

# Safety Data Sheet



A World-Class Toner Manufacturer

## 1. Identification of the Substance or Preparation and the Company

**Product identifier:** JLT-070

**Product description:** Black toner powder

**Supplier:** Jadi Imaging Technologies Sdn Bhd  
No. 1, Jalan Peguam U1/25A, Seksyen U1,  
Hicom-Glenmarie Industrial Park,  
40150 Shah Alam. Selangor Darul Ehsan.  
Malaysia.

**Email address of contact responsible for safety data sheet:** [hse@jadi.com.my](mailto:hse@jadi.com.my)

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Fax: +603 7804 3211 (Attn: R&D/ HSE)  
Jadi Imaging Technologies Sdn Bhd

**Relevant identified uses of the substance or preparation:** Filled in assembled cartridges for use in laser printers

**Date of last issue / Revision number:** 2018-07-02 / 02

## 2. Hazard(s) Identification

**Classification of the substance or mixture:** Not classified as hazardous mixture in accordance to GHS classification or CLP Regulation (EC) No. 1272/2008 and its amendments. Not classified as a dangerous preparation according to the European Directives 1999/45/EEC and its amendments.

**Labelling elements:** Hazard pictograms: Not applicable.  
Signal word: No signal word.  
Hazard statements: Not applicable.  
Precautionary statements:  
Prevention: Not applicable.  
Response: Not applicable.  
Storage: Not applicable.  
Disposal: Not applicable.  
Hazardous ingredients: Not applicable.

**Other hazards which do not result in classification:** Dust explosion (like most finely divided dust powders).

## 3. Composition/ Information on Ingredients(\*)

Component/Substance	% by weight	CAS no.	EINECS no.	REACH REG no.
Styrene-acrylate copolymer	40 – 60	58048-89-8	Registered	Not classified
Iron oxide	35 – 55	1317-61-9	215-277-5	Not classified
C.I. Solvent Violet 21	< 2	31714-55-3	250-774-0	Not classified
Wax	1 – 3	9010-79-1	Registered	Not classified
Amorphous silica	< 3	7631-86-9	231-545-4	Not classified

#### 4. First-aid Measures

<b>Skin contact</b>	Wash affected area with mild soap and water. Get medical attention if irritation develops or persists.
<b>Eye contact</b>	Flush with large amounts of clean water at low pressure for at least 15 minutes or until particles are removed. Consult a physician if irritation persists.
<b>Inhalation</b>	Remove from exposure to fresh air and gargle with plenty of water. Consult a physician if irritation such as coughing persists.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Drink one or two glasses of water. Seek medical treatment if necessary.

#### 5. Fire-fighting Measures

<b>Flash point and method</b>	Not applicable
<b>Auto ignition temperature</b>	Not applicable
<b>Hazardous combustion products</b>	Carbon monoxide (CO) and carbon dioxide (CO <sub>2</sub> )
<b>Extinguishing media</b>	CO <sub>2</sub> , water, foam, powder or dry chemicals
<b>Unsuitable extinguishing media</b>	None known.
<b>Unusual fire and explosion hazard</b>	Like most organic material in powder form, dust may form explosive mixture with air when finely dispersed in air. Generates massive smoke during fire.
<b>Special fire-fighting procedures</b>	Avoid breathing fire vapours.

#### 6. Accidental Release Measures

<b>Personal precautions</b>	Minimize dust generation and accumulation. Avoid inhalation, ingestion, eye and skin contact in case of accidental release.
<b>Protective equipment</b>	Use respiratory, eye and skin protections when cleaning spills.
<b>Emergency procedures</b>	Cordon off area affected by spillage prior to clean-up.
<b>Environmental precautions</b>	Do not release into surface water or sanitary sewer system. Refer to section 13 on disposal considerations.
<b>Procedures if material is released or spilled</b>	Gather the released dust by vacuum or slowly sweep the material into a bag or other sealed container. If a vacuum is used, the motor must be rated as dust explosion-proof. Clean the remainder with a damp cloth. Fine powder can form explosive dust-air mixtures. Dispose of in compliance with local regulations.

#### 7. Handling and Storage

<b>Handling precautions</b>	Avoid breathing dust and use with adequate ventilation.
<b>Storage precautions</b>	Store at cool condition (max temp 38 deg. C / 100deg. F) in original container. Keep container tightly closed and dry. Store away from strong oxidizers.

