

SAFETY DATA SHEET

Toner

SECTION 1: Identification of the substance / mixture and of the company / undertaking

1.1 Product identifier

PRODUCT NAME : Toner (TS565US, TS565, TS560, TS300US, TS300, TS2550AUS, TS2550AEU, TS2050, TS2030US, TS2030)

COMPANY NAME : Murata Machinery, Ltd.

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

CONTACT POINT : Communication Equipment Division Quality Assurance Group

TELEPHONE NUMBER : +81-75-672-8279

FAX NUMBER : +81-75-672-5046

SECTION 2: HAZARD IDENTIFICATION

GHS Classification

Physicochemical Hazards : No information available

Health Hazards : Acute toxicity - oral Not Classified
 Acute toxicity - inhalation(dust) Not Classified
 Carcinogenicity Not Classified
 Specific target organ toxicity (repeated exposure) Not Classified

Environmental Hazards : No information available

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Distinction of Substance or Mixture Mixture

Ingredient	Concentration or Concentration Range	CAS No.
Butyl acrylate-styrene copolymer	>84 <86 %	25767-47-9
Carbon black (bound)	>5 <7 %	1333-86-4
Fatty acid ester	> 4 <6 %	75587-84-7
PMMA	<1 %	9011-14-7
Silicon dioxide (amorphous)	>1 <3 %	Trade secret
Styrene	<50 PPM	100-42-5

SECTION 4: FIRST AID MEASURES

Inhalation : Move affected person to the open air. Keep him or her at rest to allow easier breathing.
 Call a doctor if you feel unwell.

Skin Contact : When skin stimulation occurs, seek medical treatment and advice.

Eye Contact : Wash eyes for several minutes with water carefully.
 When the ocular stimulation lasts, Seek medical treatment and advice.

Ingestion : Rinse mouth.
 Call a doctor if you feel unwell.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media	Dry chemicals, alcohol-resistance foam extinguishing agents, carbon dioxide, sand, and water spraying
Protection of Fire Fighter	In fire-extinguishing activity, wear an appropriate air breathing apparatus and full protective clothing for chemicals

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures	<p>Ventilate the closed area before entering.</p> <p>Leave from the low ground.</p> <p>If not wearing an appropriate personal protective clothing, do not touch the damaged container and leakage.</p> <p>Wear appropriate personal protective equipment (Refer to "Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION") and avoid inhalation or contact with eyes and skin.</p>
Environmental Precautions	Do not release into the environment.
Decontamination/Absorption/Sweeping/Vacuuming/Neutralization/Methods and Equipment for Containment and Cleaning up	Collect the material into a disposal container by sucking up or sweeping up. If the vacuum cleaner is used, the motor must be rated as dust explosion-proof. When you wipe it off, please wipe it off with wet cloth.
Prevention Measures for Secondary Accidents	Removes all ignition sources promptly. (Prohibition of smoking, sparks, and flames in the surrounding area)

SECTION 7: HANDLING AND STORAGE

Handling	Technical Measures	Provide ventilation system and Use necessary personal protective equipment as described in "Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION."
	Local and General Ventilation	Provide local ventilations and a full ventilation system as described in "Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION."
	Precautions for Safe Handling	<p>Wash hands thoroughly after handling.</p> <p>Avoid swallowing</p> <p>Avoid breathing dust and fume.</p> <p>Avoid breathing gas.</p> <p>Avoid breathing mist, vapors and spray.</p>
	Avoiding Contact	Refer to "Section 10 - STABILITY AND REACTIVITY."
	Specific Hygiene Measures	Wash hands thoroughly after handling.
Storage	Incompatible products	Refer to "Section 10 - STABILITY AND REACTIVITY."

