Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)

SECTION 1: Identification of the mixture and of the company

1.1 Product identifier

Article description: Toner cartridge
Group number: 2527,0000

1.2. Relevant identified uses of the mixture and uses advised against:

This product is a toner used in printers and copiers.

Sector of Use:
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftmen).

Application of the mixture:
Laser printers.

1.3 Details of the supplier of the safety data sheet:

Manufacturer:
Name: KMP PrintTechnik AG,
Address: Pfarrer-Findl-Strasse 40, D-84307 Eggenfelden, Germany
e-mail: info@kmp.com

1.4 EMERGENCY TELEPHONE NUMBER:

+49 8721 773-60 Mo - Th 8:00 am to 5:00 pm Fr 8:00 am to 2:00 pm

SECTION 2: Hazards identification

2.1. Classification of the mixture:

Classification according to Directive 1999/45/EC [DPD]
This product is not classified as dangerous.
Classification according to Regulation (EC) No 1272/2008
The product is not classified as hazardous according to the CLP regulation.

Additional information:
Full text of H- and EUH-phrases: see SECTION 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
Hazard pictograms: Void
Signal word: Void
Hazard statements: Void
Precautionary statements: Void

2.3 Other hazards

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable

SECTION 3: information on ingredients

3.1 Mixtures

Description of the mixture:
Mixture

Substances in the Mixture referred to in Points 3.2.2 of Annex II to Regulation (EC) No 1907/2006
or referred to Part 2 of Annex II to Regulation (EC) No 1272/2008:

Chemical Identity of the Substance	EC No.	CAS No.	Ranges of % by mass	Concentration % Classification according the the directive(EG) Nr. 1272 [CLP]
				Hazard Class / Statement*
None				

* Full texts of Risk phrases and Hazard statements are listed in Section 16.

Substances in the Mixture not meeting the Criteria for Classification:

Compound	EC No.	CAS No.	Concentration %	Classification according the the directive (EG) Nr. 1272 [CLP]
Styrene Acrylic Copolymer	(Polymer)	(Polymer)	70-90	Not classified
Wax	Confidential	Confidential	5-15	Not classified
Carbon black	Confidential	Confidential	3-10	Not classified
Amorphous silica	231-545-4	7631-86-9	< 5	Not classified

Refer to Section 8 for the exposure limits and Section 11 for toxicological information.
These substances are indicated solely to help the recipients understand this mixture better, and not subject to Points 3.2.3 or 3.2.4 of Annex II to Regulation (EC) No 1907/2006.

Carcinogens:

This mixture contains titanium dioxide listed by IARC as Group 2B (possibly carcinogenic to humans); however, no significant exposure to titanium dioxide is thought to occur during the use of the product because titanium dioxide is mostly in a bound form in this mixture.

Substances in Annex XIV to Regulation (EC) No 1907/2006 (Authorization) or the Candidate List of SVHC:

None

Substances in Annex XVII to Regulation (EC) No 1907/2006 (Restriction):

None

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:	Take off contaminated clothing.
After inhalation:	Supply fresh air; consult doctor in case of symptoms.
After skin contact:	Wash with plenty of soap and water. If skin irritation continues, consult a doctor.
After eye contact:	Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
After swallowing:	Rinse out mouth and then drink plenty of water.

In case of persistent symptoms consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Carbon dioxide, water, foam, dry chemical.

Unsuitable extinguishing agents: High pressure media wich could cause the formation of a potentially explosible dust-air mixture.

5.2 Special hazards arising from the substance or mixture:

Dust Explosion: This mixture, like most organic powders, is capable of creating an explosive dust when particlesare dispersed in air.
Hazardous Combustion Products: Carbon monoxide and carbon dioxide.

5.3 Advice for fire-fighters:

Firefighters should wear protective equipment such as cloves, glasses, boots, and respiratory mask as needed.

Avoid generating dust wich could form explosible mixture with air.

Do not breathe fumes.

Keep containers cool with water spray if exposed to fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non emergency personnel:	Avoid dust formation Remove ignition sources Do not breathe dust Wear personal protective equipment as described in Section 8
For Emergency Responders:	Fabric for personal protective clothing should block particles of the products as small as 3 um.

6.2 Environmental precautions:

Do not discharge into drains or the environment.

6.3 Methods and material for containment and cleaning up:

Eliminate sources of ignition including sparks and flammables.
Nonsparking tools should be used.
Shelter the released material (powder) from wind to avoid dust formation and scattering.
Vacuum or sweep the material into a sealed container. If a vacuum cleaner is used, it must be dust explosion-proof.
Dispose of the materials in accordance with EU/national requirements.

