

Principle Routes of Exposure	Inhalation
Acute toxicity	
Eyes	No known effect
Skin	No known effect
Inhalation	No known effect
Ingestion	No known effect
Chronic effects	
Main symptoms	Overexposure may cause: mild respiratory irritation similar to nuisance dust.
Aggravated medical conditions	None under normal use conditions
Environmental hazard	The environmental impact of this product has not been fully investigated. However, this preparation is not expected to present significant adverse environmental effects.

3. Composition/Information on Ingredients

Chemical Name	CAS-No	Weight %
Styrene/butadiene copolymer	9003-55-8	60-65
Magnetite	1317-61-9	20-30
Polyethylene wax	9002-88-4	5-10
Carbon Black	1333-86-4	<5

4. First Aid Measures

General advice	For external use only. When symptoms persist or in all cases of doubt seek medical advice. Show this material safety data sheet to the doctor in attendance.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes
Skin contact	Wash skin with soap and water
Inhalation	Move to fresh air
Ingestion	Rinse mouth with water and afterwards drink plenty of water or milk
Notes to physician	Treat symptomatically
Protection of first-aiders	No special protective equipment required

5. Fire-Fighting Measures

Flammable properties	Not flammable. Will not readily ignite
Flash point	Not applicable
Suitable extinguishing media	Use water spray or fog; do not use straight streams, Foam
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire

Specific hazards arising from the chemical
 Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard

Hazardous combustion products	Hazardous decomposition products due to incomplete combustion Carbon oxides Nitrogen oxides (NOx)
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Explosion Data

Sensitivity to Mechanical Impact
Sensitivity to Static Discharge

Not impact sensitive
 Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard

Note See Section 9 for physical properties related to explosibility

Protective Equipment and Precautions for Firefighters

In the event of fire and/or explosion do not breathe fumes. Wear fire/flame resistant/retardant clothing. Use self-contained pressure-demand breathing apparatus if needed to prevent exposure to smoke or airborne toxins.

6. Accidental Release Measures

Personal Precautions	Avoid breathing dust
Environmental Precautions	No special environmental precautions required
Methods for containment	Prevent dust cloud
Methods for cleaning up	Prevent dust cloud. Sweep up or vacuum up spillage and collect in suitable container for disposal. Use non-sparking tools and equipment. Avoid ignition sources.
Other Information	The environmental impact of this product has not been fully investigated. However, this preparation is not expected to present significant adverse environmental effects.

7. Handling and Storage

Advice on safe handling	Handling practices and processes should be consistent with the safe handling of combustible dust. Prevent dust cloud In case of insufficient ventilation, wear suitable respiratory equipment Keep away from open flames, hot surfaces and sources of ignition Take precautionary measures against static discharges
Technical measures/Storage conditions	Keep container tightly closed in a dry and well-ventilated place Store at room temperature
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice
Industrial User	Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of workday Provide regular cleaning of equipment, work area and clothing.

8. Exposure Controls/Personal Protection

Exposure guidelines

Product information

ACGIH TLV TWA	10 mg/m ³ (inhalable particles)
ACGIH TLV TWA	3 mg/m ³ (respirable dust)
OSHA PEL TWA	15 mg/m ³ (total dust)
OSHA PEL TWA	5 mg/m ³ (respirable dust)
Xerox Exposure Limit	2.5 mg/m ³ (total dust)
Xerox Exposure Limit	0.4 mg/m ³ (respirable dust)

Other Information

The results obtained from a Xerox sponsored Chronic Toner Inhalation Study demonstrated no lung changes in rats for the lowest (1 mg/m³) exposure level (the level most relevant to potential human exposure). A very slight degree of fibrosis was noted in 25% of animals at the middle (4mg/m³) exposure level, while a slight degree of fibrosis was noted in all the animals at the highest (16 mg/m³) exposure level. These findings are attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged period. This study was conducted using a special test toner to comply with an EPA testing protocol.

