

# Safety Data Sheet

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## SECTION 1 Identification of the substance/preparation and of the company/undertaking

### 1.1. Product identifier:

Product Name: TONER CYAN

Product Code:

TN213C/TN214C/TN216C/TN221C/TN227C/TN321C/TN324C/TN512C/TN514C/TN328C/TN626C/TN711C/TN715C/TNP48C/TNP49C/TNP79C/TNP80C/TNP81C

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

Relevant identified uses: Toner for electrophotographic apparatus

Descriptor: Industrial uses (SU3), Ink and toners (PC18)

### 1.3. Details of the supplier of the safety data sheet:

Supplier:

Address:

Telephone number:

FAX

Email:

### 1.4. Emergency telephone number:

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## SECTION 2 Hazards identification

### 2.1 Classification of the Substance or mixture:

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

**Not classified as a hazardous mixture**

Health Hazards

|                         |                |
|-------------------------|----------------|
| Acute Tox. -oral:       | Not classified |
| Acute tox. -inhalation: | Not classified |
| Skin Corr/ Irrit:       | Not classified |
| Eye Dam/ Irrit:         | Not classified |
| Skin Sens:              | Not classified |
| Muta:                   | Not classified |

Environmental Hazards

|                  |                |
|------------------|----------------|
| Aquatic Acute:   | Not classified |
| Aquatic Chronic: | Not classified |

*All other Classifications not listed are either "Not applicable" or "Not available"*

### 2.2 Label elements:

Labeling according to Regulation (EC) No 1272/2008 [CLP]

**None**

### 2.3 Other hazards:

Risk of dust-explosion if finely dispersed in air with an ignition source.

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## SECTION 3 Composition/information on ingredients

### 3.1 Mixtures:

| Ingredient Name            | Weight % | CAS No.      | Classification according to Regulation(EC) No 1272/2008 [CLP] |
|----------------------------|----------|--------------|---------------------------------------------------------------|
| Saturated polyester resin  | 70-80    | Confidential | None                                                          |
| Styrene acrylate copolymer | 2-8      | Confidential | None                                                          |
| Pigment (C)                | 2-8      | Confidential | None                                                          |
| Wax                        | 2-8      | Confidential | None                                                          |
| Silica, treated            | 1-6      | 67762-90-7   | None                                                          |
| Titanium(IV) dioxide       | < 1      | 13463-67-7   | None                                                          |
| Quaternary ammonium salt** | 0.1-1    | 102561-46-6  | Acute Tox.4, H332<br>Aquatic Chronic2, H411                   |

\*Registered as all applicable monomers

\*\* Tributylbenzylammonium 4-hydroxynaphthalene-1-sulfonate

See SECTION 16 for full text of Classification Symbols, R/S-Phrases, and Hazard Statements.

## SECTION 4 First aid measures

### 4.1 Description of first aid measures:

Immediate medical procedures:

None

Inhalation:

Move to fresh air and gargle with water.

Skin contact:

Wash with soap and water.

Eye contact:

Do not rub. Flush with large amount of water until particles are removed.

Seek medical advice

Ingestion:

Rinse mouth, then drink several glasses of water to dilute stomach content.

Seek medical advice.

### 4.2 Most important symptoms, both acute and delayed:

Inhalation of excessive amounts of dust may cause physical irritation to respiratory system.

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

None

## SECTION 5 Firefighting measures

### 5.1 Extinguishing media:

Water, CO<sub>2</sub>, dry chemicals

### 5.2 Special hazards arising from substance or mixture:

Can form explosive dust-air mixture if finely dispersed in air.

### 5.3 Advice for firefighters:

Avoid inhalation of fume and smoke.

## SECTION 6 Accidental release measures

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

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Avoid breathing dust.

Dust-proof masks should be worn when working.

### 6.2 Environmental precautions:

Do not flush into sewer or natural watercourse.

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

For containment:

Keep in air-tight container.

For cleaning up:

Sweep the spilled powder slowly.

