

Revision Date: 28-May-2021 Issuing Date: 12-Sep-2013

Safety data sheet number: MT413-02

Revision Number: 4.1

Product Name: TN-411M, TN-413M, TN-416M, TN-419M, TN-421M, TN-423M, TN-426M, TN-431M, TN-433M, TN-436M, TN-439M, TN-441M, TN-443M, TN-446M, TN-449M, TN-451M, TN-456M, TN-459M, TN-466M, TN-466M, TN-469M, TN-471M, TN-476M, TN-491M, TN-493M, TN-499M, TN-910M Toner

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

### 1.1. Product identifier

Product Name TN-411M, TN-413M, TN-416M, TN-419M, TN-421M, TN-423M, TN-426M, TN-431M,

TN-433M, TN-436M, TN-439M, TN-441M, TN-443M, TN-446M, TN-449M, TN-451M, TN-456M, TN-459M, TN-461M, TN-466M, TN-469M, TN-471M, TN-476M, TN-491M,

TN-493M, TN-499M, TN-910M Toner

Product Form Mixture

Safety data sheet number MT413-02

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

Relevant identified uses These products are magenta toner in a cartridge for Brother Industries, Ltd. laser printers,

multifunction devices and fax receivers. The cartridge should be used as supplied by Brother and for use in the products stated. Information provided on this SDS is only

consistent with the use specified by Brother.

Uses advised against No information available

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

<u>Manufacturer</u> Brother Industries, Ltd.

15-1 Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan

Telephone (for information): +81-52-824-2735

<u>Importer</u> (Europe)

Brother International Europe Ltd.

1 Tame Street, Audenshaw, Manchester M34 5JE, UK

Brother International (Nederland) B.V.

Zanderij 25, 1185 ZM Amstelveen, The Netherlands Telephone (for information): +44-161-330-6531

### For further information, please contact

E-mail address sds.info@brother.co.jp

#### 1.4. Emergency telephone number

Emergency Telephone CHEMTREC +1-703-527-3887 (International)

For France only:

Antipoison Center telephone number: ORFILA +33-1-45-425-959



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# Section 2: Hazard(s) identification

## 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

### 2.2. Label elements

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

## 2.3. Other hazards

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

# Section 3: Composition/information on ingredients

### 3.1 Substances

Not applicable

### 3.2 Mixtures

| Chemical name               | CAS No      | EC No     | EC Index No |       | Specific<br>concentration<br>limit (SCL) | Classification<br>according to<br>Regulation<br>(EC) No.<br>1272/2008<br>[CLP] | REACH<br>Registration<br>Number |
|-----------------------------|-------------|-----------|-------------|-------|--|--|---------------------------------|
| Styrene-acrylate-copolymer  | 25767-47-9  | 607-806-7 | -           | 75-85 | -  | Not classified   | Not applicable                  |
| Fatty acid ester            | **          | -         | -           | 5-14  | -  | Not classified   | Registered                      |
| Pigment                     | **          | -         | -           | 3-10  | -  | Not classified   | Not applicable                  |
| Styrene-acrylate Resin      | **          | -         | -           | 1-3   | -  | Not classified   | Not applicable                  |
| Silicon dioxide (amorphous) | 112945-52-5 | 601-216-3 | -           | 1-3   | -  | Not classified   | Registered                      |
| PMMA                        | 9011-14-7   | 618-466-4 | -           | 1-3   | -  | Not classified   | Not applicable                  |
| Silicon dioxide (amorphous) | 844491-94-7 | 430-570-1 | -           | <2    | -  | Not classified   | Registered                      |

<sup>\*\*</sup> CONFIDENTIAL

Full text of H- and EUH-phrases: see section 16

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## Section 4: First aid measures

## 4.1. Description of first aid measures

**General advice** If symptoms persist, call a physician.

**Inhalation** Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a physician.

Skin contact: Wash skin with soap and water. In the case of skin irritation or allergic reactions see a

physician.

**Ingestion** Clean mouth with water and drink afterwards plenty of water.

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

**Symptoms** Inhalation ( dust ): For large quantities: May cause irritation to the respiratory system.

Increased difficulty in breathing. Sneezing. Coughing

Eye contact: May cause eye irritation

Skin contact: : Repeated and/or prolonged skin contact may cause irritation

Ingestion: May cause stomach ache. Unlikely route of exposure

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

# Section 5: Firefighting measures

### 5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical, CO<sub>2</sub>, water spray or regular foam

Unsuitable extinguishing media Do not use water jet

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

Specific hazards arising from the

chemical

May form explosive dust clouds in air

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### 5.3. Advice for firefighters

Special protective equipment for fire-fighters

Do not use high-pressure water in order to prevent creating a dust cloud and spreading fire dust. Use appropriate respirator for carbon monoxide and carbon dioxide. Wear positive pressure self-contained breathing apparatus (SCBA) during the attack phase of firefighting operations and during cleanup in enclosed or poorly ventilated areas immediately after a fire. Personnel not having suitable respiratory protection must leave the area to prevent significant exposure to toxic combustion gases from any source.

## Section 6: Accidental release measures

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

For non-emergency personnel Avoid generation of dust. Do not breathe dust. A suitable dust mask or dust respirator with

filter type A/P may be appropriate

For emergency responders Avoid generation of dust. Do not breathe dust. A suitable dust mask or dust respirator with

filter type A/P may be appropriate.

6.2. Environmental precautions

**Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas.

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

Methods for containment

Sweep the spilt toner or remove it with a vacuum cleaner and transfer into a sealed

container carefully. Sweep slowly to minimize generation of dust during cleanup. If a vacuum cleaner is used, the motor must be rated as dust explosion proof. Potential for very fine particles to be taken into the vacuum only to be passed back into the environment due

to pore size in the bag or filter.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

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# Section 7: Handling and storage

## 7.1. Precautions for safe handling

Advice on safe handling Keep out of the reach of children. Avoid generation of dust. Avoid inhalation of high

concentrations of dust. Avoid contact with eyes.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions. Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Specific use(s) These products are magenta toner in a cartridge for Brother Industries, Ltd. laser printers,

multifunction devices and fax receivers. The cartridge should be used as supplied by

Brother and for use in the products stated.

## Section 8: Exposure controls and personal protection

## 8.1. Control parameters

### **Exposure Limits**

| Chemical name   | Austria                  | Switzerland | Poland | Norway | Ireland |
|-----------------|--------------------------|-------------|--------|--------|---------|
| Silicon dioxide | TWA: 4 mg/m <sup>3</sup> | -           | -      | -      | -       |
| (amorphous)     |                          |             |        |        |         |
| 112945-52-5     |                          |             |        |        |         |

**Derived No Effect Level (DNEL)** No information available.

Predicted No Effect Concentration No information available.