6.4 Reference to other sections:

See Section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Minimize dust generation and accumulation.
Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.
Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
Keep away from excessive heat sources of ignition such as sparks and open flames
Handle in an adequately ventilated area.
Do not handle with strong oxidizers, wich may vigorously oxidize organic materials in this mixture and cause a fire in a extreme case.
Do not breathe dust.
Do not get in eyes or on skin
Wear personal protective equipment as recommended in Section 8.
Avoid spills. Do no release to drains.
Do not eat drink or smoke when handling this product.
Wash hands after handling this product.
Remove contaminated clothing and protective equipment before entering eating areas
Keep out of reach of children.

7.2 Conditions for safe storage, including any incompatibilities:

Keep container closed and store in well-ventilated dry place at room temperature.
Keep away from excessive heat and sources of ignition.
Do not store with strong oxidizers.
Avoid packaging materials yith plasticizer (e.g. Polyvinylchloride), wich may soften this product if directly contacted.
Keep out of reach of children.

7.3 Specific end uses:

This product is a toner used in electrophotographic printers and copiers.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits:

PRODUCT	EU OEL	GERMANY DFG MAK (8hr TWA)	UK HSE WEL (8hr TWA)	Sweden SWEA OEL LLV	ACGIH TLV (TWA)	USA OSHA PEL (TWA)
General dust or particulate not otherwise classified	Not established	Inhalable fraction 4mg/m3	Inhalable dust : 10mg/m3 Respirable dust : 4mg/m3	Dust and mist, organic total dust : 5mg/m3	Inhalable particulate : 10mg/m3 Respirable particulate : 3mg/m3	Total dust : 15mg/m3 Respirable fraction : 5mg/m3

INGREDIENT	EU OEL	GERMANY DFG MAK (8hr TWA)	UK HSE WEL (8hr TWA)	Sweden SWEA OEL LLV	ACGIH TLV (TWA)	USA OSHA PEL (TWA)
Carbon black	Not established	Not established	3,5mg/m3	Not established	3,5mg/m3	3,5mg/m3
Iron oxide	Not established	Inhalable fraction 4mg/m3	Inhalable dust : 10mg/m3 Respirable dust : 4mg/m3	Total dust : 5mg/m3	10mg/m3	Total dust 15mg/m3
Amorphous silica	Not established	Inhalable fraction : 4mg/m3	Inhalable dust: 6mg/m3 Respirable dust : 2,4mg3/m3	Not established	Not established	20 mppcf* or 80% SiO2 mg/m3 (*million particles per cubic foot)

EU: OEL (Occupational Exposure Limits at Community level under Directive 2004/37/EC Annex, 98/24/EC Annex, 91/322/EEC Annex, 2000/39/EC Annex, 2006/15/EC Annex and 2009/161/EU)

Germany: DFG (The Deutsche Forschungsgemeinschaft, German Research Foundation)
MAK (Maximale Arbeitsplatz-Konzentration, Maximum Workplace Concentration)
UK: HSE (Health and safety executive) WEL (Workplace Exposure Limits)

Sweden: SWA (Swedish Work Environment Authority) OEL (Occupational Exposure Limits)LLV (Level Limit Values)

ACGIH (American Conference of Government Industrial Hygienists): TLV (Threshold limit Value)

USA: OSHA (Occupational Safety and Health Administration) PEL (Permissible Exposure Limits)

Biological limit value: Not established
PNECs and DNELs: Not established

8.2 Exposure controls

Appropriate Engineering Controls: Good general ventilation should be sufficient under normal conditions of use

Personal protective equipment:

Individual protection measures, such as personal protective equipment:

Eye/Face protection:	Protectives goggles or safety glasses are recommended.
Skin protection:	Gloves are recommended.
Respiratory protection:	Personal respiratory mask is not required under normal conditions of use, but a respiratory is needed in case of dust formation.
Thermal hazard:	None anticipated.
Environmental exposure controls:	Avoid release to the environment.

SECTION 9 : Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Fine black powder. Mainly 5 to 15 micrometers.
Odor:	None or slight plastic-like odor
Odot Threshold:	No data available
pH:	Not applicable
Melting point / Freezing point:	Not applicable
Initial boiling point and boiling range:	Not applicable
Flash point:	Not applicable
Evaporation rate:	Not applicable
Flammability:	not flammable by running rate DOT/UN test N.1 (similar product)
Upper / Lower flammability or explosive limits:	no data available
Vapor pressure:	Not applicable
Vapor Density:	Not applicable
Relative density:	1.0-1.5 (water=1)
Solubility(ies):	Negligible in water. Partially soluble in some organic solvent such as toluene and tetrahydrofuran.
Partition coefficient (n-Octanol/water):	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	Not applicable
Explosive properties:	Finely dispersed particles form explosive mixture with air
Oxidizing properties:	No data available

9.2 Other information: None

SECTION 10: Stability and reactivity

10.1 Reactivity: stable under normal conditions.

10.2 Chemical stability: Stable under normal ambient, anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions: None except dust explosion when finely dispersed. Keep away from sources of ignition such as sparks and open flames.