Clean the remainder with wet cloth, wet paper, or vacuum cleaner.

Vacuum cleaner must be equipped with dust proof filter and must be explosion-proof.

For containment:

Keep in air-tight container.

## SECTION 7 Handling and storage

### 7.1 Precautions for safe handling:

Avoid breathing dust. Keep away from ignition sources.

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

Store in a cool, dry location away from direct sunlight.

### 7.3 Specific end use(s):

For use in electrophotographic apparatus such as laser-beam printers and copiers.

## SECTION 8 Exposure controls/personal protection

### 8.1 Control parameters:

As mixture: Dust, respirable

| Country               | Limit value –Eight hours |                        | Limit value –Short term |                        |
|-----------------------|--------------------------|------------------------|-------------------------|------------------------|
|                       | ppm                      | mg/m <sup>3</sup>      | ppm                     | mg/m <sup>3</sup>      |
| <b>European Union</b> | <b>Not established</b>   | <b>Not established</b> | <b>Not established</b>  | <b>Not established</b> |
| Austria               | -                        | 5                      | -                       | 10                     |
| Belgium               | -                        | 3                      | -                       | -                      |
| France                | -                        | 5 (respirable aerosol) | -                       | -                      |
| Germany (AGS)         | -                        | 1.25                   | -                       | -                      |
| Germany (DFG)         | -                        | 1.5                    | -                       | -                      |
| Hungary               | -                        | 6                      | -                       | -                      |
| Ireland               | -                        | 4                      | -                       | -                      |
| Spain                 | -                        | 3                      | -                       | -                      |
| Sweden                | -                        | 5                      | -                       | -                      |
| Switzerland           | -                        | 3                      | -                       | -                      |
| USA (ACGIH)           | -                        | 3                      | -                       | -                      |
| USA (OSHA PEL)        | -                        | 5                      | -                       | -                      |

*Applicable control parameters are not established in other Community Members not listed*

Constituent substances:

This mixture is considered as a "Special Mixture" where substances are modulated by their inclusion within the matrix of the mixture; thus, control parameters for constituent substances do not apply in use of this mixture.

### 8.2 Exposure controls:

Appropriate engineering controls:

Use of local ventilation is recommended.

Individual protection measures:

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|                         |                                                    |
|-------------------------|----------------------------------------------------|
| Eye/face protection:    | Protective goggles should be used when             |
| handling bulk.          | Skin Protection: Not required                      |
| Hand protection:        | Not required                                       |
| Respiratory protection: | Dust-proof mask should be used when handling bulk. |

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### SECTION 9 Physical and chemical properties

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

|                                                                                                      |                                                                   |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Appearance:                                                                                          | Cyan powder (average particle size: app. 7 microns)               |
| Odour:                                                                                               | Slight odour                                                      |
| pH:                                                                                                  | Not applicable                                                    |
| Melting point:                                                                                       | App. 130°C (flow temperature)                                     |
| Boiling point:                                                                                       | Not applicable                                                    |
| Flash point:                                                                                         | Not applicable                                                    |
| Evaporation rate:                                                                                    | Not applicable                                                    |
| Flammability (according to Directive 92/69/EEC):                                                     |                                                                   |
| As mixture:                                                                                          | Not flammable; Not classified**                                   |
| Explosive limits:                                                                                    | Not available                                                     |
| Vapour pressure:                                                                                     | Not applicable                                                    |
| Vapour density:                                                                                      | Not applicable                                                    |
| Relative density:                                                                                    | 1.1-1.3                                                           |
| Solubility:                                                                                          |                                                                   |
| As mixture                                                                                           | Insoluble to water, partially soluble to toluene and xylene.      |
| <i>Substance quaternary ammonium salt: 1.14g/L (20°C) to water, 35% to methanol, 0.1% to acetone</i> |                                                                   |
| <i>Substance titanium oxide: Insoluble to water and fat, soluble to strong acids.</i>                |                                                                   |
| Partition coefficient:                                                                               |                                                                   |
| As mixture                                                                                           | Not available                                                     |
| <i>Substance Quaternary ammonium salt: Log P<sub>ow</sub>=-0.597 (19°C)</i>                          |                                                                   |
| Auto-ignition temperature:                                                                           | Not available                                                     |
| Decomposition temperature:                                                                           | >200°C                                                            |
| Viscosity:                                                                                           | Not applicable                                                    |
| Explosive properties:                                                                                | Explosive dust-air mixture is formed when finely dispersed in air |
| Oxidizing properties:                                                                                | Not available                                                     |