(PNEC)

8.2. Exposure controls

Appropriate engineering controls No information available.

Not normally required. For use other than in normal operating procedures (such as in the Personal protective equipment

event of large spill), the following should be applied:

Eye/face protection Safety goggles.

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Hand protection Protective gloves.

**Skin and body protection** If there is a risk of contact:, Apron, Boots

**Respiratory protection**Use appropriate respiratory protection.

**Environmental exposure controls** Avoid release to the environment.

## Section 9: Physical and chemical properties

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

**Appearance** 

Physical state Powder
Color magenta
Odor Odorless

Odor threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

pH Not applicable None known

pH (as aqueous solution) Not applicable

No data available Melting point / freezing point None known Boiling point / boiling range Not applicable None known Flash point No data available None known **Evaporation rate** Not applicable None known Flammability (solid, gas) No data available None known Flammability Limit in Air None known

Upper flammability limit: No data available Lower flammability limit: No data available

Vapor pressureNo data availableNone knownVapor densityNo data availableNone knownRelative densityNo data availableNone known

Water solubility Insoluble in water

None known Solubility(ies) No data available **Partition coefficient** No data available None known **Autoignition temperature** No data available None known **Decomposition temperature** No data available None known Kinematic viscosity Not applicable None known **Dynamic viscosity** Not applicable None known

**Explosive properties**No information available
Explosive limits of toner particles suspended in air

approximately equal to that of coal dust

Oxidizing properties No information available

## 9.2. Other information

### 9.2.1. Information with regard to physical hazard classes

No information available

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### 9.2.2. Other safety characteristics

No information available

# Section 10: Stability and reactivity

#### 10.1. Reactivity

No information available.

#### 10.2. Chemical stability

Stable under normal conditions.

# 10.3. Possibility of hazardous reactions

No information available.

### 10.4. Conditions to avoid

Keep away from heat. Avoid friction, sparks, or other means of ignition

### 10.5. Incompatible materials

Strong oxidizing agents

## 10.6. Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NOx)

# Section 11: Toxicological information

## 11.1. Information on toxicological effects

### **Product Information**

Inhalation Acute  $LC_{50} > 5.20 \text{ mg/l/4h}$  (OECD 436 method)

Eye contact No information available

**Skin contact:** No information available

**Ingestion** Acute LD<sub>50</sub> > 2000 mg/kg (OECD 420 method)

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**Skin corrosion/irritation**Non-irritant (OECD 404 method)

Serious eye damage/eye irritation Minimal irritant to the eye (OECD 405 method)

**Respiratory or skin sensitization** It is not a skin sensitizer (OECD 429 method)

Germ cell mutagenicity AMES test : Negative (OECD 471 method)

Carcinogenicity Ingredients of this product have not been classified as carcinogens according to IARC

monographs, NTP and OSHA

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

STOT - repeated exposure No information available

**Aspiration hazard** No information available.

Potential health effects Eye: May cause slight irritation

Skin: Prolonged exposure may cause skin irritation

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea Inhalation: Not an expected route of exposure Over exposure may cause respiratory

irritation.

### 11.2. Information on other hazards

No information available

# Section 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity** The environmental impact of this product has not been fully investigated Contains 0 % of components with unknown hazards to the aquatic environment

### 12.2. Persistence and degradability

No information available.

### 12.3. Bioaccumulative potential

No information available.

### 12.4. Mobility in soil

No information available.

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Revision Number: 4.1

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### 12.5. Results of PBT and vPvB assessment

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

#### 12.6. Endocrine disrupting properties

No information available.

#### 12.7. Other adverse effects

No information available.

# Section 13: Disposal considerations

#### 13.1. Waste treatment methods

Do not put toner or toner cartridges into a fire, this can cause fire to spread with the risk of causing burn injuries. Shred toner cartridges in a dust/explosion controlled environment. Finely dispersed particles may form explosive mixtures in the air. Dispose of in accordance with Federal, State, and local regulations.

# Section 14: Transport information

## <u>IMDG</u>

|                                  | UN/ID no                 | Not regulated         |  |  |  |
|----------------------------------|--------------------------|-----------------------|--|--|--|
| 14.2                             | Proper shipping name     | Not regulated         |  |  |  |
| 14.3                             | Hazard Class             | Not regulated         |  |  |  |
| 14.4                             | Packing group            | Not regulated         |  |  |  |
|                                  | Marine pollutant         | Not applicable        |  |  |  |
| 14.6                             | Special Provisions       | None                  |  |  |  |
| 14.7                             | Transport in bulk accord | ding toNot applicable |  |  |  |
| Annex II of MARPOL 73/78 and the |                          |                       |  |  |  |
| IBC Code                         |                          |                       |  |  |  |

# RID

| 14.1 | UN/ID no                    | Not regulated  |
|------|-----------------------------|----------------|
| 14.2 | Proper shipping name        | Not regulated  |
| 14.3 | Hazard Class                | Not regulated  |
| 14.4 | Packing group               | Not regulated  |
| 14.5 | <b>Environmental hazard</b> | Not applicable |
| 14.6 | Special Provisions          | None           |

#### ADR

| 14.1 | UN/ID no             | Not regulated  |
|------|----------------------|----------------|
| 14.2 | Proper shipping name | Not regulated  |
| 14.3 | Hazard Class         | Not regulated  |
| 14.4 | Packing group        | Not regulated  |
| 14.5 | Environmental hazard | Not applicable |
| 440  | Cusadal Dusydalama   | Nama           |

14.6 Special Provisions None

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#### IATA

14.1UN/ID noNot regulated14.2Proper shipping nameNot regulated14.3Hazard ClassNot regulated14.4Packing groupNot regulated14.5Environmental hazardNot applicable14.6Special ProvisionsNone

# Section 15: Regulatory information

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

#### **EU-Regulations**

- \* Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XVII.
- \* Contains no substance listed in REACH Regulation (EC) No.1907/2006 Candidate List for Authorization.
- \* Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XIV.

### **National Regulations**

No information available

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## Section 16: Other information

## Key or legend to abbreviations and acronyms used in the safety data sheet

### Legend

SVHC: Substances of Very High Concern for Authorization:

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Trade secret

### Key literature references and sources for data

No information available

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**Revision Note** 

SDS sections updated: 1

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

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### **Disclaimer**

The information relates only to this product. It may not be valid, if used in combination with any other materials or in any other process, and it is based on our best knowledge as of the date of preparation (revision).

