

## Safety Data Sheet

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

- 1.1. Product identifier  
Mixture identification:  
Trade name: MAINTENANCE UNIT A (C13S110081)
- 1.2. Relevant identified uses of the substance or mixture and uses advised against  
Recommended use:  
Toner for electrophotographic printing
- 1.3. Details of the supplier of the safety data sheet  
Company:  
EPSON EUROPE B.V.  
Azie building, Atlas ArenA, Hoogoorddreef 5, 1101 BA Amsterdam  
Zuidoost The Netherlands  
Phone number: +31-20-314-5000  
Competent person responsible for the safety data sheet:  
chemicals@epson-europe.com  
Date: 06/02/2018  
Revision: 2.0
- 1.4. Emergency telephone number  
Phone number: +31-20-314-5000

### SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture  
EC regulation criteria 1272/2008 (CLP)  
The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).  
Adverse physicochemical, human health and environmental effects:  
No other hazards
- 2.2. Label elements  
The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).  
Hazard pictograms:  
None  
Hazard statements:  
None  
Precautionary statements:  
None  
Special Provisions:  
None  
Special provisions according to Annex XVII of REACH and subsequent amendments:  
None
- 2.3. Other hazards  
vPvB Substances: None - PBT Substances: None  
Other Hazards:  
No other hazards

### SECTION 3: Composition/information on ingredients

- 3.1. Substances  
No
- 3.2. Mixtures  
Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
40% ~	Polyester		The product is not classified as

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50%			dangerous according to Regulation EC 1272/2008 (CLP).
3% ~ 5%	Amorphous silica	CAS: 7631-86-9 EC: 231-545-4	The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).
0.5% ~ 1%	Titanium dioxide	CAS: 13463-67-7 EC: 236-675-5	Substance with a Union workplace exposure limit.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

#### 4.2. Most important symptoms and effects, both acute and delayed

None

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treatment:

None

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

Extinguishing media which must not be used for safety reasons:

None in particular.

#### 5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

#### 5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

#### 6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

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### 6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

### 6.4. Reference to other sections

See also section 8 and 13

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

### 7.3. Specific end use(s)

None in particular

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

- OEL Type: ACGIH - TWA: 10 mg/m<sup>3</sup> - Notes: Inhalable particles
- OEL Type: ACGIH - TWA: 3 mg/m<sup>3</sup> - Notes: Respirable particles
- OEL Type: OSHA - TWA: 15 mg/m<sup>3</sup> - Notes: Total dust
- OEL Type: OSHA - TWA: 5 mg/m<sup>3</sup> - Notes: Respirable fraction
- OEL Type: National - TWA: 8 mg/m<sup>3</sup> - Notes: Class 3 Dusts (Total dust)
- OEL Type: National - TWA: 2 mg/m<sup>3</sup> - Notes: Class 3 Dusts (Respirable dust)

Titanium dioxide - CAS: 13463-67-7

- OEL Type: ACGIH - TWA(8h): 10 mg/m<sup>3</sup>
- OEL Type: OSHA - TWA: 15 mg/m<sup>3</sup>
- OEL Type: National - TWA: 0.3 mg/m<sup>3</sup> - Notes: nano particle
- OEL Type: NIOSH - STEL: 5000 mg/m<sup>3</sup>

DNEL Exposure Limit Values

No data available

PNEC Exposure Limit Values

No data available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls:

None

#### 8.2.2. Individual protection measures, such as personal protective equipment

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Not needed for normal use.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

#### 8.2.3. Environmental exposure controls:

None

## SECTION 9: Physical and chemical properties

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### 9.1. Information on basic physical and chemical properties

Appearance and colour:	Black Powder
Odour:	Slightly
Odour threshold:	No data available
pH:	Not Relevant
Melting point / freezing point:	100-200 °C
Initial boiling point and boiling range:	No data available
Solid/gas flammability:	No data available
Upper/lower flammability or explosive limits:	No data available
Vapour density:	No data available
Flash point:	Not Relevant
Evaporation rate:	No data available
Vapour pressure:	No data available
Relative density:	1.5-1.8 at 20 °C
Solubility in water:	Insoluble
Solubility in oil:	No data available
Partition coefficient (n-octanol/water):	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	Not Relevant
Explosive properties:	No data available
Oxidizing properties:	No data available

### 9.2. Other information

Miscibility:	No data available
Fat Solubility:	No data available
Conductivity:	No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions

### 10.2. Chemical stability

Stable under normal conditions

### 10.3. Possibility of hazardous reactions

None

### 10.4. Conditions to avoid

Stable under normal conditions.

### 10.5. Incompatible materials

None in particular.