#### 9.2 Other information: None

\*\*according to criteria of Regulation (EC) No 1272/2008 [CLP]

### SECTION 10 Stability and reactivity

|                                          |                                                  |
|------------------------------------------|--------------------------------------------------|
| 10.1 Reactivity:                         | No data                                          |
| 10.2 Chemical stability:                 | Stable                                           |
| 10.3 Possibility of hazardous reactions: | No data                                          |
| 10.4 Conditions to avoid:                | Do not disperse in air with ignition source.     |
| 10.5 Incompatible materials:             | No data                                          |
| 10.6 Hazardous decomposition products:   | Decomposition will not occur under intended uses |

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### SECTION 11 Toxicological information

#### 11.1 Information on toxicological effects:

|                |
|----------------|
| Acute toxicity |
| As mixture:    |
| Inhalation:    |

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-Not classified\*\*

Ingestion: LD<sub>50</sub>: oral-rat > 2500mg/kg body weight\*; -Not classified\*\*

*Substance Quaternary ammonium salt:*

*Oral:* Not classified\*\*

*Dermal:* Not classified\*\*

*Inhalation:* No death in 1.61\*mg/l, air (4hr) -Acute tox.4 \*This concentration is the maximum be tested

Skin corrosion/irritation: Not irritant\*; -Not classified\*\*

Serious eye damage/irritation:

As mixture not irritant\*; -Not classified\*\*

*Substance titanium oxide:*

Skin sensitization: ot a sensitizer\*: -Not classified\*\*

Germ cell mutagenicity: Ames test Negative\*; -Not classified\*\*

Carcinogenicity: Not available for mixture

Titanium oxide classified as "group 2B" by IARC, but the carcinogenicity of titanium dioxide is limited to lug overload conditions by dust inhalation tests. The content in this toner is considered to be modulated by their inclusion within the matrix of the mixture, not to be respirable by itself making the situation impossible to occur under intended use of this toner.

Thus, carcinogenicity of this toner mixture is concluded to be "Not classified." e "Not

*Substance titanium oxide:* available"

Reproductive toxicity: Not available for mixture

No constituent components are classified\*\*

STOT-single exposure: Not available for mixture

STOT-repeated exposure: Not available for mixture

Aspiration hazards: Not available for mixture

No constituent components are classified\*\*

\*data from toner with similar composition.

\*\*according to criteria of Regulation (EC) No 1272/2008 [CLP]

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## SECTION 12 Ecological information

### 12.1 Toxicity

As mixture:

Fish(*Oryzias latipes*): LC<sub>50</sub>(96hr) > 100mg/L (WAF)\*

Crustaceans(*Daphnia magna*): EC<sub>50</sub>(48hr) > 100mg/L (WAF)\*

Algae(*Pseudokirchneriella subcapitata*): E<sub>r</sub>L<sub>50</sub>(0-72h) > 100 mg/l (WAF)\*

-Not Classified\*\*

*Substance quaternary ammonium salt:*

*Fish:* LC<sub>50</sub>(96hr)> 100mg/L

*Crustaceans(Daphnia magna):* EC<sub>50</sub>(48hr): 10mg/L

*Algae(Pseudokirchneriella subcapitata):* E<sub>b</sub>L<sub>50</sub>(72h): 39mg/l, (NOEC: 0.20mg/l)

-Aquatic Acute2\*\*

### 12.2 Persistence and degradability

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Not available for mixture

*Substance Quaternary ammonium salt: Not readily biodegradable. (24% after 28days)*

### 12.3 Bioaccumulative potential

Not available for mixture

*Substance Quaternary ammonium salt: Log  $P_{ow}$  = -0.597; Not suspected to be bioaccumulative.*

### 12.4 Mobility in soil

Not available

### 12.5 Results of PBT and vPvB assessment:

This mixture does not contain any substance that are assessed to be PBT or vPvB.