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**Revision Date**: 28-May-2021 **Issuing Date**: 04-Apr-2016

Safety data sheet number: PT405-01

Revision Number: 2

Product Name: TN-411BK, TN-413BK, TN-416BK, TN-419BK, TN-421BK, TN-423BK, TN-426BK, TN-431BK, TN-433BK, TN-436BK, TN-449BK, TN-449BK, TN-449BK, TN-449BK, TN-456BK, TN-456BK, TN-469BK, TN-471BK, TN-476BK, TN-493BK, TN-499BK, TN-910BK Toner

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

### 1.1. Product identifier

Product Name TN-411BK, TN-413BK, TN-416BK, TN-419BK, TN-421BK, TN-423BK, TN-426BK,

TN-431BK, TN-433BK, TN-436BK, TN-439BK, TN-441BK, TN-443BK, TN-446BK, TN-449BK, TN-451BK, TN-456BK, TN-459BK, TN-466BK, TN-466BK, TN-471BK, TN-476BK, TN-491BK, TN-493BK, TN-499BK, TN-910BK Toner

Product Form Mixture

Safety data sheet number PT405-01

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

Relevant identified uses These products are black toner in a cartridge for Brother Industries, Ltd. laser printers,

multifunction devices and fax receivers. The cartridge should be used as supplied by Brother and for use in the products stated. Information provided on this SDS is only

consistent with the use specified by Brother.

Uses advised against No information available

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

<u>Manufacturer</u> Brother Industries, Ltd.

15-1 Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan

Telephone (for information): +81-52-824-2735

<u>Importer</u> (Europe)

Brother International Europe Ltd.

1 Tame Street, Audenshaw, Manchester M34 5JE, UK

Brother International (Nederland) B.V.

Zanderij 25, 1185 ZM Amstelveen, The Netherlands Telephone (for information): +44-161-330-6531

### For further information, please contact

E-mail address sds.info@brother.co.jp

### 1.4. Emergency telephone number

Emergency Telephone CHEMTREC +1-703-527-3887 (International)

For France only:

Antipoison Center telephone number: ORFILA +33-1-45-425-959



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# Section 2: Hazard(s) identification

## 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

### 2.2. Label elements

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

## 2.3. Other hazards

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

# Section 3: Composition/information on ingredients

### 3.1 Substances

Not applicable

## 3.2 Mixtures

| Chemical name               | CAS No      | EC No     | EC Index No | Weight-% | Specific      | Classification | REACH          |
|-----------------------------|-------------|-----------|-------------|----------|---------------|----------------|----------------|
|                             |             |           |             |          | concentration | according to   | Registration   |
|                             |             |           |             |          | limit (SCL)   | Regulation     | Number         |
|                             |             |           |             |          |               | (EC) No.       |                |
|                             |             |           |             |          |               | 1272/2008      |                |
|                             |             |           |             |          |               | [CLP]          |                |
| Styrene-acrylate-copolymer  | 25767-47-9  | 607-806-7 | -           | 65-75    | -             | Not classified | Not applicable |
| Fatty acid ester            | **          | -         | -           | 8-18     | -             | Not classified | Registered     |
| Carbon Black (bound)        | 1333-86-4   | 215-609-9 | -           | 4-14     | -             | Not classified | 01-2119384822- |
| ` ,                         |             |           |             |          |               |                | 32-XXXX        |
| Styrene-acrylate Resin      | **          | -         | -           | <7       | -             | Not classified | Not applicable |
| PMMA                        | 9011-14-7   | 618-466-4 | -           | 1-5      | -             | Not classified | Not applicable |
| Silicon dioxide (amorphous) | 112945-52-5 | 601-216-3 | -           | <3       | -             | Not classified | Registered     |
| Silicon Dioxide (amorphous) | 7631-86-9   | 231-545-4 | -           | <3       | -             | Not classified | 01-2119379499- |
| , , ,                       |             |           |             |          |               |                | 16-XXXX        |
| Silicon dioxide (amorphous) | 844491-94-7 | 430-570-1 | -           | <3       | -             | Not classified | Registered     |
| Zinc stearate               | 557-05-1    | 209-151-9 | -           | <0.2     | -             | Not classified | Not applicable |

<sup>\*\*</sup> CONFIDENTIAL

Full text of H- and EUH-phrases: see section 16

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Product Name: TN-411BK, TN-413BK, TN-416BK, TN-419BK, TN-421BK, TN-423BK, TN-426BK, TN-431BK, TN-433BK, TN-436BK, TN-449BK, TN-449BK, TN-449BK, TN-449BK, TN-456BK, TN-456BK, TN-469BK, TN-471BK, TN-476BK, TN-493BK, TN-499BK, TN-910BK Toner

## Section 4: First aid measures

### 4.1. Description of first aid measures

**General advice** If symptoms persist, call a physician.

**Inhalation** Remove to fresh air. Get immediate medical advice/attention.

**Eye contact**Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a physician.

**Skin contact:** Wash skin with soap and water. In the case of skin irritation or allergic reactions see a

physician.

Ingestion Rinse mouth immediately and drink plenty of water. Get immediate medical

advice/attention.

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

Symptoms Inhalation ( dust ): For large quantities: May cause irritation to the respiratory system.

Increased difficulty in breathing. Sneezing. Coughing

Eye contact: May cause eye irritation

Skin contact: : Repeated and/or prolonged skin contact may cause irritation

Ingestion: May cause stomach ache. Unlikely route of exposure

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

# Section 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable Extinguishing Media** Dry chemical, CO<sub>2</sub>, water spray or regular foam

Unsuitable extinguishing media Do not use water jet

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

Specific hazards arising from the

chemical

May form explosive dust clouds in air

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### 5.3. Advice for firefighters

Special protective equipment for fire-fighters

Do not use high-pressure water in order to prevent creating a dust cloud and spreading fire dust. Use appropriate respirator for carbon monoxide and carbon dioxide. Wear positive pressure self-contained breathing apparatus (SCBA) during the attack phase of firefighting operations and during cleanup in enclosed or poorly ventilated areas immediately after a fire. Personnel not having suitable respiratory protection must leave the area to prevent significant exposure to toxic combustion gases from any source.

## Section 6: Accidental release measures

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

For non-emergency personnel Ensure adequate ventilation Avoid contact with skin and eyes Avoid generation of dust. Do

not breathe dust. A suitable dust mask or dust respirator with filter type A/P may be

appropriate

For emergency responders Avoid generation of dust. Do not breathe dust. A suitable dust mask or dust respirator with

filter type A/P may be appropriate.