#### 8. Exposure Controls/ Personal Protection

<b>Exposure limit values</b>	USA OSHA (TWA/PEL): 15 mg/m <sup>3</sup> (Total dust), 5 mg/m <sup>3</sup> (Respirable fraction), 80 mg/m <sup>3</sup> /%SiO <sub>2</sub> (Amorphous silica), 3.5 mg/m <sup>3</sup> (Carbon black), 15 mg/m <sup>3</sup> (Titanium dioxide - total dust) ACGIH (TWA/TLV): 10 mg/m <sup>3</sup> (Inhalable Particulate), 3 mg/m <sup>3</sup> (Respirable particulate), 10 mg/m <sup>3</sup> (Amorphous silica), 3.5 mg/m <sup>3</sup> (Carbon black), 10 mg/m <sup>3</sup> (Titanium dioxide) DFG-MAK: , 4 mg/m <sup>3</sup> (Inhalable fraction), 1.5 mg/m <sup>3</sup> (Respirable fraction), 4 mg/m <sup>3</sup> (Amorphous silica)
<b>Personal protective equipment</b>	Respiratory, eye and skin protections are required during use.
<b>Engineering controls</b>	Use in areas with local exhaust ventilation.

## 9. Physical and Chemical Properties

<b>pH</b>	Not applicable
<b>Vapor pressure</b>	Not applicable
<b>Initial boiling point and range</b>	Not applicable
<b>Flash point</b>	Not applicable
<b>Evaporation rate</b>	Not applicable
<b>Melting point</b>	> 90 °C
<b>Decomposition temperature</b>	> 300 °C
<b>Auto-ignition temperature</b>	Not applicable
<b>Appearance</b>	
<b>Physical state</b>	Solid
<b>Form</b>	Fine powder
<b>Color</b>	Black
<b>Odor</b>	Odorless to slight plastic odor
<b>Odor threshold</b>	Not available
<b>Specific gravity (Water=1)</b>	0.30 ~ 0.70
<b>Relative density</b>	Not available
<b>Vapor density</b>	Not applicable
<b>Solubility</b>	Negligible in water. Partially soluble in toluene and xylene.
<b>Viscosity</b>	Not applicable
<b>Flammability</b>	Not flammable
<b>Upper flammability in air, %vol</b>	Not available
<b>Lower flammability in air, %vol</b>	Not available
<b>Partition coefficient: n-octanol/ water</b>	Not available
<b>Oxidizing properties</b>	No information available

## 10. Stability and Reactivity

<b>Reactivity</b>	Not applicable.
<b>Stability</b>	Stable under normal storage conditions.
<b>Possibility of hazardous reactions</b>	None identified. Hazardous polymerization will not occur.
<b>Hazardous decomposition products</b>	Carbon monoxide (CO) and carbon dioxide (CO <sub>2</sub> )
<b>Incompatibility</b>	Strong oxidizers
<b>Conditions to avoid</b>	Ignition and fire source when dust is finely dispersed in air.

## 11. Toxicological Information

Complete toxicity data are not available for this specific formulation.

Refer to Section 3 for potential health effects and Section 4 for first aid measures.

<b>Acute dermal irritation</b>	Not classified as irritant, according to OSHA Hazard Communication Standard (HCS) and EU Directive 67/548/EEC and as amended.
<b>Acute eye irritation</b>	Not classified as irritant, according to OSHA Hazard Communication Standard (HCS) and EU Directive 67/548/EEC and as amended.
<b>Sensitization</b>	Not classified as a sensitizer according to EU Directive 67/548/EEC and as amended, and OSHA HCS (US).
<b>Chronic toxicity</b>	No information available.
<b>Acute oral toxicity</b>	(rat) LD <sub>50</sub> > 2000 mg/kg (estimated from other products containing similar materials)
<b>Acute inhalation toxicity</b>	(rat) LC <sub>50</sub> (4hr) > 5.0mg/L
<b>Carcinogenicity</b>	<u>Information of Ingredients:</u> No carcinogen or potential carcinogen, (except carbon black and titanium dioxide) according to IARC, Japan Association on Industrial Health, ACGIH, EPA, OSHA, NTP, MAK, California Proposition 65, TRGS 905 and (EC)No 1272/2008 AnnexVI

Table 3.2.

The IARC re-evaluated carbon black and titanium dioxide as a Group 2B carcinogen (possibly carcinogenic to humans) as the result of inhalation exposure test in rats. But, oral/skin test does not show carcinogenicity. (4) The evaluation of carbon black 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.