### 12.6 Other adverse effects:

Not available

*\*data from toner with similar composition.*

*\*\*according to criteria of Regulation (EC) No 1272/2008 [CLP]*

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## SECTION 13 Disposal consideration

### 13.1 Waste treatment methods

Dispose according to local authority requirements.

Waste should not be released to sewer or natural watercourse.

DO NOT put toner powder or container into fire.

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## SECTION 14 Transport information

### 14.1 UN number

None

### 14.2 UN proper shipping name

None

### 14.3 Transport hazard class(es)

ADR / RID / ADN: none

IMDG Code: none

ICAO-TI / IATA-DGR: none

### 14.4 Packing group

None

### 14.5 Environmental hazards:

Not classified as environmentally hazardous under UN Model Regulations.

Not classified as marine pollutant under IMDG Code.

### 14.6 Special precautions for user:

Handling such as exposure to water, rolling, falling, or giving shock to the container may result in breakage of the inner bag and result in scattering of the mixture.

Avoid direct sunlight and hot places. (See also: Section 7)

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

None

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## SECTION 15 Regulatory information

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

EU Regulations

Regulation (EC) No 1272/2008 [CLP]

Not classified as hazardous mixture, label not required

Regulation (EC) No 1907/2006 [REACH]

Restricted substances: None

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SVHC: None\*

Registration: See SECTION 3

*\*Up to 18<sup>th</sup> updated list issued 15-Jan.-2018*

National regulations (France):

French enforcement Decree no. 2012-232 of 17-February, 2012

Substances "Silica, treated" and "Titanium (IV) oxide," is considered as nanomaterial, but it is considered to be modulated by their inclusion within the matrix of the mixture; thus, it is not considered to be "contained without being linked to the mixture."

**15.2 Chemical safety assessment:**

No chemical safety assessment has been carried out for this mixture by the supplier.

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## SECTION 16 Other information

Issued according to (EC) 453/2010 Annex II amendment of REACH Annex II

**Indication of changes:**

2-July-2018: Updated "REACH registration" in SECTION 3 and the date of SVHC in SECTION 15. SECTION 2; Deleted 1999/45/EC. SECTION 3; Revised the upper limit for "Quaternary ammonium salt" based on the Ecotoxicity test result. Deleted 68/548/EC. SECTION 12; Revised the information of "Quaternary ammonium salt" based on the last SDS. SECTION 16; Deleted Symbols and Risk Phrases.

