

Material Safety Data Sheet
In according to the Regulation (CE) n. 1907/2006 REACH
Issue date: 29/07/2011 data Rev. Date: 29/11/2015
Data Sheet B0987in Rev. n. 1

1. Identification of the Product and of the Company

Product name: TONER CARTRIDGE d-Copia 3500MF 4500MF 5500MF
4500MF Plus 5500MF Plus

Code number: B0987

Product description: Cartridge containing black toner powder

Company name: Olivetti S.p.A.
Via Jervis 77
10015 Ivrea (TO) - ITALY

For information: Tel. 0039 (0)125 775710
Fax 0039 (0)125 775711
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For emergency: Centro Antiveleni-Ospedale Niguarda (Milano)
0039 (0)2 66101029

2. Hazards identification

Classification according to Regulation (EC) No. 1272/2008 [CLP] Not classified as dangerous

Labelling according to Regulation (EC) No. 1272/2008 [CLP] No labelling is applicable

3. Composition/information on ingredients

Substance [] Preparation [X]

Chemical Name	% w/w	CAS number	EINECS number
Polyester resin	65-75	+++	-
Carbon black	5-10	1333-86-4	215-609-9
Ferrite (Ferrite including Manganese)	1-10 (Mn <2)	66402-68-4	-
Amorphous silica	1-5	7631-86-9	231-545-4
Titanium dioxide	<1	13463-67-7	236-675-5

+++ : Supplier's confidential information

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4. First – aid measures

Inhalation:	Remove from exposure to fresh air and gargle with plenty of water. Consult a doctor in case of such symptoms as coughing.
Skin contact:	Wash with soap and water.
Eye contact:	Flush with water immediately and see a doctor if irritating.
Ingestion:	Rinse out the mouth. Drink one or two glasses of water to dilute. Seek medical treatment if necessary.

5. Fire- fighting measures

Extinguishing Media:	Water (Sprinkle with water), Foam, Powder, CO ₂ or Dry Chemical Extinguisher
Fire-Fighting Procedure:	Pay attention not to blow away toner powder. Drain water off around and decrease the atmosphere temperature to extinguish the fire.

6. Accidental release measures

Personal precautions:	Avoid inhalation, ingestion, eye, skin contact in case of accidental toner release.
Environmental precautions:	Do not release into drains and surface water.
Methods for Cleaning-up:	Gather the released toner not to blow away and wipe up with a wet cloth.

7. Handling and storage

Handling:	Never open the toner container.
Storage:	Keep the toner container tightly closed and store in a cool, dry and dark place keeping away from fire. Keep away from children.

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8. Exposure controls/personal protection

Engineer Measures

Ventilation: Ventilator is not require under normal use.

Control Parameters

ACGIH-TLV (2008)-TWA: Inhalable fraction 10 mg/m³, Respirable fraction 3 mg/m³

Manganese compounds (Ferrite component) 0.2 mg/ m³

Carbon black 3.5 mg/m³ Titanium dioxide 10 mg/m³

OSHA-PEL (2006)-TWA: Total Dust 15 mg/m³, Respirable fraction 5 mg/m³

Manganese compounds (Ferrite component) 5 mg/ m³ (Ceiling)
(as Mn)

Carbon black 3.5 mg/m³ , Amorphous silica 80 mg/m³/%SiO₂

Titanium dioxide 15 mg/m³(total dust)

Protective Equipment:

Respiratory protection, eye protection, hand protection, skin and body protection are not required under normal use.

9. Physical and chemical properties

Physical state:	Solid
Appearance:	Powder
Colour:	Black
Odour:	Odorless
pH:	No data available
Boiling point (°C):	No data available
Fusion point (°C):	100-120
Flash Point (°C):	No data available
Auto-Ignition Temperature (°C):	No data available
Upper/ lower flammability or explosive limits:	No data available
Explosion Properties:	No data available
Evaporation rate:	No data available
Vapor Pressure:	No data available
Vapor density:	No data available
Specific Gravity:	1.2 – 1.4 g/cm ³
Solubility:	Insoluble in water
Partition Coefficient, n-Octanol/Water:	No data available
Decomposition temperature:	No data available

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10. Stability and reactivity

Stability/Reactivity: Stable under normal use.

Hazardous Decomposition Products: None

11. Toxicological information

- Acute oral toxicity:** (rat) LD₅₀>2000mg/kg
(Estimated from other products containing same materials) [Toner]
(rat)LD₅₀>2500mg/kg
(Estimated from the data of constituent materials) [Carrier]
- Acute dermal toxicity:** (rat)LD₅₀>2000mg/kg
(Estimated from other products containing same materials) [Toner]
(rat)LD₅₀>2000mg/kg
(Estimated from the data of constituent materials) [Carrier]
- Acute inhalation toxicity:** (rat)LC₅₀(4h) >5.0mg/l
(Estimated from other products containing same materials) [Toner]
- Acute eye irritation:** (rabbit) Minimal irritant
(Estimated from other products containing same materials) [Toner]
- Acute skin irritation:** (rabbit) Non-irritant
(Estimated from other products containing same materials) [Toner]
(rabbit) Non-irritant
(Estimated from the data of constituent materials) [Carrier]
- Skin sensitisation:** (mouse) Non-sensitiser
(Estimated from other products containing same materials) [Toner]
(guinea pig) Non-sensitiser
(Estimated from the data of constituent materials) [Carrier]
- Mutagenicity:** Ames test is negative [Toner]
Ames test is negative
(Estimated from the data of constituent materials) [Carrier]
No mutagen, according to MAK, TRGS905 e (EC)No 1272/2008 Annex VI table 3.2.
- Reproductive Toxicity:** No reproductive toxicant, according to MAK, California Proposition 65, TRGS 905(EC)No 1272/2008 Annex VI table 3.2.
- Carcinogenicity:** No carcinogen or potential carcinogen, (except carbon black and titanium dioxide) according to IARC, Japan Association on Industrial Health, ACGIH, EPA, OSHA, NTP, ILO, MAK, California Proposition 65, TRGS 905 and (EC)No 1272/2008 Annex VI table 3.2.