### 10.6. Hazardous decomposition products

None.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Toxicological information of the product:

#### a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg

Test: LC50 - Route: Inhalation Gas - Species: Rat > 5.16 mg/l

#### b) skin corrosion/irritation:

Test: Skin Irritant - Species: Rabbit Non-irritant

#### c) serious eye damage/irritation:

Test: Eye Irritant - Species: Rabbit Mild irritant

#### d) respiratory or skin sensitisation:

Test: Skin Sensitisation - Species: Mouse Non-sensitiser

#### e) germ cell mutagenicity:

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Test: Mutagenesis - Species: Salmonella Typhimurium and Escherichia coli  
Negative

f) carcinogenicity:

Components do not come under carcinogens (Ref. 1), except for Titanium dioxide

g) reproductive toxicity:

Does not contain reproductive toxicity and developmental toxic substances (Ref. 2)

i) STOT-repeated exposure:

Prolonged inhalation of excessive dust may cause lung damage. It is attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged interval. Use of this product, as intended, does not result in inhalation of excessive dust.

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

Toxicological information of the main substances found in the product:

Titanium dioxide - CAS: 13463-67-7

Titanium dioxide is classified as "possibly carcinogenic to human"(Group 2B). In animal chronic inhalation studies, the tumor formulation observed in only rats with animal chronic inhalation study are attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged interval. Use of this product, as intended, does not result in inhalation of excessive dust. Epidemiological study to date have not revealed any evidence of the relation between exposure to titanium dioxide and diseases of the respiratory tract beyond general effects of dust.(Ref. 4)

If not differently specified, the information required in Regulation (EU) 2015/830 listed below must be considered as 'No data available':

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

### SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

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

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- vPvB Substances: None - PBT Substances: None  
12.6. Other adverse effects  
None

### SECTION 13: Disposal considerations

- 13.1. Waste treatment methods  
Recover if possible. In so doing, comply with the local and national regulations currently in force.

### SECTION 14: Transport information

- 14.1. UN number  
Not classified as dangerous in the meaning of transport regulations.  
14.2. UN proper shipping name  
No data available  
14.3. Transport hazard class(es)  
No data available  
14.4. Packing group  
No data available  
14.5. Environmental hazards  
No data available  
14.6. Special precautions for user  
No data available  
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  
No data available

### SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
Dir. 98/24/EC (Risks related to chemical agents at work)  
Dir. 2000/39/EC (Occupational exposure limit values)  
Regulation (EC) n. 1907/2006 (REACH)  
Regulation (EC) n. 1272/2008 (CLP)  
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013  
Regulation (EU) 2015/830  
Regulation (EU) n. 286/2011 (ATP 2 CLP)  
Regulation (EU) n. 618/2012 (ATP 3 CLP)  
Regulation (EU) n. 487/2013 (ATP 4 CLP)  
Regulation (EU) n. 944/2013 (ATP 5 CLP)  
Regulation (EU) n. 605/2014 (ATP 6 CLP)  
Restrictions related to the product or the substances contained according to Annex XVII  
Regulation (EC) 1907/2006 (REACH) and subsequent modifications:  
Restrictions related to the product:  
No restriction.  
Restrictions related to the substances contained:  
No restriction.  
Where applicable, refer to the following regulatory provisions :  
Directive 2003/105/CE ('Activities linked to risks of serious accidents') and subsequent amendments.  
Regulation (EC) nr 648/2004 (detergents).  
1999/13/EC (VOC directive)  
  
Provisions related to directives 82/501/EC(Seveso), 96/82/EC(Seveso II):  
No data available  
15.2. Chemical safety assessment  
No

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### SECTION 16: Other information

Paragraphs modified from the previous revision:

SECTION 1: Identification of the substance/mixture and of the company/undertaking  
SECTION 3: Composition/information on ingredients  
SECTION 8: Exposure controls/personal protection  
SECTION 9: Physical and chemical properties  
SECTION 11: Toxicological information

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,  
Commission of the European Communities  
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van  
Nostrand Reinold  
CCNL - Appendix 1

- Ref. 1 ·IARC Monographs on the Evaluation Carcinogenic Risks to Humans (IARC:  
International Agency for Research on Cancer)  
·Journal of Occupational Health (JOH) (Japan Society of Occupational Health (JSOH))  
·TLVs and BEIs (ACGIH: American Conference of Governmental Industrial Hygienists)  
·IRIS Carcinogenic Assessment (IRIS: Integrated Risk Information System of US EPA)  
·National Toxicology Program (NTP) Report on Carcinogens (USA)  
·Annex VI of 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  
·MAK und BAT Werte Liste (DFG: German Research Foundation)  
·TRGS 905, Verzeichnis krebserzeugender, keimzell mutagener oder  
reproduktionstoxischer Stoffe (AGS: Committee on Hazardous Substances, Germany)
- Ref. 2 ·Annex VI of 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  
·TRGS 905, Verzeichnis krebserzeugender, keimzell mutagener oder  
reproduktionstoxischer Stoffe (AGS: Committee on Hazardous Substances, Germany)
- Ref. 3 ·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)
- Ref. 4 ·NIOSH CURRENT INTELLIGENCE BULLETIN 63: Occupational Exposure to  
Titanium Dioxide

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This Safety Data Sheet cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of  
Dangerous Goods by Road.



## Safety Data Sheet

CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK:	German Water Hazard Class.