

Material Safety Data Sheet

Issue Date : 2004.12.14

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Toner in toner cartridge

Used for : F-520/F-560

Reorder No:TS560US

COMPANY NAME : Murata Machinery, Ltd.

ADDRESS : 136, Takeda-Mukaishiro-cho, Fushimi-ku, Kyoto 612-8686, Japan

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SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	CAS #	AMOUNT	EXPOSURE LIMITS	
			OSHA PEL	ACGIH TLV
Carbon black (bound)	1333-86-4	5-7 %	3.5 ppm TWA	3.5 ppm TWA
Styrene	100-42-6	<50 ppm	50 ppm TWA 100 ppm STEL	20 ppm TWA 40 ppm STEL, A4

OTHER INGREDIENTS	CAS #	AMOUNT	NOTES
Styrene acrylate copolymer	25767-47-9	83-84 %	TWA = Time Weighted Average TLV = Threshold Limit Value AL = Action Level RD = Respirable Dust TD = Total Dust STEL = Short Term Exposure Limit Skin = Skin contact may be a significant route of exposure A1 = Confirmed Human Carcinogen A2 = ACGIH Suspected Human Carcinogen A3 = ACGIH Animal Carcinogen A4 = ACGIH Not Classifiable as a Human Carcinogen PNOC = Particulates Not Otherwise Classified
Fatty acid ester	75587-84-7	4-6 %	
PMMA	9011-14-7	<1 %	
Silicon Dioxide (amorphous)	7631-86-9	1-3 %	

EMERGENCY OVERVIEW

This product is the black colored toner with an odorless. As supplied, these products are not expected to cause any adverse health or physical effects in how to use usual. Processing operations may produce vapors or dust that may cause eye, skin, and respiratory tract irritation. Toxic combustion products may be released under fire conditions.

SECTION 3 - HAZARDS IDENTIFICATION

Potential Health Effects From Overexposure: Possible routes of entry include skin & eye contact and process vapor or dust inhalation. Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust. We recommend that contact with exposed skin be avoided by the use of gloves and other personal protective equipment appropriate for handling and / or processing operations. Overexposure to decomposition or combustion products may cause irritation of the eyes, skin, and respiratory tract. See Section 10 for information on combustion products.

SECTION 4 - FIRST AID MEASURES

If irritation occurs or persists from any route of exposure, remove the affected individual from the area and seek medical assistance.

Eye Contact: Eye irritation will be caused. If contacted, flush eyes with running water for 15 minutes with eyelids open. Consult an eye-doctor.

Skin Contact: No symptoms will appear. If contacted, remove contaminated clothes and wash skin with soap and water.

Particulate Inhalation: Lung irritation, difficult breathing, sneezing, coughing, will be caused. If inhaled, remove the sufferer to fresh air and seek medical assistance immediately.

Ingestion: Stomach irritation will be caused. If ingested, seek medical assistance immediately.

SECTION 5 - FIRE FIGHTING MEASURES

Extinguishing Media: Dry chemicals, CO₂, water spray or foam are recommended media.

Special Firefighting Procedures: Do not use straight water, high-pressure water or water steam in order to prevent creating a dust cloud and spreading fire dust. Use appropriate respirator for carbon monoxide and carbon dioxide. Wear positive pressure self-contained breathing apparatus (SCBA) during the attack phase of firefighting operations and during cleanup in enclosed or poorly ventilated areas immediately after a fire. Personnel not having suitable respiratory protection must leave the area to prevent significant exposure to toxic combustion gases from any source.

Unusual Fire and Explosion Hazards: Thermal decomposition of organic components may result in occurrence of oxides of carbon. Special precautions must be taken if like most organic materials in powder form, it can form explosive mixtures when dispersed in air. Toxic gases may be formed upon combustion and represents a hazard to firefighters. See Section 10 for additional information on combustion products.

Explosion Limits: Lower = 40g/m³ (for powder)

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Sweep the spilt toner or remove it with a vacuum cleaner, and transfer into the sealed container carefully. Sweep slowly to minimize generation of dust during clean-up. If the vacuum cleaner is used, the motor must be rated as dust explosion-proof. A conductive hose bonded to the machine should be used to reduce static build-up. Residue can be removed with soap and cold water. Clothes may be washed or dry cleaned after removal of loose toner.

