Safety Data Sheet

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

SDS Number:	**CK8516C(TR)-TA-UT-01-EN**	**Issue date:**	**21/05/2021**
Revision date:		**Effective date:**	**21/05/2021**
Version:	**01**	**Replace version:**	

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

1.1 Product identifier

Product name Cyan Toner for 7307ci, 8307ci

Consumable name CK-8516C

Product form Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses The image formation of our electrophotographic equipment.
Other uses are not recommended.

1.3 Details of the supplier of the safety data sheet

Manufacturer KYOCERA Document Solutions Inc.

Address 1-2-28 Tamatsukuri, Chuo-ku, Osaka 540-8585, Japan

Supplier TA Triumph-Adler GmbH

Address Deelbögenkamp 4c
22297 Hamburg
Germany

1.4 Emergency telephone number +49 (0) 40 / 528490
(This number is available only during office hours)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Not classified as hazardous mixture.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Not applicable.

2.3 Other hazards

Assessment of PBT/vPvB

No data available.

See section 4 and 11 for information on health effects and symptoms.
See section 9 for dust explosion information.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical name	CAS No	Weight%	Classification (CLP)
Polyester resin (3 kinds)	confidential	70-80	
Ferrite (Ferrite including Manganese)	66402-68-4	5-10 (as Mn: < 2)	
Organic pigment	confidential	3-8	
Amorphous silica	7631-86-9	1-5	
Titanium dioxide	13463-67-7	< 1	Carc.2(H351)

Information of ingredients

(1) Substance, which present a health or environmental hazard within the meaning of CLP:

Titanium dioxide.

(2) Substance, which are assigned Community workplace exposure limits:

None.

(3) Substance, which are PBT or vPvB in accordance with the criteria set out in Annex XIII of REACH:

None.

(4) Substance, which are included in the list established in accordance with Article 59(1) of REACH (SVHC):

None.

See section 16 for the full text of the H statements declared above.

SECTION 4: First aid measures

4.1 Description of 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.

4.2 Most important symptoms and effects, both acute and delayed

Potential health effects and symptoms

Inhalation: Prolonged inhalation of excessive dusts may cause lung damage. Use of this product as intended does not result in prolonged inhalation of excessive toner dusts.

Skin contact: Unlikely to cause skin irritation.

Eye contact: May cause transient eye irritation.

Ingestion: Use of this product as intended does not result in ingestion.

4.3 Indication of any immediate medical attention and special treatment needed

No additional information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, foam, powder, CO_2 or dry chemical

Unsuitable extinguishing media

None specified.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon dioxide, Carbon monoxide

5.3 Advice for firefighters

Fire-fighting procedures

Pay attention not to blow away dust. Drain water off around and decrease the atmosphere temperature to extinguish the fire.

Protection equipment for firefighters

None specified.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid inhalation, ingestion, eye and skin contact in case of accidental release. Avoid formation of dust. Provide adequate ventilation.

6.2 Environmental precautions

Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

Gather the released powder not to blow away and wipe up with a wet cloth.

6.4 Reference to other sections

See section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not attempt to force open or destroy the toner container or unit.
See installation guide of this product.

7.2 Conditions for safe storage, including any incompatibilities

Keep the toner container or unit tightly closed and store in a cool, dry and dark place.
Keep away from fire. Keep out of the reach of children.

7.3 Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

(Reference data)

US ACGIH Threshold Limit Values (TWA)

Particles: 10 mg/m³ (Inhalable particles) 3 mg/m³ (Respirable particles)
Manganese inorganic compounds (Ferrite component): 0.1 mg/m³ (Inhalable fraction)
0.02 mg/m³ (Respirable fraction) (as Mn)
Titanium dioxide: 10 mg/m³

US OSHA PEL (TWA)

Particles: 15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)
Manganese compounds (Ferrite component): 5 mg/m³ (Ceiling) (as Mn)
Amorphous silica: 80 mg/m³/%SiO_2
Titanium dioxide: 15 mg/m³ (Total dust)

EU Occupational exposure limits: Directive (EC) 2000/39, (EC) 2006/15 and (EU) 2009/161

Not listed.

8.2 Exposure controls

Appropriate engineering controls

Special ventilator is not required under normal intended use.
Use in a well-ventilated area.

Personal protective equipment

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

Environmental exposure controls

No additional information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state	Solid (fine powder)
Colour	Cyan
Odour	Odourless
Odour threshold	No data available.
pH	No data available.
Melting point [°C]	100-120 (Toner)
Boiling point	No data available.
Flash point	No data available.
Evaporation rate	No data available.
Flammability (solid, gas)	No data available.
Upper flammability or explosive limit	No data available.
Lower flammability or explosive limit	No data available.
Vapour pressure	No data available.
Vapour density	No data available.
Relative density [g/cm³]	1.2-1.4 (Toner)
Solubility (ies)	Almost insoluble in water.
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

9.2 Other information

Dust explosion properties

Dust explosion is improbable under normal intended use.
Experimental explosiveness of toner is classified into the same rank such kind of powder as flour, dry milk and resin powder according to the pressure rising speed.

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

This product is stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur.

10.4 Conditions to avoid

None specified.

10.5 Incompatible materials

None specified.

10.6 Hazardous decomposition products

Hazardous decomposition products are not to be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Based on available data, the classification criteria listed below are not met.