10.4 Conditions to avoid: Excessive heat**,** Dust formation.

10.5 Incompatible materials: Strong oxidizers, which could vigorously oxidize organic materials in this mixture and cause a fire in an extreme case.

10.6 Hazardous decomposition products: Carbon monoxide (CO) and Carbon dioxide (CO_2)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute Toxicity

Ingestion:	LD50 rat > 5.000mg/kg (OECD 425) (a similar product)
Inhalation:	No test data available
Skin contact:	No test data available
Skin corrosion/irritation:	No test data available
Serious eye damage/irritation:	No test data available
Skin sensitization:	No test data available
Respiratory sensitization:	No test data available
Mutagenicity:	Ames test (Salmonella typhimurium; Escherichia Coli) negative. (a similar product)
Carcinogenecity:	No test data available Titanium dioxide is listed by IARC as Group 2B (possibly carcinogenic to humans); however, inhalation tests of titanium dioxide by Muhle et al. (Reference 2) showed no significant carcinogenicity. Moreover, IARC monograph vol. 93 states that exposure levels are assumed to be lower in the user industries, with the possible exception of workers who handle large quantities of titanium dioxide. Titanium oxide in this mixture is within small quantity and mostly in a bound form. Therefore, no significant exposure to titanium dioxide is thought to occur during the use of the product.
Toxicity for reproduction	No test data available
STOT (**Specific target organ toxicity**)-**single exposure:**	No test data available
STOT – **repeated exposure:**	No test data available

Inhalation test of a toner for two years showed no significant carcinogenicity. (Reference 1)

In rats chronic exposure to toner concentrations 4mg/m3 and over lead to an accumulation of particles in the lungs as well as to persistent inflammatory processes and slight to moderate fibrotic changes in the lungs of rats. In hamsters these effects were only observed at significantly higher concentrations (>20mg/m3). The particle accumulation in the lung tissue of the experimental animals is attributed to a damage and overload of the lung clearance mechanisms and is called “lung overloading”. This is not an effect specific to toner dust but is generally observed when high concentrations of other, slightly soluble dusts are inhaled. The lowest-observable-effect-level (LOEL) was 4mg/m3 and the no-observable-effect-level (NOEL) was 1 mg/m3 in rat. The NOEL was greater than 6mg/m3 in hamsters. (Reference 2) Toner concentration under the normal use of this product is estimated less than 1mg/m3.

Aspiration hazard: No test data available.

Other Information: None

SECTION 12: Ecological information

According to our test results of this or similar mixture and the information provided by the suppliers about the substances contained in this mixture, this mixture is not expected to be harmful to ecology.

12.1 Toxicity: No data available.

12.2 Persistence and degradability: No data available

12.3 Bioaccumulative potential: No data available.

12.4 Mobility in soil: No data available.

12.5 Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB under Regulation (EC) No 1907/2006.

12.6 Other adverse effects: No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material may be landfilled or incinerated in compliance with all EU/national/regional/local provisions. Do not dump this product into sewers, on the ground, or into any body of water.

SECTION 14: Transport information

14.1 UN-Number: None assigned in accordance with UN Model Regulations.

14.2 UN proper shipping name: None assigned in accordance with UN Model Regulations.

14.3 Transport hazard class(es): None assigned in accordance with UN Model Regulations.

14.4 Packing group: None assigned in accordance with UN Model Regulations.

14.5 Environment Hazards: Not classified as hazardous in accordance with the criteria of the UN Model Regulations.

14.6 Special precautions for user See Section 2 and 7.

14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code Not applicable.

UN Model regulations: Recommendations on the TRANSPORT OF DANGEROUS GOODS issued by UN.
MARPOL: The International Convention for the Prevention of Pollution from ships, 1973, as modified by the Protocol of 1978 relating to thereto.
IBC code: The International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).

SECTION 15: Regulatory information

Safety, health and environmental legislation specific for the mixture

EU Information

Directive 2011/35/EU (RoHs)	This mixture complies with the RoHS directive
Regulation (EC) No 850/2004	Not subject to the regulation
Regulation (EC) No 1005/2009:	Not subject to the regulation
Regulation (EC) No 649/2012:	Not subject to the regulation

(EC) No 850/2004: Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.
(EC) No 1005/2009: Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.
(EC) No 649/2012: Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