SECTION 7 - HANDLING AND STORAGE

Handling: Keep out of the reach of children. In case of accidental spill, try not to disperse the particles. Avoid prolonged inhalation of excessive dust and contact eyes. Use with adequate ventilation. Use the mask, which recommended preventing dust and coarse particulate.

Storage: Keep out of the reach of children. Keep container tightly closed and Store in a cool and dry place. Wash a hand well after handling a toner. Keep away from contact with oxidizing materials. Store in a cool and dry place away from direct light to maintain quality.

Please check "Conditions to avoid" indicated by the section 10.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation: Effective general and, if necessary, local exhaust ventilation must always be provided to draw fumes or vapors away from workers to prevent routine inhalation.

Ventilation must be adequate to maintain the ambient workplace atmosphere below the limits listed in Section 2.

Local Exhaust: Recommended

Mechanical (General): Recommended

Respiratory Protection: Respiratory protection is not typically required during normal use and handling operations where general dilution or local exhaust ventilation is adequate to control exposures.

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.

Protective Equipment: Use the mask, which recommended preventing dust and coarse particulate, and goggles when handling a large quantity of toner or during long-term exposure, as with any non-toxic dust. Protective gloves should be worn to prevent skin contact.

Protective Gloves: Recommended

Eye Protection: Safety goggles

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity (H₂O=1): 1.15.

Solubility in Water: Negligible

Appearance and Odor: Black Powder and Odorless

Melting Point: 120

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions to Avoid: Overheating by heat accumulation under the condition of transportation, storage or any similar situation and contact with ignition sources such as open flames, sparks, electrical arcs and static discharge sources.

Materials to Avoid: Avoid exposure to strong oxidizers or reducing agents.

Hazardous Decomposition Products:

The gas generated by heat decomposition may contain carbon monoxide, carbon dioxide and Nitrogen.

SECTION 11 - TOXICOLOGICAL INFORMATION

Health Hazards (Acute and Chronic):

Acute Oral Toxicity: LD50 >2000mg/Kg (rat)

Acute Inhalation Toxicity: LC50 >5mg/l (rat)

Skin Irritation: Non-irritant (rabbit)

Eye Irritation: Very slight irritant (rabbit)

Mutagenicity: Negative (Ames test)

Carbon black

Carcinogenicity:

In 1996, the IARC reevaluated carbon black as a Group 2B carcinogen (possible human carcinogen). This classification is given to chemicals for which there is inadequate human evidence, but sufficient animal evidence on which to base an opinion of carcinogenicity.

The classification is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung.

Studies performed in animal models other than rats did not show any 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.

SECTION 12 - ECOLOGICAL INFORMATION

No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

This material is not a hazardous waste per Federal Regulation 40 CFR 261 when disposed. Consult with the appropriate State and Local Waste Authorities for additional information. Incinerate only in a closed container.

SECTION 14 - TRANSPORT INFORMATION

For U.S.A transportation purposes, this product is not defined or designated as a hazardous material by the U.S. Department of Transportation under Title 49 of the Code of Federal Regulations.

SECTION 15 - REGULATORY INFORMATION

Inventories	JCSCL (Japan)	Yes
	TSCA (USA)	Yes
	EINECS/ELINCS (EU)	Yes

SECTION 16 - OTHER INFORMATION

Hazard Rating System Classifications:

	NFPA	HMIS	Key: 0=least; 1=slight; 2=moderate; 3=high; 4=extreme National Fire Protection Association rating identifies hazards during a fire emergency. Hazardous Materials Identification System rating applies to products as packaged.
Health	1	1	
Flammability	1	1	
Reactivity	0	0	

Appendix A – Carbon black

This product contains trace Carbon black. Carbon black is listed by the International Agency for Research on Cancer (IARC) as a Group 2B carcinogen (possibly carcinogenic to humans).

User's Responsibility

This bulletin cannot cover all possible situations which the user may experience during processing. Each aspect of your operation must be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin must be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.

This product is for general industrial use. If you use it for food, medical care and an another special use, please use under your confirmation of safety for that use, or please talk with us beforehand.

Disclaimer of Liability

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this material. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local laws and regulations remains the responsibility of the user.