03-Nov.-2017: First issued

**Abbreviations and acronyms:**

|                                |                                                                                                 |
|--------------------------------|-------------------------------------------------------------------------------------------------|
| FAX:                           | Facsimile                                                                                       |
| CLP:                           | Classification Labelling Packaging regulation                                                   |
| Flam. Sol.                     | Flammable Solid                                                                                 |
| Tox.                           | Toxicity Corr.                                                                                  |
|                                | Corrosivity                                                                                     |
| Irrit.                         | Irritation Dam.                                                                                 |
|                                | Damage                                                                                          |
| Sens.                          | Sensitization                                                                                   |
| Muta.                          | Mutagenicity                                                                                    |
| CAS:                           | Chemical Abstract Service                                                                       |
| REACH:                         | Registration, Evaluation, Authorization, and Restriction of Chemicals                           |
| ppm:                           | parts per million (weight/weight)                                                               |
| AGS                            | Ausschuss für Gefahrstoffe                                                                      |
| DFG                            | Deutsche Forschungsgemeinschaft                                                                 |
| USA                            | United States of America                                                                        |
| ACGIH:                         | American Conference of Governmental Industrial Hygienists                                       |
| TWA:                           | Time weighted Average                                                                           |
| OSHA                           | Occupational Safety and Health Administration                                                   |
| PEL                            | Permissible Exposure Limit                                                                      |
| app.                           | approximately                                                                                   |
| LC <sub>50</sub>               | Lethal Concentration to 50% of test population                                                  |
| LD <sub>50</sub>               | Lethal Dose to 50% of test population                                                           |
| IARC:                          | International Agency for Research on Cancer                                                     |
| NTP:                           | National Toxicology Program                                                                     |
| NIOSH:                         | National Institute of Occupational Safety and Health                                            |
| STOT-SE:                       | Specific Target Organ Toxicity –Single Exposure                                                 |
| STOT RE                        | Specific Target Organ Toxicity –Repeated Exposure                                               |
| WAF                            | Water Accommodated Fraction                                                                     |
| EC <sub>50</sub>               | Effective Concentration to 50% of test population                                               |
| NOEC                           | No Observed Effect Concentration                                                                |
| E <sub>r</sub> L <sub>50</sub> | Effective Loading rate that causes growth rate reduction to 50%                                 |
| E <sub>b</sub> L <sub>50</sub> | Effective Loading rate that causes 50% reduction in algal cell biomass                          |
| PBT                            | Persistent, Bioaccumulative, and Toxic                                                          |
| vPvB:                          | very Persistent and very Bioaccumulative                                                        |
| UN                             | United Nations                                                                                  |
| ADR:                           | European Agreement concerning the International Carriage of Dangerous Goods by Road             |
| RID:                           | Regulations concerning the International Carriage of Dangerous Goods by Rail                    |
| ADN:                           | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |

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|           |                                                                         |
|-----------|-------------------------------------------------------------------------|
| IMDG      | International Maritime Dangerous Goods                                  |
| IATA-DGR: | International Air Transport Association Dangerous Goods Regulations     |
| ICAO-TI:  | Technical Instructions for the Safe Transport of Dangerous Goods by Air |
| SVHC:     | Substances of Very High Concern                                         |

### Full text of Classification S-Phrases and Hazard Statements:

|                   |                                                                                     |
|-------------------|-------------------------------------------------------------------------------------|
| Safety Phrases    |                                                                                     |
| S7                | Keep container tightly closed                                                       |
| S22               | Do not breathe dust                                                                 |
| S60               | This material and its container must be disposed as hazardous waste                 |
| S61               | Avoid release to the environment. Refer to special instructions/Safety data sheets. |
| Hazard Statements |                                                                                     |
| H320              | Irritant to eyes                                                                    |
| H332              | Harmful if inhaled                                                                  |
| H351              | Suspected of causing cancer by inhalation                                           |
| H411              | Toxic to aquatic life with long lasting effects                                     |

### Classification procedures:

|                         |                                                             |
|-------------------------|-------------------------------------------------------------|
| Acute Tox. -oral:       | Data from similar mixture and bridging principle "Dilution" |
| Acute tox. -inhalation: | Data from similar mixture and bridging principle "Dilution" |
| Skin Corr/ Irrit:       | Data from similar mixture and bridging principle "Dilution" |
| Eye Dam/ Irrit:         | Data from similar mixture and bridging principle "Dilution" |
| Skin Sens:              | Data from similar mixture and bridging principle "Dilution" |
| Muta:                   | On basis of test data                                       |
| Aquatic Acute:          | Data from similar mixture and bridging principle "Dilution" |
| Aquatic Chronic:        | Data from similar mixture and bridging principle "Dilution" |

Although the information contained in this SDS is prepared to be accurate to the best of our knowledge, please be aware that health and hazard assessment may not be enough and complete.

Since SDS may be revised due to regulation changes or product modifications, please confirm if this is the latest version, especially if the revision date is outdated for two years.