Acute toxicity

Oral (LD_{50})	> 2000 mg/kg (rat)* (Toner) > 2000 mg/kg (rat)** (Carrier)
Dermal (LD_{50})	No data available. (Toner) No data available. (Carrier)
Inhalation (LC_{50}(4hr))	> 5.10 mg/l (rat)* (Toner)

Skin corrosion/irritation

Acute skin irritation	Non-irritant (rabbit)* (Toner) Non-irritant (rabbit)** (Carrier)

Serious eye damage/irritation

Acute eye irritation	Mild irritant (rabbit)*. (Toner)

Respiratory or skin sensitization

Skin sensitization	Non-sensitising (mouse)* (Toner) Non-sensitising** (Carrier)

11.1 Germ cell mutagenicity

Ames test is negative** (Toner)
Ames test is negative** (Carrier)
*(based on test result of similar product)
**(based on test result of constituent materials)

Information of ingredients:

No mutagen according to MAK, TRGS905 und (EC) No 1272/2008 Annex VI.

Carcinogenicity

Information of ingredients:

No carcinogen or potential carcinogen (except 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 Annex VI.

The IARC re-evaluated 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 (2). In the animal chronic inhalation studies for Titanium dioxide, the lung tumour was observed only in rats. It is estimated that this is attributed to the overload of rat´s lung clearance mechanism (overload phenomenon) (3). The inhalation of excessive Titanium dioxide does 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 diseases.

Reproductive toxicity

Information of ingredients:

No reproductive toxicant according to MAK, California Proposition 65, TRGS 905 und (EC) No 1272/2008 Annex VI.

STOT-single exposure No data available.

STOT-repeated exposure No data available.

Aspiration hazard No data available.

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

Other information No data available.

SECTION 12: Ecological information

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bio accumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No additional information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Do not attempt to incinerate the toner container or unit and the waste toner yourself. Dangerous sparks may cause burn. Any disposal practice should be done under conditions which meet local, state and federal laws and regulations relating to waste (contact local or state environmental agency for specific rules).

SECTION 14: Transport information

14.1 UN-number

None.

14.2 UN Proper shipping name

None.

14.3 Transport hazard class(es)

None.

14.4 Packing group

None.

14.5 Environmental hazards

None.

14.6 Special precautions for user

No additional information available.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-regulations

Regulation (EC) No 1005/2009 (on substances that deplete the ozone layer, Annex I and II):

Not listed.

Regulation (EU) 2019/1021 (on persistent organic pollutants, Annex I as amended):

Not listed.

Regulation (EU) No 649/2012 (concerning the export and import of dangerous chemicals, Annex I and V as amended):

Not listed.

Regulation (EC) No 1907/2006 REACH Annex XVII as amended (Restrictions on use):

Not listed.

Regulation (EC) No 1907/2006 REACH Annex XIV as amended (Authorizations):

Not listed.

US-regulations

All ingredients in this product comply with order under TSCA.

Canada regulations

This product is not a WHMIS-controlled product, since we consider it as a manufactured article.

15.2 Chemical Safety Assessment

No data available.

SECTION 16: Other information

To the best of our knowledge, the information contained herein is accurate. However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein. The contents and format of this SDS are in accordance with Regulation (EC) No 1907/2006, Annex II as amended by Regulation (EU) 2015/830 with respect to SDSs.

Revision information: -

Full text of H statements under sections 3: H351: Suspected of causing cancer (inhalation)

Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists 2016 TLVs and BEIs (Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices)
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DFG	Deutsche Forschungsgemeinschaft
EPA	Environmental Protection Agency (Integrated Risk Information System) (US)
IARC	International Agency for Research on Cancer (IARC Monographs on the Evaluations of Carcinogenic Risks to Humans)
MAK	Maximale Arbeitsplatzkonzentration der Deutschen Forschungsgesellschaft (2011)
NTP	National Toxicology Program (Report on Carcinogens) (US)
OSHA	Occupational Safety and Health Administration (29 CFR Part 1910 Subpart Z)
PBT	Persistent, Bio accumulative and Toxic
PEL	Permissible Exposure Limits
Proposition 65	California, Safe Drinking Water and Toxic Enforcement Act of 1986
REACH	Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals
STOT	Specific target organ toxicity
SVHC	Substances of Very High Concern
TRGS 905	Technische Regeln für Gefahrstoffe (Deutschland)
TSCA	Toxic Substances Control Act (US)
TWA	Time Weighted Average
UN	United Nations
vPvB	very Persistent and very Bio accumulative
WHMIS	Workplace Hazardous Materials Information System (Canada)

Key literature references and sources for data

(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) IARC Monograph on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol. 93

(3) NIOSH CURRENT INTELLIGENCE BULLETIN "Evaluation of Health Hazard and Recommendation for Occupational Exposure to Titanium Dioxide DRAFT"

(4) The contents are in accordance with Material Safety Data Sheet "CK8516C(TR)-TA-UT-01-EN"; 21/05/2021 of the KYOCERA Document Solutions Inc., 1-2-28 Tamatsukuri, Chuo-ku, Osaka 540-8585, Japan.

Safety Data Sheet

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

SDS Number:	**CK8516K(TR)-TA-UT-01-EN**	**Issue date:**	**21/05/2021**
Revision date:		**Effective date:**	**21/05/2021**
Version:	**01**	**Replace version:**	

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

1.1 Product identifier

Product name Black Toner for 7307ci, 8307ci

Consumable name CK-8516K

Product form Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses The image formation of our electrophotographic equipment.
Other uses are not recommended.