6.2. Environmental precautions

**Environmental precautions** Do not flush into surface water or sanitary sewer system.

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

**Methods for containment**Sweep the spilt toner or remove it with a vacuum cleaner and transfer into a sealed

container carefully. Sweep slowly to minimize generation of dust during cleanup. If a vacuum cleaner is used, the motor must be rated as dust explosion proof. Potential for very fine particles to be taken into the vacuum only to be passed back into the environment due

to pore size in the bag or filter.

Methods for cleaning up

Take up mechanically, placing in appropriate containers for disposal

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

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# Section 7: Handling and storage

## 7.1. Precautions for safe handling

Advice on safe handling Keep out of the reach of children. Avoid generation of dust. Avoid inhalation of high

concentrations of dust. Avoid contact with eyes.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

**Storage Conditions.** Keep away from oxidizing agents.

7.3. Specific end use(s)

Specific use(s)

These products are black toner in a cartridge for Brother Industries, Ltd. laser printers,

multifunction devices and fax receivers. This cartridge should be used as supplied by

Brother and for use in the products stated.

# Section 8: Exposure controls and personal protection

## 8.1. Control parameters

### **Exposure Limits**

| Chemical name        | European Union            | United Kingdom              | France                      | Spain                       | Germany                    |
|----------------------|---------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------------|
| Carbon Black (bound) | -                         | TWA: 3.5 mg/m <sup>3</sup>  | TWA: 3.5 mg/m <sup>3</sup>  | TWA: 3.5 mg/m <sup>3</sup>  | -                          |
| 1333-86-4            |                           | STEL: 7 mg/m <sup>3</sup>   |                             |                             |                            |
| Silicon Dioxide      | TWA 0.1 mg/m <sup>3</sup> | TWA: 6 mg/m <sup>3</sup>    | -                           | -                           | TWA: 4 mg/m <sup>3</sup>   |
| (amorphous)          | respirable fraction       | TWA: 2.4 mg/m <sup>3</sup>  |                             |                             |                            |
| 7631-86-9            |                           | TWA: 0.1 mg/m <sup>3</sup>  |                             |                             |                            |
|                      |                           | STEL: 18 mg/m <sup>3</sup>  |                             |                             |                            |
|                      |                           | STEL: 7.2 mg/m <sup>3</sup> |                             |                             |                            |
| Zinc stearate        | -                         | TWA: 10 mg/m <sup>3</sup>   | TWA: 10 mg/m <sup>3</sup>   | TWA: 10 mg/m <sup>3</sup>   | -                          |
| 557-05-1             |                           | TWA: 4 mg/m <sup>3</sup>    |                             |                             |                            |
|                      |                           | STEL: 20 mg/m <sup>3</sup>  |                             |                             |                            |
|                      |                           | STEL: 12 mg/m <sup>3</sup>  |                             |                             |                            |
| Chemical name        | Italy                     | Portugal                    | Netherlands                 | Finland                     | Denmark                    |
| Carbon Black (bound) | -                         | TWA: 3 mg/m <sup>3</sup>    | -                           | TWA: 3.5 mg/m <sup>3</sup>  | TWA: 3.5 mg/m <sup>3</sup> |
| 1333-86-4            |                           |                             |                             | STEL: 7 mg/m <sup>3</sup>   |                            |
| Silicon Dioxide      | -                         | -                           | TWA: 0.75 mg/m <sup>3</sup> | TWA: 5 mg/m <sup>3</sup>    | -                          |
| (amorphous)          |                           |                             |                             | TWA: 0.05 mg/m <sup>3</sup> |                            |
| 7631-86-9            |                           |                             |                             | TWA: 0.1 mg/m <sup>3</sup>  |                            |
| Zinc stearate        | -                         | TWA: 10 mg/m <sup>3</sup>   | -                           | TWA: 10 mg/m <sup>3</sup>   | -                          |
| 557-05-1             |                           |                             |                             | -                           |                            |

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| Chemical name               | Austria                  | Switzerland              | Poland                   | Norway  | Ireland  |
|-----------------------------|--------------------------|--------------------------|--------------------------|---|--|
| Carbon Black (bound)        | -                        | -                        | TWA: 4 mg/m <sup>3</sup> | TWA: 3.5 mg/m <sup>3</sup>                              | TWA: 3 mg/m <sup>3</sup>                               |
| 1333-86-4                   |                          |                          |                          | STEL: 7 mg/m <sup>3</sup>                               | STEL: 15 mg/m <sup>3</sup>                             |
| Silicon dioxide (amorphous) | TWA: 4 mg/m <sup>3</sup> | -                        | -                        | -   | -  |
| 112945-52-5                 |                          |                          |                          |   |  |
| Silicon Dioxide (amorphous) | TWA: 4 mg/m <sup>3</sup> | TWA: 4 mg/m <sup>3</sup> | -                        | TWA: 1.5 mg/m <sup>3</sup><br>STEL: 3 mg/m <sup>3</sup> | TWA: 6 mg/m <sup>3</sup><br>TWA: 2.4 mg/m <sup>3</sup> |
| 7631-86-9                   |                          |                          |                          | _   | STEL: 18 mg/m <sup>3</sup>                             |
|                             |                          |                          |                          |   | STEL: 7.2 mg/m <sup>3</sup>                            |
| Zinc stearate               | -                        | TWA: 3 mg/m <sup>3</sup> | -                        | -   | TWA: 10 mg/m <sup>3</sup>                              |
| 557-05-1                    |                          |                          |                          |   | TWA: 4 mg/m <sup>3</sup>                               |
|                             |                          |                          |                          |   | STEL: 12 mg/m <sup>3</sup>                             |
|                             |                          |                          |                          |   | STEL: 20 mg/m <sup>3</sup>                             |
|                             |                          |                          |                          |   | STEL: 30 mg/m <sup>3</sup>                             |

**Derived No Effect Level (DNEL)** No information available.

Predicted No Effect Concentration

(PNEC)

No information available.

### 8.2. Exposure controls

Appropriate engineering controls No information available.

Personal protective equipment Not normally required. For use other than in normal operating procedures (such as in the

event of large spill), the following should be applied:

Eye/face protection Safety goggles.