Occupational Exposure Controls

Engineering measures	Engineering controls should be used to maintain airborne dust levels below established exposure limits
Industrial use	Equipment and processes should be designed and operated in accordance with directives for safe handling of combustible dust. Provide appropriate exhaust ventilation at places where dust is formed. Ensure all equipment is electrically grounded before beginning transfer operations.

Personal Protective Equipment

Industrial use / Bulk containers

Respiratory protection	No special protective equipment required
Eye/Face protection	No special protective equipment required
Skin and body protection	No special protective equipment required
Hand protection	No special protective equipment required

Industrial use If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn Wear protective eyewear (goggles)

9. Physical and Chemical Properties

Appearance	Powder	Odor	Faint
Odor threshold	Not applicable	Physical state	Solid
pH	Not applicable	Color	Black
Flash point	Not applicable	Boiling point/range	Not applicable
Softening point	49 - 60 °C / 120 - 140 °F	Autoignition temperature	Not applicable

Flammability Limits in Air Not applicable

Explosive properties (Method: ASTM E 1226 Standard Test Method for Explosibility of Dust Clouds)

Maximum rate of explosion pressure rise (KSt)	185 - 278 m ³ bars/sec
Maximum explosion pressure (Pmax)	7.9 - 9.0 bar
Minimum ignition energy	<3 millijoules

Vapor pressure	Not applicable
Vapor density	Not applicable
Water solubility	Negligible
Viscosity	Not applicable
Partition coefficient	Not applicable
Evaporation rate	Not applicable

Melting point/range Not determined
Freezing point Not applicable
Decomposition temperature Not determined
Specific gravity ~ 1

10. Stability and Reactivity

Reactivity No dangerous reaction known under conditions of normal use
Stability Stable under normal conditions
Incompatible products None
Conditions to Avoid Heat, flames and sparks
 Take precautionary measures against static discharges
 Prevent dust cloud
Hazardous Decomposition Products None under normal use
Hazardous polymerization Hazardous polymerization does not occur
Hazardous reactions None under normal processing

11. Toxicological Information

The toxicity data noted below is based on the test results of similar reprographic materials.

Acute toxicity

Product information

Irritation No skin irritation, No eye irritation
LD50 Oral > 5 g/kg (rat)
LD50 Dermal > 5 g/kg (rabbit)
LC50 Inhalation: > 5 mg/L (rat, 4 hr)

Eyes No known effect
Skin No known effect
Inhalation No known effect
Ingestion No known effect

Chronic toxicity

Product information

Chronic effects No known effects under normal use conditions
Main symptoms **Overexposure may cause:** mild respiratory irritation similar to nuisance dust.
Aggravated medical conditions None under normal use conditions
Carcinogenicity See "Other Information" in this section.

Chemical Name	IARC	NTP
Carbon Black	2B	

Other information

The IARC (International Agency for Research on Cancer) has listed carbon black as "possibly carcinogenic to humans". The classification is based on studies evaluating pure, "free" carbon black. In contrast, toner is a formulation composed of specially prepared polymer and a small amount of carbon black (or other pigment). In the process of making toner, the small amount of carbon black becomes encapsulated within a matrix. Xerox has performed extensive testing of toner, including a chronic bioassay (test for potential carcinogenicity). Exposure to toner did not produce evidence of cancer in exposed animals. The results were submitted to regulatory agencies and published extensively.

Other toxic effects

Product information

Sensitization	No sensitization responses were observed
Mutagenic effects	Not mutagenic in AMES Test
Developmental toxicity	None known.
Teratogenicity	None known
Target organ effects	None known
Other adverse effects	None known
Aspiration Hazard	Not applicable

12. Ecological Information

Ecotoxicity

The environmental impact of this product has not been fully investigated. However, this preparation is not expected to present significant adverse environmental effects.

Persistence and degradability No information available.

13. Disposal Considerations

Waste Disposal Methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging Dispose of in accordance with local regulations.

14. Transport Information

Note This material is not subject to regulation as a hazardous material for shipping.

15. Regulatory Information

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Clean Water Act

This product is not regulated as a pollutant pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product is not regulated as a hazardous air pollutant (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