1.3 Details of the supplier of the safety data sheet

Manufacturer KYOCERA Document Solutions Inc.

Address 1-2-28 Tamatsukuri, Chuo-ku, Osaka 540-8585, Japan

Supplier TA Triumph-Adler GmbH

Address Deelbögenkamp 4c
22297 Hamburg
Germany

1.4 Emergency telephone number +49 (0) 40 / 528490
(This number is available only during office hours)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Not classified as hazardous mixture.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Not applicable.

2.3 Other hazards

Assessment of PBT/vPvB

No data available.

See section 4 and 11 for information on health effects and symptoms.
See section 9 for dust explosion information.

Safety Data Sheet

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

SDS Number:	**CK8516K(TR)-TA-UT-01-EN**	**Issue date:**	**21/05/2021**
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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical name	CAS No	Weight%	Classification (CLP)
Polyester resin (3 kinds)	confidential	70-80	
Ferrite (Ferrite including Manganese)	66402-68-4	5-10 (as Mn: < 2)	
Carbon Black	1333-86-4	3-8	
Amorphous silica	7631-86-9	1-5	
Titanium dioxide	13463-67-7	< 1	Carc.2(H351)

Information of ingredients

(1) Substance, which present a health or environmental hazard within the meaning of CLP:

Titanium dioxide.

(2) Substance, which are assigned Community workplace exposure limits:

None.

(3) Substance, which are PBT or vPvB in accordance with the criteria set out in Annex XIII of REACH:

None.

(4) Substance, which are included in the list established in accordance with Article 59(1) of REACH (SVHC):

None.

See section 16 for the full text of the H statements declared above.

SECTION 4: First aid measures

4.1 Description of 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.

4.2 Most important symptoms and effects, both acute and delayed

Potential health effects and symptoms

Inhalation: Prolonged inhalation of excessive dusts may cause lung damage. Use of this product as intended does not result in prolonged inhalation of excessive toner dusts.

Skin contact: Unlikely to cause skin irritation.

Eye contact: May cause transient eye irritation.

Ingestion: Use of this product as intended does not result in ingestion.

4.3 Indication of any immediate medical attention and special treatment needed

No additional information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, foam, powder, CO_2 or dry chemical

Unsuitable extinguishing media

None specified.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon dioxide, Carbon monoxide

5.3 Advice for firefighters

Fire-fighting procedures

Pay attention not to blow away dust. Drain water off around and decrease the atmosphere temperature to extinguish the fire.

Protection equipment for firefighters

None specified.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid inhalation, ingestion, eye and skin contact in case of accidental release. Avoid formation of dust. Provide adequate ventilation.

6.2 Environmental precautions

Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

Gather the released powder not to blow away and wipe up with a wet cloth.

6.4 Reference to other sections

See section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not attempt to force open or destroy the toner container or unit.
See installation guide of this product.

7.2 Conditions for safe storage, including any incompatibilities

Keep the toner container or unit tightly closed and store in a cool, dry and dark place.
Keep away from fire. Keep out of the reach of children.

7.3 Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

(Reference data)

US ACGIH Threshold Limit Values (TWA)

Particles: 10 mg/m³ (Inhalable particles) 3 mg/m³ (Respirable particles)
Manganese inorganic compounds (Ferrite component): 0.1 mg/m³ (Inhalable fraction)
0.02 mg/m³ (Respirable fraction) (as Mn)
Carbon Black: 3 mg/m³ (Inhalable fraction)
Titanium dioxide: 10 mg/m³

US OSHA PEL (TWA)

Particles: 15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)
Manganese compounds (Ferrite component): 5 mg/m³ (Ceiling) (as Mn)
Carbon Black: 3.5 mg/m³
Amorphous silica: 80 mg/m³/%SiO_2
Titanium dioxide: 15 mg/m³ (Total dust)

EU Occupational exposure limits: Directive (EC) 2000/39, (EC) 2006/15 and (EU) 2009/161

Not listed.

8.2 Exposure controls

Appropriate engineering controls

Special ventilator is not required under normal intended use.
Use in a well-ventilated area.

Personal protective equipment

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

8.2 Environmental exposure controls

No additional information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance		
	Physical state	Solid (fine powder)
	Colour	Black
	Odour	Odourless
	Odour threshold	No data available.
pH		No data available.
Melting point [°C]		100-120 (Toner)
Boiling point		No data available.
Flash point		No data available.
Evaporation rate		No data available.
Flammability (solid, gas)		No data available.
Upper flammability or explosive limit		No data available.
Lower flammability or explosive limit		No data available.
Vapour pressure		No data available.
Vapour density		No data available.
Relative density [g/cm³]		1.2-1.4 (Toner)
Solubility (ies)		Almost insoluble in water.
Partition coefficient: n-octanol/water		No data available.
Auto-ignition temperature		No data available.
Decomposition temperature		No data available.
Viscosity		No data available.
Explosive properties		No data available.
Oxidizing properties		No data available.

9.2 Other information

Dust explosion properties

Dust explosion is improbable under normal intended use.
Experimental explosiveness of toner is classified into the same rank such kind of powder as flour, dry milk and resin powder according to the pressure rising speed.

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

This product is stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur.

10.4 Conditions to avoid

None specified.

10.5 Incompatible materials

None specified.