**Hand protection** Protective gloves.

**Skin and body protection** If there is a risk of contact:, Apron, Boots

**Respiratory protection** Use appropriate respiratory protection.

**Environmental exposure controls** Avoid release to the environment.

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# Section 9: Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

**Appearance** 

Physical state Solid Powder
Color black
Odor Odorless

Odor threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

PH Not applicable None known
PH (as aqueous solution) Not applicable

Not applicable
Not applicable

Melting point / freezing point No data available None known Boiling point / boiling range Not applicable None known Flash point No data available None known **Evaporation rate** No data available None known Flammability (solid, gas) No data available None known Flammability Limit in Air None known

Upper flammability limit:No data availableLower flammability limit:No data available

Vapor pressureNo data availableNone knownVapor densityNo data availableNone knownRelative densityNo information availableNone known

Insoluble in water Water solubility Solubility(ies) No data available None known Partition coefficient No data available None known **Autoignition temperature** No data available None known **Decomposition temperature** No data available None known Kinematic viscosity Not applicable None known **Dynamic viscosity** Not applicable None known

**Explosive properties**No information available
Explosive limits of toner particles suspended in air

approximately equal to that of coal dust

Oxidizing properties No information available

### 9.2. Other information

### 9.2.1. Information with regard to physical hazard classes

No information available

## 9.2.2. Other safety characteristics

No information available

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# Section 10: Stability and reactivity

## 10.1. Reactivity

No information available.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No information available.

#### 10.4. Conditions to avoid

Keep away from heat. Avoid friction, sparks, or other means of ignition

## 10.5. Incompatible materials

Strong oxidizing agents

### 10.6. Hazardous decomposition products

Carbon oxides, Nitrogen oxides (NOx)

# Section 11: Toxicological information

### 11.1. Information on toxicological effects

### **Product Information**

Inhalation Acute  $LC_{50} > 5.20 \text{ mg/l/4h}$  (OECD 436 method)

**Eye contact** No information available

**Skin contact:** No information available

**Ingestion** Acute LD<sub>50</sub> > 2000 mg/kg (OECD 420 method)

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**Skin corrosion/irritation** Non-irritant (OECD 404 method)

pH: Not applicable

Serious eye damage/eye irritation Minimal irritant to the eye (OECD 405 method)

pH: Not applicable

Respiratory or skin sensitization 
It is not a skin sensitizer (OECD 429 method)

Germ cell mutagenicity AMES test: Negative (OECD 471 method)

Carcinogenicity Carbon Black: In 1996, the IARC re-evaluated carbon black as a Group 2B carcinogen

(possible human carcinogen). This classification is given to chemicals, for which there is inadequate human evidence, but sufficient animal evidence on which to base an opinion of carcinogenicity. The classification is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung. Studies performed in animal models other than rats did not show any association between carbon black and lung tumors. Moreover, a two-year cancer bioassay using a typical toner preparation containing carbon black demonstrated no association

between toner exposure and tumor development in rats.

Other ingredients of this product have not been classified as carcinogens according

to IARC monographs, NTP and OSHA

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

STOT - repeated exposure No information available

**Aspiration hazard** No information available.

Skin: Prolonged exposure may cause skin irritation

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea Inhalation: Not an expected route of exposure Over exposure may cause respiratory

irritation.

### 11.2. Information on other hazards

No information available

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# Section 12: Ecological information

### 12.1. Toxicity

#### **Ecotoxicity**

Contains 0 % of components with unknown hazards to the aquatic environment

| Chemical name                  | Algae/aquatic plants  | Fish  | Toxicity to microorganisms | Crustacea                                    |
|--------------------------------|---|---|----------------------------|--|
| Silicon Dioxide<br>(amorphous) | EC50: =440mg/L (72h,<br>Pseudokirchneriella<br>subcapitata) | LC50: =5000mg/L (96h,<br>Brachydanio rerio) | -                          | EC50: =7600mg/L (48h,<br>Ceriodaphnia dubia) |

#### 12.2. Persistence and degradability

No information available.

#### 12.3. Bioaccumulative potential

There is no data for this product.

**Component Information** 

| Chemical name | Partition coefficient |
|---------------|-----------------------|
| Zinc stearate | 1.2                   |

#### 12.4. Mobility in soil

No information available.

## 12.5. Results of PBT and vPvB assessment

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

### 12.6. Endocrine disrupting properties

No information available.

## 12.7. Other adverse effects

No information available.

# Section 13: Disposal considerations

## 13.1. Waste treatment methods

Do not put toner or toner cartridges into a fire, this can cause fire to spread with the risk of causing burn injuries. Shred toner cartridges in a dust/explosion controlled environment. Finely dispersed particles may form explosive mixtures in the air. Dispose of in accordance with Federal, State, and local regulations.

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# Section 14: Transport information

## <u>IMDG</u>

| 14.1 | UN/ID no             | Not regulated  |
|------|----------------------|----------------|
| 14.2 | Proper shipping name | Not regulated  |
| 14.3 | Hazard Class         | Not regulated  |
| 14.4 | Packing group        | Not regulated  |
| 14.5 | Marine pollutant     | Not applicable |
| 14.6 | Special Provisions   | None           |

14.7 Transport in bulk according to Not applicable

Annex II of MARPOL 73/78 and the

**IBC Code** 

## RID

| 14.1 | UN/ID no             | Not regulated  |
|------|----------------------|----------------|
| 14.2 | Proper shipping name | Not regulated  |
| 14.3 | Hazard Class         | Not regulated  |
| 14.4 | Packing group        | Not regulated  |
| 14.5 | Environmental hazard | Not applicable |
| 14.6 | Special Provisions   | None           |

### ADR

| 14.1 | UN/ID no             | Not regulated  |
|------|----------------------|----------------|
| 14.2 | Proper shipping name | Not regulated  |
| 14.3 | Hazard Class         | Not regulated  |
| 14.4 | Packing group        | Not regulated  |
| 14.5 | Environmental hazard | Not applicable |
| 146  | Special Provisions   | None           |

14.6 Special Provisions None

#### IATA

| 14.1 | UN/ID no             | Not regulated  |
|------|----------------------|----------------|
| 14.2 | Proper shipping name | Not regulated  |
| 14.3 | Hazard Class         | Not regulated  |
| 14.4 | Packing group        | Not regulated  |
| 14.5 | Environmental hazard | Not applicable |
| 14.6 | Special Provisions   | 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**

- \* Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XVII.
- \* Contains no substance listed in REACH Regulation (EC) No.1907/2006 Candidate List for Authorization.
- \* Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XIV.

### **National Regulations**

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## Section 16: Other information

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Leaend

SVHC: Substances of Very High Concern for Authorization:

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

\* Trade secret

### Key literature references and sources for data

No information available

Revision Date 28-May-2021

Issuing Date 04-Apr-2016

### **Revision Note**

SDS sections updated: 1,3

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

### **Disclaimer**

The information relates only to this product. It may not be valid, if used in combination with any other materials or in any other process, and it is based on our best knowledge as of the date of preparation (revision).