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11. Toxicological information

The IARC reevaluated Carbon black and titanium dioxide as a Group 2B carcinogen (possibly carcinogenic humans) as the result of inhalation exposure test in rats. But, oral/skin test does not show carcinogenicity. 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. In the animal chronic inhalation studies for titanium dioxide, the lung tumor was observed in only rats. It is estimated that is attributed to the overload of rat's lung clearance mechanism (overload phenomenon). The inhalation of excessive titanium dioxide dose not occur in normal use of this product. Also, epidemiological studies to date have not revealed any evidence of the relation between occupational exposure to titanium dioxide and respiratory tract disease.

Chronic effect: 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 (16mg/m³) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animal in the middle (4 mg/m³) exposure group. But no pulmonary change was reported in the lowest (1mg/m³) exposure group, the most relevant level to potential human exposures.

Other information: None

12. Ecological information

Toxicity	No data available
Persistence and degradability	No data available
Mobility	No data available

13. Disposal considerations

Do not incinerate the toner cartridge or unit and the waste toner. They can give off dangerous sparks that can cause burns

When disposing of the waste or recovered material, consult federal, state and/or local regulations for the proper disposal method.

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14. Transport information

UN No:	None
UN Shipping Name:	None
UN Classification:	None
UN Packaging Group:	None
Special Precaution:	None

15. Regulatory information

EU Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

- Regulation (EC) No 2037/2000 of the European Parliament and of the Council on Substances That Deplete the Ozone Layer: Not applicable
- Regulation (EC) No 850/2004 of the European Parliament and of the Council on Persistent Organic Pollutants and Amending Directive 79/117/EEC (POPs): Not applicable
- Regulation (EU) No 649/2012 of the European Parliament and of the Council on Concerning the Export and Import of Dangerous Chemicals (PIC): Not applicable
- Directive 2012/18/EU of the European Parliament and of the Council on the Control of Major-Accident Hazards Involving Dangerous Substances, Amending and Subsequently Repealing Council Directive 96/82/EC, (Seveso III): Not applicable
- Regulation (EC) No 1907/2006 of the European Parliament and of the Council:
 - Annex XIV- List of Substances Subject To Authorization: Not applicable
 - Annex XVII- Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles: Not applicable

For this product a chemical safety assessment was not carried out.

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16. Other information

This Material Safety Data Sheet was prepared in according to the Regulation (CE) n. 1907/2006 REACH and Regulation 1272/2008.

This information adds to those contained in the "Instructions of use" for same product, but does not substitute them.

The information contained herein relates only to the referred product as manufactured and put into the market, and is not valid for other combinations of same materials.

It is the user's responsibility to determine the suitability of such information for his intended use.

<Abbreviation>

ACGIH:	American Conference of Governamental Industrial Hygienists
PEL:	Permissible Exposure Limit
OSHA:	Occupational Safety and Health Administration
TLV:	Threshold Limit Value
TWA:	ghted Average
MAK:	MAK (Maximale Arbeitsplatzkonzentrationen) under Deutsche Forschungsgemeinschaft
TRGS:	Technische Regeln fur Gefahrstoffe (Deutsche)
IARC:	International Agency for Research on Cancer
EPA:	Environmental Protection Agency (USA)
NTP:	National Toxicology Program
ILO:	International Labour Office
UN:	United Nations
TSCA:	Toxic Substances Control Act (USA)

Reference

ISO 11014-1 Safety data sheet for chemical products
Commission Directive 91/155/EEC and 2001/58/EC
Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats - H.Muhle et.la Fundamental and Applied Toxicology 17.280.299 (1991)
Lung Clereance and Retention of Toner, Utilizing a Tracer Technique, during Chronic Inhalation Exposure in Rats – B.Bellmann Fundamental and Applied Toxicology 17.300-313(1991)
ACGHI TLV (Thereshold limit Values)
OSHA PEL (Permissible Exposure Limits)
IARC Monograph on the Evaluation of the Carcinogenic Risk of Chemical to Humans Vol.93
NOISH CURRENT INTELLIGENCE BULLETIN "Evaluation of Health Hazard and Recommendation for Occupation Exposure of Health Hazard and Recommendation for Occupational Exposure ti Titanium DioxideDRAFT

Changes to previous review >

- changes to the following sections were modified : 1 and 2 .