10.6 Hazardous decomposition products

Hazardous decomposition products are not to be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Based on available data, the classification criteria listed below are not met.

Acute toxicity

Oral (LD_{50})	> 2000 mg/kg (rat)* (Toner) > 2000 mg/kg (rat)** (Carrier)
Dermal (LD_{50})	No data available. (Toner) No data available. (Carrier)
Inhalation (LC_{50}(4hr))	> 5.09 mg/l (rat)* (Toner)

Skin corrosion/irritation

Acute skin irritation	Non-irritant (rabbit)* (Toner) Non-irritant (rabbit)** (Carrier)

Serious eye damage/irritation

Acute eye irritation	Mild irritant (rabbit)*. (Toner)

Respiratory or skin sensitization

Skin sensitization	Non-sensitising (mouse)* (Toner) Non-sensitising** (Carrier)

11.1 Germ cell mutagenicity

Ames test is negative** (Toner)
Ames test is negative** (Carrier)
*(based on test result of similar product)
**(based on test result of constituent materials)

Information of ingredients:

No mutagen according to MAK, TRGS905 und (EC) No 1272/2008 Annex VI.

Carcinogenicity

Information of ingredients:

No carcinogen or potential carcinogen (except Titanium dioxide and Carbon Black) according to IARC, Japan Association on Industrial Health, ACGIH, EPA, OSHA, NTP, MAK, California Proposition 65, TRGS 905 and (EC) No 1272/2008 Annex VI.

The IARC re-evaluated Titanium dioxide and Carbon Black 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 (2). The evaluation of Carbon Black is based upon the development of lung tumours 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 tumours. Moreover, a two years cancer bioassay using a typical toner preparation containing Carbon Black demonstrated no association between toner exposure and tumour development in rats (1). In the animal chronic inhalation studies for Titanium dioxide, the lung tumour was observed only in rats. It is estimated that this is attributed to the overload of rat´s lung clearance mechanism (overload phenomenon) (3). The inhalation of excessive Titanium dioxide does 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 diseases.

Reproductive toxicity

Information of ingredients:

No reproductive toxicant according to MAK, California Proposition 65, TRGS 905 und (EC) No 1272/2008 Annex VI.

STOT-single exposure No data available.

STOT-repeated exposure No data available.

Aspiration hazard No data available.

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

Other information No data available.

SECTION 12: Ecological information

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bio accumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No additional information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Do not attempt to incinerate the toner container or unit and the waste toner yourself. Dangerous sparks may cause burn. Any disposal practice should be done under conditions which meet local, state and federal laws and regulations relating to waste (contact local or state environmental agency for specific rules).

SECTION 14: Transport information

14.1 UN-number

None.

14.2 UN Proper shipping name

None.

14.3 Transport hazard class(es)

None.

14.4 Packing group

None.

14.5 Environmental hazards

None.

14.6 Special precautions for user

No additional information available.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-regulations

Regulation (EC) No 1005/2009 (on substances that deplete the ozone layer, Annex I and II):

Not listed.

Regulation (EU) 2019/1021 (on persistent organic pollutants, Annex I as amended):

Not listed.

Regulation (EU) No 649/2012 (concerning the export and import of dangerous chemicals, Annex I and V as amended):

Not listed.

Regulation (EC) No 1907/2006 REACH Annex XVII as amended (Restrictions on use):

Not listed.

Regulation (EC) No 1907/2006 REACH Annex XIV as amended (Authorizations):

Not listed.

US-regulations

All ingredients in this product comply with order under TSCA.

Canada regulations

This product is not a WHMIS-controlled product, since we consider it as a manufactured article.

15.2 Chemical Safety Assessment

No data available.

Safety Data Sheet

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

SDS Number:	**CK8516K(TR)-TA-UT-01-EN**	**Issue date:**	**21/05/2021**
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Version:	**01**	**Replace version:**	

SECTION 16: Other information

To the best of our knowledge, the information contained herein is accurate. However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein. The contents and format of this SDS are in accordance with Regulation (EC) No 1907/2006, Annex II as amended by Regulation (EU) 2015/830 with respect to SDSs.

Revision information: -

Full text of H statements under sections 3: H351: Suspected of causing cancer (inhalation)

Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists 2016 TLVs and BEIs (Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices)
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DFG	Deutsche Forschungsgemeinschaft
EPA	Environmental Protection Agency (Integrated Risk Information System) (US)
IARC	International Agency for Research on Cancer (IARC Monographs on the Evaluations of Carcinogenic Risks to Humans)
MAK	Maximale Arbeitsplatzkonzentration der Deutschen Forschungsgesellschaft (2011)
NTP	National Toxicology Program (Report on Carcinogens) (US)
OSHA	Occupational Safety and Health Administration (29 CFR Part 1910 Subpart Z)
PBT	Persistent, Bio accumulative and Toxic
PEL	Permissible Exposure Limits
Proposition 65	California, Safe Drinking Water and Toxic Enforcement Act of 1986
REACH	Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals
STOT	Specific target organ toxicity
SVHC	Substances of Very High Concern
TRGS 905	Technische Regeln für Gefahrstoffe (Deutschland)
TSCA	Toxic Substances Control Act (US)
TWA	Time Weighted Average
UN	United Nations
vPvB	very Persistent and very Bio accumulative
WHMIS	Workplace Hazardous Materials Information System (Canada)

Key literature references and sources for data

(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) IARC Monograph on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol. 93

(3) NIOSH CURRENT INTELLIGENCE BULLETIN "Evaluation of Health Hazard and Recommendation for Occupational Exposure to Titanium Dioxide DRAFT"

(4) The contents are in accordance with Material Safety Data Sheet "CK8516K(TR)-TA-UT-01-EN"; 21/05/2021 of the KYOCERA Document Solutions Inc., 1-2-28 Tamatsukuri, Chuo-ku, Osaka 540-8585, Japan.