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Revision Date: 28-May-2021 Issuing Date: 12-Sep-2013

Safety data sheet number: YT413-02

Revision Number: 4.1

Product Name: TN-411Y, TN-413Y, TN-416Y, TN-419Y, TN-421Y, TN-423Y, TN-426Y, TN-431Y, TN-433Y, TN-436Y, TN-439Y, TN-441Y, TN-443Y, TN-446Y, TN-449Y, TN-451Y, TN-456Y, TN-459Y, TN-461Y, TN-466Y, TN-469Y, TN-471Y, TN-476Y, TN-491Y, TN-493Y, TN-499Y, TN-910Y Toner

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

### 1.1. Product identifier

Product Name TN-411Y, TN-413Y, TN-416Y, TN-419Y, TN-421Y, TN-423Y, TN-426Y, TN-431Y,

TN-433Y, TN-436Y, TN-439Y, TN-441Y, TN-443Y, TN-446Y, TN-449Y, TN-451Y, TN-456Y, TN-459Y, TN-461Y, TN-466Y, TN-469Y, TN-471Y, TN-476Y, TN-491Y,

TN-493Y, TN-499Y, TN-910Y Toner

Product Form Mixture

Safety data sheet number YT413-02

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

Relevant identified uses These products are yellow toner in a cartridge for Brother Industries, Ltd. laser printers,

multifunction devices and fax receivers. The cartridge should be used as supplied by Brother and for use in the products stated. Information provided on this SDS is only

consistent with the use specified by Brother.

Uses advised against No information available

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

<u>Manufacturer</u> Brother Industries, Ltd.

15-1 Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan

Telephone (for information): +81-52-824-2735

<u>Importer</u> (Europe)

Brother International Europe Ltd.

1 Tame Street, Audenshaw, Manchester M34 5JE, UK

Brother International (Nederland) B.V.

Zanderij 25, 1185 ZM Amstelveen, The Netherlands Telephone (for information): +44-161-330-6531

### For further information, please contact

E-mail address sds.info@brother.co.jp

### 1.4. Emergency telephone number

Emergency Telephone CHEMTREC +1-703-527-3887 (International)

For France only:

Antipoison Center telephone number: ORFILA +33-1-45-425-959



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Revision Number: 4.1

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# Section 2: Hazard(s) identification

## 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

### 2.2. Label elements

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

## 2.3. Other hazards

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

# Section 3: Composition/information on ingredients

### 3.1 Substances

Not applicable

## 3.2 Mixtures

| Chemical name               | CAS No      | EC No     | EC Index No | Weight-% | Specific<br>concentration<br>limit (SCL) | Classification<br>according to<br>Regulation<br>(EC) No.<br>1272/2008<br>[CLP] | REACH<br>Registration<br>Number |
|-----------------------------|-------------|-----------|-------------|----------|--|--|---------------------------------|
| Styrene-acrylate-copolymer  | 25767-47-9  | 607-806-7 |             | 75-90    | -  | Not classified   | Not applicable                  |
| Pigment                     | **          | -         | -           | 4-10     | -  | Not classified   | Not applicable                  |
| Fatty acid ester            | **          | -         | -           | 3-10     | -  | Not classified   | Registered                      |
| Silicon dioxide (amorphous) | 112945-52-5 | 601-216-3 | -           | 1-3      | -  | Not classified   | Registered                      |
| PMMA                        | 9011-14-7   | 618-466-4 | -           | 1-3      | -  | Not classified   | Not applicable                  |
| Silicon dioxide (amorphous) | 844491-94-7 | 430-570-1 | -           | <2       | -  | Not classified   | Registered                      |
| Styrene-acrylate Resin      | **          | -         | -           | 0.1-1    | -  | Not classified   | Not applicable                  |

<sup>\*\*</sup> CONFIDENTIAL

Full text of H- and EUH-phrases: see section 16

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Safety data sheet number: YT413-02

Revision Number: 4.1

Product Name: TN-411Y, TN-413Y, TN-416Y, TN-419Y, TN-421Y, TN-423Y, TN-426Y, TN-431Y, TN-433Y, TN-436Y, TN-439Y, TN-441Y, TN-443Y, TN-446Y, TN-449Y, TN-451Y, TN-456Y, TN-459Y, TN-461Y, TN-466Y, TN-469Y, TN-471Y, TN-476Y, TN-491Y, TN-493Y, TN-499Y, TN-910Y Toner

## Section 4: First aid measures

## 4.1. Description of first aid measures

**General advice** If symptoms persist, call a physician.

**Inhalation** Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a physician.

Skin contact: Wash skin with soap and water. In the case of skin irritation or allergic reactions see a

physician.

**Ingestion** Clean mouth with water and drink afterwards plenty of water.

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

**Symptoms** Inhalation ( dust ): For large quantities: May cause irritation to the respiratory system.

Increased difficulty in breathing. Sneezing. Coughing

Eye contact: May cause eye irritation

Skin contact: : Repeated and/or prolonged skin contact may cause irritation

Ingestion: May cause stomach ache. Unlikely route of exposure

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

# Section 5: Firefighting measures

### 5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical, CO<sub>2</sub>, water spray or regular foam

Unsuitable extinguishing media Do not use water jet

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

Specific hazards arising from the

chemical

May form explosive dust clouds in air

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Safety data sheet number: YT413-02

Revision Number: 4.1

Product Name: TN-411Y, TN-413Y, TN-416Y, TN-419Y, TN-421Y, TN-423Y, TN-426Y, TN-431Y, TN-433Y, TN-436Y, TN-439Y, TN-441Y, TN-443Y, TN-446Y, TN-449Y, TN-451Y, TN-456Y, TN-459Y, TN-461Y, TN-466Y, TN-469Y, TN-471Y, TN-476Y, TN-491Y, TN-493Y, TN-499Y, TN-910Y Toner

### 5.3. Advice for firefighters

Special protective equipment for fire-fighters

Do not use high-pressure water in order to prevent creating a dust cloud and spreading fire dust. Use appropriate respirator for carbon monoxide and carbon dioxide. Wear positive pressure self-contained breathing apparatus (SCBA) during the attack phase of firefighting operations and during cleanup in enclosed or poorly ventilated areas immediately after a fire. Personnel not having suitable respiratory protection must leave the area to prevent significant exposure to toxic combustion gases from any source.

## Section 6: Accidental release measures

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

For non-emergency personnel Avoid generation of dust. Do not breathe dust. A suitable dust mask or dust respirator with

filter type A/P may be appropriate

For emergency responders Avoid generation of dust. Do not breathe dust. A suitable dust mask or dust respirator with

filter type A/P may be appropriate.