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Administration Level / Permissible Concentration

	ACGIH TLV	OSHA PEL
TONER	3 mg/m ³ (for Respiratory dust) 10 mg/m ³ (for Total dust)	3 mg/m ³ (for Respiratory dust) 10 mg/m ³ (for Total dust)
Carbon black	TWA 3.5 mg/m ³ ; A3	TWA 3.5 mg/m ³
Silicon dioxide (amorphous)	10 mg/m ³	6 mg/m ³

NOTE:

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

Engineering Controls

Install a local ventilation equipment

A general proper ventilation is enough to control concentration in air.

Personal
Protective
Equipment

Respiratory
Protection

If ventilation is insufficient, wear an adequate protective apparatus for respiratory organs.

Use a personal protective apparatus for respiratory organs whenever necessary.

Wear an adequate protective apparatus for respiratory organs.

Hand Protection

Use necessary personal protective gloves.

Eye Protection

Use a personal eye protector whenever necessary.

Skin and Body
Protection

Use the personal protective clothing and full face mask whenever necessary.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Appearance	Solid
	Physical State	Solid (powder)
	Color	Black
Odor		Odorless
Melting Point		110°C
Specific Gravity (Density)		1.15
Solubility		Insoluble in water
Dust Explosion Lower Limit		40 g/m ³

SECTION 10: STABILITY AND REACTIVITY

Reactivity	No information available
Chemical Stability	Stable
Possibility of Hazardous Reactions	No information available
Conditions to Avoid	Heat, Flames, Sparks
Incompatible Materials	Oxidizing agent
Hazardous Decomposition Products	No information available

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity			
Oral	LD50	Rat	>2000 mg/kg (OECD 423)
Inhalation(dust)	LC50	Rat	> 5.15 mg/l (OECD 403)
Other Health Hazards			
	Ames Test	Negative	(OECD 471)
	Dermal Irritation	Non-irritant	(OECD 404)
	Eye Irritation	Minimal Irritant	(OECD 405)
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.		
Silicon dioxide(amorphous)	This product contains Amorphous Fumed Silica. Amorphous Fumed Silica is listed by the International Agency for Research on Cancer (IARC) as a Group 3 carcinogen (Not Classifiable).		
PMMA (Polymethyl methacrylate)	This product contains Polymethyl methacrylate(PMMA). PMMA is listed by the International Agency for Research on Cancer (IARC) as a Group 3 carcinogen (Not Classifiable).		

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION No information available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Residues	<p>For disposal, conform with the standards provided by related laws and local public bodies.</p> <p>The burying processing is done as incineration or non-dangerous waste with the incineration system that has the exhaust equipment such as afterburners and scrubbers (alkali cleaning solution).</p> <p>This material is not a hazardous waste per Federal Regulation 40 CFR 261 when disposed.</p> <p>Consult with the appropriate State and Local Waste Authorities for additional information. Incinerate only in a closed container.</p>
Contaminated Container and Packaging	<p>It conforms to the law on Waste Disposal and Cleaning.</p> <p>It follows the guidance of each municipality though the pulp and paper are treatable as the municipal waste. Plastic ̀ reclaims as industrial waste after the melt or incineration and is processed.</p>

SECTION 14: TRANSPORT INFORMATION

International Regulations

Maritime Regulatory Information

UN No. N/A

Aviation Regulatory Information

UN No. N/A

Japanese Regulations

Maritime Regulatory Information

UN No. N/A

Aviation Regulatory Information

UN No. N/A

Special Safety Measures

Not regulated under DOT, IATA.

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.

Hazard Rating System Classification

	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	

SECTION 15: REGULATORY INFORMATION

Inventories:

ENCS Yes

TSCA Yes

EINECS / ELINCS Yes

Information on the label (according to 1999/45/EC and 67/548/EEC) Symbol, R-Phrase, S-Phrase:

Not required.

SECTION 16: OTHER INFORMATION

Reference Literature	The classification of chemicals of this MSDS was based on GHS of JIS Z 7252(2009).
Other Property	<p>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.</p> <p>User's Responsibility: If you use this product for food, medical care and another special use, please use under your confirmation of safety for that use.</p> <p>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.</p>