Safety Data Sheet

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

SDS Number:	**CK8516M(TR)-TA-UT-01-EN**	**Issue date:**	**21/05/2021**
Revision date:		**Effective date:**	**21/05/2021**
Version:	**01**	**Replace version:**	

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

1.1 Product identifier

Product name Magenta Toner for 7307ci, 8307ci

Consumable name CK-8516M

Product form Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses The image formation of our electrophotographic equipment.
Other uses are not recommended.

1.3 Details of the supplier of the safety data sheet

Manufacturer KYOCERA Document Solutions Inc.

Address 1-2-28 Tamatsukuri, Chuo-ku, Osaka 540-8585, Japan

Supplier TA Triumph-Adler GmbH

Address Deelbögenkamp 4c
22297 Hamburg
Germany

1.4 Emergency telephone number +49 (0) 40 / 528490
(This number is available only during office hours)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Not classified as hazardous mixture.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Not applicable.

2.3 Other hazards

Assessment of PBT/vPvB

No data available.

See section 4 and 11 for information on health effects and symptoms.
See section 9 for dust explosion information.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical name	CAS No	Weight%	Classification (CLP)
Polyester resin (3 kinds)	confidential	70-80	
Ferrite (Ferrite including Manganese)	66402-68-4	5-10 (as Mn: < 2)	
Organic pigment	confidential	3-8	
Amorphous silica	7631-86-9	1-5	
Titanium dioxide	13463-67-7	< 1	Carc.2(H351)

Information of ingredients

(1) Substance, which present a health or environmental hazard within the meaning of CLP:

Titanium dioxide.

(2) Substance, which are assigned Community workplace exposure limits:

None.

(3) Substance, which are PBT or vPvB in accordance with the criteria set out in Annex XIII of REACH:

None.

(4) Substance, which are included in the list established in accordance with Article 59(1) of REACH (SVHC):

None.

See section 16 for the full text of the H statements declared above.

SECTION 4: First aid measures

4.1 Description of 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.

4.2 Most important symptoms and effects, both acute and delayed

Potential health effects and symptoms

Inhalation: Prolonged inhalation of excessive dusts may cause lung damage. Use of this product as intended does not result in prolonged inhalation of excessive toner dusts.

Skin contact: Unlikely to cause skin irritation.

Eye contact: May cause transient eye irritation.

Ingestion: Use of this product as intended does not result in ingestion.

4.3 Indication of any immediate medical attention and special treatment needed

No additional information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, foam, powder, CO_2 or dry chemical

Unsuitable extinguishing media

None specified.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon dioxide, Carbon monoxide

5.3 Advice for firefighters

Fire-fighting procedures

Pay attention not to blow away dust. Drain water off around and decrease the atmosphere temperature to extinguish the fire.

Protection equipment for firefighters

None specified.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid inhalation, ingestion, eye and skin contact in case of accidental release. Avoid formation of dust. Provide adequate ventilation.

6.2 Environmental precautions

Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

Gather the released powder not to blow away and wipe up with a wet cloth.

6.4 Reference to other sections

See section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not attempt to force open or destroy the toner container or unit.
See installation guide of this product.

7.2 Conditions for safe storage, including any incompatibilities

Keep the toner container or unit tightly closed and store in a cool, dry and dark place.
Keep away from fire. Keep out of the reach of children.

7.3 Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

(Reference data)

US ACGIH Threshold Limit Values (TWA)

Particles: 10 mg/m³ (Inhalable particles) 3 mg/m³ (Respirable particles)
Manganese inorganic compounds (Ferrite component): 0.1 mg/m³ (Inhalable fraction)
0.02 mg/m³ (Respirable fraction) (as Mn)
Titanium dioxide: 10 mg/m³

US OSHA PEL (TWA)

Particles: 15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)
Manganese compounds (Ferrite component): 5 mg/m³ (Ceiling) (as Mn)
Amorphous silica: 80 mg/m³/%SiO_2
Titanium dioxide: 15 mg/m³ (Total dust)

EU Occupational exposure limits: Directive (EC) 2000/39, (EC) 2006/15 and (EU) 2009/161

Not listed.

8.2 Exposure controls

Appropriate engineering controls

Special ventilator is not required under normal intended use.
Use in a well-ventilated area.

Personal protective equipment

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

Environmental exposure controls

No additional information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state	Solid (fine powder)
Colour	Magenta
Odour	Odourless
Odour threshold	No data available.
pH	No data available.
Melting point [°C]	100-120 (Toner)
Boiling point	No data available.
Flash point	No data available.
Evaporation rate	No data available.
Flammability (solid, gas)	No data available.
Upper flammability or explosive limit	No data available.
Lower flammability or explosive limit	No data available.
Vapour pressure	No data available.
Vapour density	No data available.
Relative density [g/cm³]	1.2-1.4 (Toner)
Solubility (ies)	Almost insoluble in water.
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

9.2 Other information

Dust explosion properties

Dust explosion is improbable under normal intended use.
Experimental explosiveness of toner is classified into the same rank such kind of powder as flour, dry milk and resin powder according to the pressure rising speed.