6.2. Environmental precautions

**Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas.

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

Methods for containment

Sweep the spilt toner or remove it with a vacuum cleaner and transfer into a sealed

container carefully. Sweep slowly to minimize generation of dust during cleanup. If a vacuum cleaner is used, the motor must be rated as dust explosion proof. Potential for very fine particles to be taken into the vacuum only to be passed back into the environment due

to pore size in the bag or filter.

Methods for cleaning up

Take up mechanically, placing in appropriate containers for disposal

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

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# Section 7: Handling and storage

## 7.1. Precautions for safe handling

Advice on safe handling Keep out of the reach of children. Avoid generation of dust. Avoid inhalation of high

concentrations of dust. Avoid contact with eyes.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions. Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Specific use(s) These products are yellow toner in a cartridge for Brother Industries, Ltd. laser printers,

multifunction devices and fax receivers. The cartridge should be used as supplied by

Brother and for use in the products stated.

## Section 8: Exposure controls and personal protection

## 8.1. Control parameters

### **Exposure Limits**

| Chemical name   | Austria                  | Switzerland | Poland | Norway | Ireland |
|-----------------|--------------------------|-------------|--------|--------|---------|
| Silicon dioxide | TWA: 4 mg/m <sup>3</sup> | -           | -      | -      | -       |
| (amorphous)     |                          |             |        |        |         |
| 112945-52-5     |                          |             |        |        |         |

**Derived No Effect Level (DNEL)** No information available.

Predicted No Effect Concentration No information available.

(PNEC)

8.2. Exposure controls

Appropriate engineering controls No information available.

Not normally required. For use other than in normal operating procedures (such as in the Personal protective equipment

event of large spill), the following should be applied:

Eye/face protection Safety goggles.

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Product Name: TN-411Y, TN-413Y, TN-416Y, TN-419Y, TN-421Y, TN-423Y, TN-426Y, TN-431Y, TN-433Y, TN-436Y, TN-439Y, TN-441Y, TN-443Y, TN-446Y, TN-449Y, TN-451Y, TN-456Y, TN-459Y, TN-461Y, TN-466Y, TN-469Y, TN-471Y, TN-476Y, TN-491Y, TN-493Y, TN-499Y, TN-910Y Toner

**Hand protection** Protective gloves.

**Skin and body protection** If there is a risk of contact:, Apron, Boots

**Respiratory protection** Use appropriate respiratory protection.

**Environmental exposure controls** Avoid release to the environment.

## Section 9: Physical and chemical properties

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

**Appearance** 

Physical state Powder
Color yellow
Odor Odorless

Odor threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

pH Not applicable None known

pH (as aqueous solution)Not applicableMelting point / freezing pointNo data availableNone knownBoiling point / boiling rangeNot applicableNone knownFlash pointNo data availableNone knownEvaporation rateNo data availableNone known

Flammability (solid, gas) No data available None known

Flammability Limit in Air
Upper flammability limit:
No data available

Lower flammability limit:No data availableVapor pressureNo data availableNone knownVapor densityNo data availableNone knownRelative densityNo data availableNone known

Relative density
Water solubility
No data available
Insoluble in water

Solubility(ies) No data available None known **Partition coefficient** No data available None known **Autoignition temperature** No data available None known **Decomposition temperature** No data available None known Kinematic viscosity No data available None known **Dynamic viscosity** No data available None known

No information available

**Explosive properties**No information available
Explosive limits of toner particles suspended in air

None known

approximately equal to that of coal dust

## 9.2. Other information

Oxidizing properties

### 9.2.1. Information with regard to physical hazard classes

No information available

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### 9.2.2. Other safety characteristics

No information available

# Section 10: Stability and reactivity

#### 10.1. Reactivity

No information available.

#### 10.2. Chemical stability

Stable under normal conditions.

## 10.3. Possibility of hazardous reactions

No information available.

### 10.4. Conditions to avoid

Keep away from heat. Avoid friction, sparks, or other means of ignition

### 10.5. Incompatible materials

Strong oxidizing agents

## 10.6. Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NOx)

# Section 11: Toxicological information

## 11.1. Information on toxicological effects

## **Product Information**

Inhalation Acute  $LC_{50} > 5.25 \text{ mg/l/4h}$  (OECD 436 method)

Eye contact No information available

**Skin contact:** No information available

Ingestion Acute LD<sub>50</sub> > 2000 mg/kg (OECD 420 method)

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**Skin corrosion/irritation** Non-irritant (OECD 404 method)

Serious eye damage/eye irritation Minimal irritant to the eye (OECD 405 method)

**Respiratory or skin sensitization** It is not a skin sensitizer (OECD 429 method)

Germ cell mutagenicity AMES test : Negative (OECD 471 method)

Carcinogenicity Ingredients of this product have not been classified as carcinogens according to IARC

monographs, NTP and OSHA

**Reproductive toxicity**No information available.

**STOT - single exposure** No information available.

STOT - repeated exposure No information available

**Aspiration hazard** No information available.

Skin: Prolonged exposure may cause skin irritation

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea Inhalation: Not an expected route of exposure Over exposure may cause respiratory

irritation.

### 11.2. Information on other hazards

No information available

# Section 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity** The environmental impact of this product has not been fully investigated Contains 0 % of components with unknown hazards to the aquatic environment

## 12.2. Persistence and degradability

No information available.

### 12.3. Bioaccumulative potential

No information available.

### 12.4. Mobility in soil

No information available.

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### 12.5. Results of PBT and vPvB assessment

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

#### 12.6. Endocrine disrupting properties

No information available.

#### 12.7. Other adverse effects

No information available.

# Section 13: Disposal considerations

#### 13.1. Waste treatment methods

Do not put toner or toner cartridges into a fire, this can cause fire to spread with the risk of causing burn injuries. Shred toner cartridges in a dust/explosion controlled environment. Finely dispersed particles may form explosive mixtures in the air. Dispose of in accordance with Federal, State, and local regulations.