US Information
TSCA: All the substances in this mixture are listed or exempted in accordance with TSCA.
CERCLA Reportable Quantity (40 CFR 117,302): Not applicable
SARA Title III (EPCRA)
Section 302 (40 CFR 355): Not applicable
Section 311/312 (40 CFR 370): Immediate health hazard : No
(All the ingredients of this product are bound within the mixture)
Chronic health hazard: No
(All the ingredients of this product are bound within the mixture)
Sudden release of pressure hazard: No
Reactive hazard: No
Section 313 (40 CFR 372): Not applicable to this mixture

California proposition 65:
This product does not contains any chemicals listed by the State of California

15.2 Chemical Safety Assessment
No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

The information is furnished without warranty, express or implied, except that It is accurate to the best knowledge of Mitsubishi Kagaku Imaging Corporation ath the time of preparation of this document. It relates only to the specific material designated herein, and does not relate to use in combination with any other material or process. Mitsubishi Kagaku Imaging Corporation assumes no legal responsibility for use of or reliance upon this information. This document was prepared to comply with the requirements in the European Union and may not meet regulatory requirements in other regions.

Sections containing revisions and/or new statements:
Fully revised in accordance with the Annex II to Regulation (EC) No 1907/2006 replaced by the text set out in the Annex to COMISSION REGULATION (EU) 2015/830.
This document was prepared in accordance with Regulations (EC) No 1907/2006 (REACH) , 1272/2008 (CLP) and (EU) 2015/830 (amending REACH).

Annex to the extended Safety Data Sheet (eSDS): None

Abbreviations and acronyms:

ADN	Accord Europeen Relatif au transport international de marchandises dangereuses par voies de navigation intérieures (European Agreement Concerning the international carriage of dangerous goods by inland waterways)
ADR	Accord européen relative au transport international de marchandises dangereuses par route. (The european agreement on cross-border transportation of dangerous goods by road)
CAS	Chemicals abstracts service
CERCLA	Comprehensive environmental response compensation and liability Act
CFR	Code of federal regulations
CLP	Regulation (EC) No 1272/2008 of the European parliament and of the council of 16 December 2008 on classification; labelling and packaging of substances and mixtures, amending and repealing directives 67/548/EEC and 1999/45/EC, and amending regulation (EC) No 1907/2006.
DNEL	Derived no-effect level
DOT	Department of transportation
EC	European community
EC50	Half maximal (50%) Effective concentration
ErC50	EC50 in terms of reduction of growth rate
EEC	European economic community
EPCRA	Emergency planning and community right-to-know act
EU	European Union
GHS	Globally Harmonized system of classification and labelling of chemicals
IARC	International agency for research on cancer
IATA	International air transport association
ICAO	International civil aviation organization
IC50	half maximal (50%) inhibitory concentration
IMDG	International medical guide for ships
LD50	Lethal dose, 50% kill
OECD	Organisation for economic co-operation and development
OSHA	Occupational safety and health administration
PELs	Permissible exposure limits
PBT	Persistent, bioaccumulative and toxic
PNEC	Predicted no-effect concentration
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 december 2006 concerning the registration, evaluation, authorization and restriction

of chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing council regulation (EEC) No 793/93 and commission regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commision Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

RID Règlement international concernant le transport des marchandises dangereuses par chemin de fer (The international regulations covering transportation of dangerous goods by rail)

RoHS Directive 2011/65/EU of the European Parliament and of the council of 8 june 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

SARA Superfund Amendments and Erauthorization Act of 1986

SDS Safety data sheet

SVHC Substances of very high concern

TSCA Toxic substances control Act

TLV Threshold limit Value

TWA Time Weighted Average

UN United Nations

vPvB Very persistent and very bioaccumulative

Literature References:

(1) "Negative effect of long-term inhalation of toner on formation of 8-Hydroxydeoxyguanosine in DNA in the lung of Rats in vivo" Yasuo Morimoto, et. Al., Inhalation Toxicology, Vol 17 (13) 749-753 (2005)

(2) Studies by Muhle, Bellmann, Creutzenberg et al.
"Lung clearance and retention of toner, utilizing a tracer technique during chronis inhalation exposure in rats" Fundam. Appl. Toxicol 17 (1991) p.300-313
"Lung clearance and retention of toner, TiO2, and crystalline silica, utilizing a tracer technique during chronic inhalation exposure in Syrian golden hamsters" Inhal. Toxicol. 10 (1998) p.731-751
"Subchronic inhalation study of toner in rats" Inhal. Toxicol 2 (1990) p.341-360
"Pulmonary response to toner upon chronix inhalation exposure in rats"
Fundam. Appl. Toxicol. 17 (1991) p.280-299
"Pulmonary response to toner, TiO2 and crystalline silica upon chronix inhalation exposure in Syrian golden hamsters." Inhal. Toxicol. 10 (1998) p.699-729

Full texts of Risk Phrases, Hazard statements, safety Phrases and/or Precautionary statements in section 3: None