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

This product is stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur.

10.4 Conditions to avoid

None specified.

10.5 Incompatible materials

None specified.

10.6 Hazardous decomposition products

Hazardous decomposition products are not to be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Based on available data, the classification criteria listed below are not met.

Acute toxicity

Oral (LD_{50})	> 2000 mg/kg (rat)* (Toner) > 2000 mg/kg (rat)** (Carrier)
Dermal (LD_{50})	No data available. (Toner) No data available. (Carrier)
Inhalation (LC_{50}(4hr))	> 5.08 mg/l (rat)* (Toner)

Skin corrosion/irritation

Acute skin irritation	Non-irritant (rabbit)* (Toner) Non-irritant (rabbit)** (Carrier)

Serious eye damage/irritation

Acute eye irritation	Mild irritant (rabbit)*. (Toner)

Respiratory or skin sensitization

Skin sensitization	Non-sensitising (mouse)* (Toner) Non-sensitising** (Carrier)

11.1 Germ cell mutagenicity

Ames test is negative** (Toner)
Ames test is negative** (Carrier)
*(based on test result of similar product)
**(based on test result of constituent materials)

Information of ingredients:

No mutagen according to MAK, TRGS905 und (EC) No 1272/2008 Annex VI.

Carcinogenicity

Information of ingredients:

No carcinogen or potential carcinogen (except 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 Annex VI.

The IARC re-evaluated 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 (2). In the animal chronic inhalation studies for Titanium dioxide, the lung tumour was observed only in rats. It is estimated that this is attributed to the overload of rat´s lung clearance mechanism (overload phenomenon) (3). The inhalation of excessive Titanium dioxide does 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 diseases.

Reproductive toxicity

Information of ingredients:

No reproductive toxicant according to MAK, California Proposition 65, TRGS 905 und (EC) No 1272/2008 Annex VI.

STOT-single exposure No data available.

STOT-repeated exposure No data available.

Aspiration hazard No data available.

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

Other information No data available.

SECTION 12: Ecological information

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bio accumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No additional information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Do not attempt to incinerate the toner container or unit and the waste toner yourself. Dangerous sparks may cause burn. Any disposal practice should be done under conditions which meet local, state and federal laws and regulations relating to waste (contact local or state environmental agency for specific rules).

SECTION 14: Transport information

14.1 UN-number

None.

14.2 UN Proper shipping name

None.

14.3 Transport hazard class(es)

None.

14.4 Packing group

None.

14.5 Environmental hazards

None.

14.6 Special precautions for user

No additional information available.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-regulations

Regulation (EC) No 1005/2009 (on substances that deplete the ozone layer, Annex I and II):

Not listed.

Regulation (EU) 2019/1021 (on persistent organic pollutants, Annex I as amended):

Not listed.

Regulation (EU) No 649/2012 (concerning the export and import of dangerous chemicals, Annex I and V as amended):

Not listed.

Regulation (EC) No 1907/2006 REACH Annex XVII as amended (Restrictions on use):

Not listed.

Regulation (EC) No 1907/2006 REACH Annex XIV as amended (Authorizations):

Not listed.

US-regulations

All ingredients in this product comply with order under TSCA.

Canada regulations

This product is not a WHMIS-controlled product, since we consider it as a manufactured article.

15.2 Chemical Safety Assessment

No data available.

SECTION 16: Other information

To the best of our knowledge, the information contained herein is accurate. However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein. The contents and format of this SDS are in accordance with Regulation (EC) No 1907/2006, Annex II as amended by Regulation (EU) 2015/830 with respect to SDSs.

Revision information: -

Full text of H statements under sections 3: H351: Suspected of causing cancer (inhalation)

Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists 2016 TLVs and BEIs (Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices)
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DFG	Deutsche Forschungsgemeinschaft
EPA	Environmental Protection Agency (Integrated Risk Information System) (US)
IARC	International Agency for Research on Cancer (IARC Monographs on the Evaluations of Carcinogenic Risks to Humans)
MAK	Maximale Arbeitsplatzkonzentration der Deutschen Forschungsgesellschaft (2011)
NTP	National Toxicology Program (Report on Carcinogens) (US)
OSHA	Occupational Safety and Health Administration (29 CFR Part 1910 Subpart Z)
PBT	Persistent, Bio accumulative and Toxic
PEL	Permissible Exposure Limits
Proposition 65	California, Safe Drinking Water and Toxic Enforcement Act of 1986
REACH	Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals
STOT	Specific target organ toxicity
SVHC	Substances of Very High Concern
TRGS 905	Technische Regeln für Gefahrstoffe (Deutschland)
TSCA	Toxic Substances Control Act (US)
TWA	Time Weighted Average
UN	United Nations
vPvB	very Persistent and very Bio accumulative
WHMIS	Workplace Hazardous Materials Information System (Canada)

Key literature references and sources for data

(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) IARC Monograph on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol. 93

(3) NIOSH CURRENT INTELLIGENCE BULLETIN "Evaluation of Health Hazard and Recommendation for Occupational Exposure to Titanium Dioxide DRAFT"

(4) The contents are in accordance with Material Safety Data Sheet "CK8516M(TR)-TA-UT-01-EN"; 21/05/2021 of the KYOCERA Document Solutions Inc., 1-2-28 Tamatsukuri, Chuo-ku, Osaka 540-8585, Japan.