The studies performed in animal models other than rats have not demonstrated an association between carbon black and lung tumors. Moreover, a two-years cancer bioassay using a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development in rats. (1)

In the animal chronic inhalation studies for titanium dioxide, the lung tumor was observed in only rats. It is estimated that this is attributed to the overload of rat's lung clearance mechanism (overload phenomenon). (5) The inhalation of excessive titanium dioxide does not occur in normal use and circumstances. Also, epidemiological studies to date have not revealed any evidence of the relation between occupational exposure to titanium dioxide and respiratory tract diseases.

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 (16 mg/m<sup>3</sup>) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animal in the middle (4 mg/m<sup>3</sup>) exposure group. (1) But no pulmonary change was reported in the lowest (1 mg/m<sup>3</sup>) exposure group, the most relevant level to potential human exposures.

Other information:

None

**Mutagenicity** Negative, does not indicate mutagenic potential (Ames Test: Salmonella typhimurium)

**Reproductive toxicity** Not classified as toxic according to EU Directive 67/548/EEC and as amended, California Proposition 65, and DFG (Germany).

**Symptoms and target organs**

NIOSH – Pocket Guide – Target Organs

Amorphous silica                      7631-86-9                      respiratory system, eyes

**12. Ecological Information**

**Ecotoxicity** Based on available data of similar material, toner is identified as non-harmful to aquatic organisms.

**Persistence and degradability** Not available.

**Bioaccumulative potential** Not available.

**Mobility in soil** Not available.

**Other adverse effects** Not available.

**13. Disposal Considerations**

**Disposal instructions** Dispose of in accordance to federal, state, and local regulations.

**14. Transport Information**

Not regulated under DOT, IMDG, IATA, ADR or RID.  
Any transportation practice must be in compliance with law & regulations.

**UN No.** None

**UN Shipping Name** None

**UN Classification** None

**UN Packing Group** None

**Special Precautions** None

**15. Regulatory Information**

**International regulations** All chemical substances in this preparation have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

## 16. Other Information

**Disclaimer:** To the best of our present knowledge and experience, the information contained herein is believed to be accurate. However, no warranty is made. In addition to the information provided herein, users are advised to consider supplementing with other information from suitable sources, and arrive at their own independent judgment on whether the information is accurate and complete so as to ensure proper use and disposal for the safety of their staff and customers.

### <Reference>

- (1) • Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats H. Muhle et. al., Fundamental and Applied Toxicology 17. 280-299 (1991)
  - Lung Clearance and Retention of Toner, Utilizing a Tracer Technique, during Chronic Inhalation Exposure in Rats B. Bellmann, Fundamental and Applied Toxicology 17. 300-313 (1991)
- (2) ACGIH TLV (Threshold Limit Values)
- (3) OSHA PEL (Permissible Exposure Limits)
- (4) IARC Monograph on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol. 93
- (5) NIOSH CURRENT INTELLIGENCE BULLETIN "Evaluation of Health Hazard and Recommendation for Occupational Exposure to Titanium Dioxide DRAFT"
  - ISO 11014-1 Safety data sheet for chemical products
  - Regulation (EC) No 1907/2006

### <Abbreviation>

ACGIH: American Conference of Governmental Industrial Hygienists  
2010 TLVs and BEIs (Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices)

OSHA: Occupational Safety and Health Administration (29 CFR Part 1910 Subpart Z)

TWA: Time Weighted Average

IARC: International Agency for Research on Cancer  
(IARC Monographs on the Evaluations of Carcinogenic Risks to Humans)

EPA: Environmental Protection Agency (Integrated Risk Information System) (USA)

NTP: National Toxicology Program (Report on Carcinogens) (USA)

MAK: Maximale Arbeitsplatz-Konzentrationen (List of MAK and BAT Values 2009)  
(DFG: Deutsche Forschungsgemeinschaft)

Proposition 65: California, Safe Drinking Water and Toxic Enforcement Act of 1986

TRGS905: Technische Regeln für Gefahrstoffe (Deutsche)

(EC) No. 1272/2008 Annex VI Table 3.2: Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) Annex VI Table 3.2

UN: United Nations

TSCA: Toxic Substances Control Act (USA)

EINICS: European Inventory of Existing Commercial Substances

ELINCS: European List of Notified Chemical Substances

EU: European Union

CAS: Chemical Abstracts Service

CFR: Code of Federal Regulations