: 021-000718

Date : 4 April, 2006

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

Product Name : Toner, Toner Cartridges UG-5545, DQ-UG26H, UG-5545DEV,
DQ-UG26HDEV for Panasonic Facsimile machine Models UF-8100,
UF-7100 and DP-180

Product No.: Toner for Toner Cartridges UG-5545, DQ-UG26H, UG-5545DEV and
DQ-UG26HDEV

Contact : Panasonic Testing Center
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SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS #	PROPORTION (% by wt.)	EC #	SYMBOLS	R PHRASE
Styrene acrylate copolymer		> 86		None	None
Carbon black	1333-86-4	< 6	215-609-9	None	None
Polypropylene		< 3		None	None
Amorphous silica		< 3		None	None
Iron oxide		< 2		None	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.

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

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 4 FIRST AID MEASURES

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

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

Explosion Limits(Upper): No data available

Explosion Limits(Lower): No data available

EXTINGUISHING MEDIA : Foam, CO₂, dry chemical.

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

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.

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 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

CONTROL PARAMETERS :

OSHA PEL : TWA 5.0 mg/m³ (Inert of Nuisance Dust : Respirable fraction)
15.0 mg/m³ (Inert of Nuisance Dust : Total dust)

ACGIH TLV : TWA (2005)
3.0 mg/m³ (Particulates Not Otherwise Classified : Respirable Particle Mass)
10.0 mg/m³ (Particulates Not Otherwise Classified : Inhalable Particle Mass)

RESPIRATORY PROTECTION :

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 : Odorless black fine powder
ODOR : None
BOILING POINT : Not applicable
VAPOR PRESSURE : Not applicable
VAPOR DENSITY : Not applicable
SOLUBILITY (H₂O) : Insoluble
SPECIFIC GRAVITY : ca. 1.10 g/cm³
SOFTENING POINT : No data
pH : Not applicable
PERCENT VOLATILE : Not applicable

SECTION 10 STABILITY AND REACTIVITY

STABILITY : This is a stable product.
INCOMPATIBILITY (SPECIAL MATERIALS TO AVOID) : Oxidizing materials.
HAZARDOUS DECOMPOSITION PRODUCTS :
Carbon oxides, hydrocarbons (by high heat and fire)
HAZARDOUS POLYMERIZATION : Will not occur

SECTION 11 TOXICOLOGICAL INFORMATION

MUTAGENICITY : Negative in the Ames test
(Estimated from the data of constituent components)

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 typical toner, a mild to moderate degree of lung fibrosis was observed in 92% of rats in the concentration (16 mg/m³) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4 mg/m³) exposure group. But no pulmonary change was reported in the lowest (1 mg/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 control regulations.

SECTION 14 TRANSPORT INFORMATION

TRANSPORT INFORMATION : This is not a hazardous product.

UN No. : None allocated.

SECTION 15 REGULATORY INFORMATION

CLASSIFICATION and LABELLING ACCORDING TO EU DIRECTIVES:

CLASSIFICATION: Not classified as hazardous.

SECTION 16 OTHER INFORMATION

NFPA RATING : Health = 1 Flammability = 1 Reactivity = 0

Paraffin is not hazardous except for its flammable properties, but "Paraffin wax fume" is one of hazardous chemicals. Its ACGIH TLVs (TWA) and NIOSH RELs (TWA) is the same value (2 mg/m3).

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.