Safety Data Sheet

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

SDS Number:	**CK8516Y(TR)-TA-UT-01-EN**	**Issue date:**	**21/05/2021**
Revision date:		**Effective date:**	**21/05/2021**
Version:	**01**	**Replace version:**	

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

1.1 Product identifier

Product name Yellow Toner for 7307ci, 8307ci

Consumable name CK-8516Y

Product form Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses The image formation of our electrophotographic equipment.
Other uses are not recommended.

1.3 Details of the supplier of the safety data sheet

Manufacturer KYOCERA Document Solutions Inc.

Address 1-2-28 Tamatsukuri, Chuo-ku, Osaka 540-8585, Japan

Supplier TA Triumph-Adler GmbH

Address Deelbögenkamp 4c
22297 Hamburg
Germany

1.4 Emergency telephone number +49 (0) 40 / 528490
(This number is available only during office hours)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Not classified as hazardous mixture.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Not applicable.

2.3 Other hazards

Assessment of PBT/vPvB

No data available.

See section 4 and 11 for information on health effects and symptoms.
See section 9 for dust explosion information.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical name	CAS No	Weight%	Classification (CLP)
Polyester resin (3 kinds)	confidential	70-80	
Ferrite (Ferrite including Manganese)	66402-68-4	5-10 (as Mn: < 2)	
Organic pigment	confidential	3-8	
Amorphous silica	7631-86-9	1-5	
Titanium dioxide	13463-67-7	< 1	Carc.2(H351)

Information of ingredients

(1) Substance, which present a health or environmental hazard within the meaning of CLP:

Titanium dioxide.

(2) Substance, which are assigned Community workplace exposure limits:

None.

(3) Substance, which are PBT or vPvB in accordance with the criteria set out in Annex XIII of REACH:

None.

(4) Substance, which are included in the list established in accordance with Article 59(1) of REACH (SVHC):

None.

See section 16 for the full text of the H statements declared above.

SECTION 4: First aid measures

4.1 Description of 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.

4.2 Most important symptoms and effects, both acute and delayed

Potential health effects and symptoms

Inhalation: Prolonged inhalation of excessive dusts may cause lung damage. Use of this product as intended does not result in prolonged inhalation of excessive toner dusts.

Skin contact: Unlikely to cause skin irritation.

Eye contact: May cause transient eye irritation.

Ingestion: Use of this product as intended does not result in ingestion.

4.3 Indication of any immediate medical attention and special treatment needed

No additional information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, foam, powder, CO_2 or dry chemical

Unsuitable extinguishing media

None specified.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon dioxide, Carbon monoxide

5.3 Advice for firefighters

Fire-fighting procedures

Pay attention not to blow away dust. Drain water off around and decrease the atmosphere temperature to extinguish the fire.

Protection equipment for firefighters

None specified.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid inhalation, ingestion, eye and skin contact in case of accidental release. Avoid formation of dust. Provide adequate ventilation.

6.2 Environmental precautions

Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

Gather the released powder not to blow away and wipe up with a wet cloth.

6.4 Reference to other sections

See section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not attempt to force open or destroy the toner container or unit.
See installation guide of this product.

7.2 Conditions for safe storage, including any incompatibilities

Keep the toner container or unit tightly closed and store in a cool, dry and dark place.
Keep away from fire. Keep out of the reach of children.

7.3 Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

(Reference data)

US ACGIH Threshold Limit Values (TWA)

Particles: 10 mg/m³ (Inhalable particles) 3 mg/m³ (Respirable particles)
Manganese inorganic compounds (Ferrite component): 0.1 mg/m³ (Inhalable fraction)
0.02 mg/m³ (Respirable fraction) (as Mn)
Titanium dioxide: 10 mg/m³

US OSHA PEL (TWA)

Particles: 15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)
Manganese compounds (Ferrite component): 5 mg/m³ (Ceiling) (as Mn)
Amorphous silica: 80 mg/m³/%SiO_2
Titanium dioxide: 15 mg/m³ (Total dust)

EU Occupational exposure limits: Directive (EC) 2000/39, (EC) 2006/15 and (EU) 2009/161

Not listed.

8.2 Exposure controls

Appropriate engineering controls

Special ventilator is not required under normal intended use.
Use in a well-ventilated area.

Personal protective equipment

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

Environmental exposure controls

No additional information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state	Solid (fine powder)
Colour	Yellow
Odour	Odourless
Odour threshold	No data available.
pH	No data available.
Melting point [°C]	100-120 (Toner)
Boiling point	No data available.
Flash point	No data available.
Evaporation rate	No data available.
Flammability (solid, gas)	No data available.
Upper flammability or explosive limit	No data available.
Lower flammability or explosive limit	No data available.
Vapour pressure	No data available.
Vapour density	No data available.
Relative density [g/cm³]	1.2-1.4 (Toner)
Solubility (ies)	Almost insoluble in water.
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

9.2 Other information

Dust explosion properties

Dust explosion is improbable under normal intended use.
Experimental explosiveness of toner is classified into the same rank such kind of powder as flour, dry milk and resin powder according to the pressure rising speed.

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

This product is stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur.

10.4 Conditions to avoid

None specified.

10.5 Incompatible materials

None specified.

10.6 Hazardous decomposition products

Hazardous decomposition products are not to be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Based on available data, the classification criteria listed below are not met.

Acute toxicity

Oral (LD_{50})	> 2000 mg/kg (rat)* (Toner) > 2000 mg/kg (rat)** (Carrier)
Dermal (LD_{50})	No data available. (Toner) No data available. (Carrier)
Inhalation (LC_{50}(4hr))	> 5.10 mg/l (rat)* (Toner)

Skin corrosion/irritation

Acute skin irritation	Non-irritant (rabbit)* (Toner) Non-irritant (rabbit)** (Carrier)

Serious eye damage/irritation

Acute eye irritation	Mild irritant (rabbit)*. (Toner)

Respiratory or skin sensitization

Skin sensitization	Non-sensitising (mouse)* (Toner) Non-sensitising** (Carrier)

11.1 Germ cell mutagenicity

Ames test is negative** (Toner)
Ames test is negative** (Carrier)
*(based on test result of similar product)
**(based on test result of constituent materials)

Information of ingredients:

No mutagen according to MAK, TRGS905 und (EC) No 1272/2008 Annex VI.

Carcinogenicity

Information of ingredients:

No carcinogen or potential carcinogen (except 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 Annex VI.

The IARC re-evaluated 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 (2). In the animal chronic inhalation studies for Titanium dioxide, the lung tumour was observed only in rats. It is estimated that this is attributed to the overload of rat´s lung clearance mechanism (overload phenomenon) (3). The inhalation of excessive Titanium dioxide does 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 diseases.

Reproductive toxicity

Information of ingredients:

No reproductive toxicant according to MAK, California Proposition 65, TRGS 905 und (EC) No 1272/2008 Annex VI.

STOT-single exposure No data available.

STOT-repeated exposure No data available.

Aspiration hazard No data available.

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

Other information No data available.

SECTION 12: Ecological information

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bio accumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No additional information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Do not attempt to incinerate the toner container or unit and the waste toner yourself. Dangerous sparks may cause burn. Any disposal practice should be done under conditions which meet local, state and federal laws and regulations relating to waste (contact local or state environmental agency for specific rules).

SECTION 14: Transport information

14.1 UN-number

None.

14.2 UN Proper shipping name

None.

14.3 Transport hazard class(es)

None.

14.4 Packing group

None.

14.5 Environmental hazards

None.

14.6 Special precautions for user

No additional information available.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-regulations

Regulation (EC) No 1005/2009 (on substances that deplete the ozone layer, Annex I and II):

Not listed.

Regulation (EU) 2019/1021 (on persistent organic pollutants, Annex I as amended):

Not listed.

Regulation (EU) No 649/2012 (concerning the export and import of dangerous chemicals, Annex I and V as amended):

Not listed.

Regulation (EC) No 1907/2006 REACH Annex XVII as amended (Restrictions on use):

Not listed.

Regulation (EC) No 1907/2006 REACH Annex XIV as amended (Authorizations):

Not listed.

US-regulations

All ingredients in this product comply with order under TSCA.

Canada regulations

This product is not a WHMIS-controlled product, since we consider it as a manufactured article.

15.2 Chemical Safety Assessment

No data available.

Safety Data Sheet

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

SDS Number:	**CK8516Y(TR)-TA-UT-01-EN**	**Issue date:**	**21/05/2021**
Revision date:		**Effective date:**	**21/05/2021**
Version:	**01**	**Replace version:**	

SECTION 16: Other information

To the best of our knowledge, the information contained herein is accurate. However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein. The contents and format of this SDS are in accordance with Regulation (EC) No 1907/2006, Annex II as amended by Regulation (EU) 2015/830 with respect to SDSs.

Revision information: -

Full text of H statements under sections 3: H351: Suspected of causing cancer (inhalation)

Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists 2016 TLVs and BEIs (Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices)
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DFG	Deutsche Forschungsgemeinschaft
EPA	Environmental Protection Agency (Integrated Risk Information System) (US)
IARC	International Agency for Research on Cancer (IARC Monographs on the Evaluations of Carcinogenic Risks to Humans)
MAK	Maximale Arbeitsplatzkonzentration der Deutschen Forschungsgesellschaft (2011)
NTP	National Toxicology Program (Report on Carcinogens) (US)
OSHA	Occupational Safety and Health Administration (29 CFR Part 1910 Subpart Z)
PBT	Persistent, Bio accumulative and Toxic
PEL	Permissible Exposure Limits
Proposition 65	California, Safe Drinking Water and Toxic Enforcement Act of 1986
REACH	Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals
STOT	Specific target organ toxicity
SVHC	Substances of Very High Concern
TRGS 905	Technische Regeln für Gefahrstoffe (Deutschland)
TSCA	Toxic Substances Control Act (US)
TWA	Time Weighted Average
UN	United Nations
vPvB	very Persistent and very Bio accumulative
WHMIS	Workplace Hazardous Materials Information System (Canada)

Key literature references and sources for data

(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) IARC Monograph on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol. 93

(3) NIOSH CURRENT INTELLIGENCE BULLETIN "Evaluation of Health Hazard and Recommendation for Occupational Exposure to Titanium Dioxide DRAFT"

(4) The contents are in accordance with Material Safety Data Sheet "CK8516Y(TR)-TA-UT-01-EN"; 21/05/2021 of the KYOCERA Document Solutions Inc., 1-2-28 Tamatsukuri, Chuo-ku, Osaka 540-8585, Japan.