# Section 14: Transport information

### **IMDG**

| 14.1                             | UN/ID no                 | Not regulated         |  |  |  |
|----------------------------------|--------------------------|-----------------------|--|--|--|
| 14.2                             | Proper shipping name     | Not regulated         |  |  |  |
| 14.3                             | Hazard Class             | Not regulated         |  |  |  |
|                                  | Packing group            | Not regulated         |  |  |  |
| 14.5                             | Marine pollutant         | Not applicable        |  |  |  |
| 14.6                             | Special Provisions       | None                  |  |  |  |
| 14.7                             | Transport in bulk accord | ling toNot applicable |  |  |  |
| Annex II of MARPOL 73/78 and the |                          |                       |  |  |  |
| IBC Code                         |                          |                       |  |  |  |

## RID

| 14.1 | UN/ID no                    | Not regulated  |
|------|-----------------------------|----------------|
| 14.2 | Proper shipping name        | Not regulated  |
| 14.3 | Hazard Class                | Not regulated  |
| 14.4 | Packing group               | Not regulated  |
| 14.5 | <b>Environmental hazard</b> | Not applicable |
| 14.6 | Special Provisions          | None           |

## ADR

| 14.1 | UN/ID no                    | Not regulated  |
|------|-----------------------------|----------------|
| 14.2 | Proper shipping name        | Not regulated  |
| 14.3 | Hazard Class                | Not regulated  |
| 14.4 | Packing group               | Not regulated  |
| 14.5 | <b>Environmental hazard</b> | Not applicable |
| 14.6 | Special Provisions          | None           |

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#### IATA

14.1UN/ID noNot regulated14.2Proper shipping nameNot regulated14.3Hazard ClassNot regulated14.4Packing groupNot regulated14.5Environmental hazardNot applicable

14.6 Special Provisions None

# Section 15: Regulatory information

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

### **EU-Regulations**

- \* Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XVII.
- \* Contains no substance listed in REACH Regulation (EC) No.1907/2006 Candidate List for Authorization.
- \* Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XIV.

### **National Regulations**

No information available

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## Section 16: Other information

## Key or legend to abbreviations and acronyms used in the safety data sheet

### Legend

SVHC: Substances of Very High Concern for Authorization:

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

\* Trade secret

### Key literature references and sources for data

No information available



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Revision Date 28-May-2021

Issuing Date 12-Sep-2013

**Revision Note** 

SDS sections updated: 1

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

#### **Disclaimer**

The information relates only to this product. It may not be valid, if used in combination with any other materials or in any other process, and it is based on our best knowledge as of the date of preparation (revision).



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Product Name: TN-411C, TN-413C, TN-416C, TN-419C, TN-421C, TN-423C, TN-426C, TN-431C, TN-433C, TN-436C, TN-439C, TN-441C, TN-443C, TN-446C, TN-449C, TN-451C, TN-456C, TN-459C, TN-461C, TN-466C, TN-469C, TN-471C, TN-476C, TN-491C, TN-493C, TN-499C, TN-910C Toner

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

### 1.1. Product identifier

Product Name TN-411C, TN-413C, TN-416C, TN-419C, TN-421C, TN-423C, TN-426C, TN-431C,

TN-433C, TN-436C, TN-439C, TN-441C, TN-443C, TN-446C, TN-449C, TN-451C, TN-456C, TN-459C, TN-461C, TN-466C, TN-469C, TN-471C, TN-476C, TN-491C,

TN-493C, TN-499C, TN-910C Toner

Product Form Mixture

Safety data sheet number CT413-02

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

Relevant identified uses These products are cyan toner in a cartridge for Brother Industries, Ltd. laser printers,

multifunction devices and fax receivers. The cartridge should be used as supplied by Brother and for use in the products stated. Information provided on this SDS is only

consistent with the use specified by Brother.

Uses advised against No information available

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

<u>Manufacturer</u> Brother Industries, Ltd.

15-1 Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan

Telephone (for information): +81-52-824-2735

<u>Importer</u> (Europe)

Brother International Europe Ltd.

1 Tame Street, Audenshaw, Manchester M34 5JE, UK

Brother International (Nederland) B.V.

Zanderij 25, 1185 ZM Amstelveen, The Netherlands Telephone (for information): +44-161-330-6531

## For further information, please contact

E-mail address sds.info@brother.co.jp

#### 1.4. Emergency telephone number

Emergency Telephone CHEMTREC +1-703-527-3887 (International)

For France only:

Antipoison Center telephone number: ORFILA +33-1-45-425-959

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# Section 2: Hazard(s) identification

## 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

### 2.2. Label elements

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

## 2.3. Other hazards

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

# Section 3: Composition/information on ingredients

### 3.1 Substances

Not applicable

## 3.2 Mixtures

| Chemical name               | CAS No      | EC No     | EC Index No | Weight-% | Specific<br>concentration<br>limit (SCL) | Classification<br>according to<br>Regulation<br>(EC) No.<br>1272/2008<br>[CLP] | REACH<br>Registration<br>Number |
|-----------------------------|-------------|-----------|-------------|----------|--|--|---------------------------------|
| Styrene-acrylate-copolymer  | 25767-47-9  | 607-806-7 | -           | 80-90    | -  | Not classified   | Not applicable                  |
| Fatty acid ester            | **          | -         | -           | 3-10     | -  | Not classified   | Registered                      |
| Pigment                     | **          | -         | -           | 3-7      | -  | Not classified   | Not applicable                  |
| Silicon dioxide (amorphous) | 112945-52-5 | 601-216-3 | -           | 1-3      | -  | Not classified   | Registered                      |
| PMMA                        | 9011-14-7   | 618-466-4 | -           | 1-3      | -  | Not classified   | Not applicable                  |
| Silicon dioxide (amorphous) | 844491-94-7 | 430-570-1 | -           | <2       | -  | Not classified   | Registered                      |
| Styrene-acrylate Resin      | **          | -         | -           | 0.1-1    | -  | Not classified   | Not applicable                  |

<sup>\*\*</sup> CONFIDENTIAL

Full text of H- and EUH-phrases: see section 16

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## Section 4: First aid measures

## 4.1. Description of first aid measures

**General advice** If symptoms persist, call a physician.

**Inhalation** Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a physician.

Skin contact: Wash skin with soap and water. In the case of skin irritation or allergic reactions see a

physician.

**Ingestion** Clean mouth with water and drink afterwards plenty of water.

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

**Symptoms** Inhalation ( dust ): For large quantities: May cause irritation to the respiratory system.

Increased difficulty in breathing. Sneezing. Coughing

Eye contact: May cause eye irritation

Skin contact: : Repeated and/or prolonged skin contact may cause irritation

Ingestion: May cause stomach ache. Unlikely route of exposure

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

# Section 5: Firefighting measures

### 5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical, CO<sub>2</sub>, water spray or regular foam

Unsuitable extinguishing media Do not use water jet

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

Specific hazards arising from the

chemical

May form explosive dust clouds in air

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### 5.3. Advice for firefighters

Special protective equipment for fire-fighters

Do not use high-pressure water in order to prevent creating a dust cloud and spreading fire dust. Use appropriate respirator for carbon monoxide and carbon dioxide. Wear positive pressure self-contained breathing apparatus (SCBA) during the attack phase of firefighting operations and during cleanup in enclosed or poorly ventilated areas immediately after a fire. Personnel not having suitable respiratory protection must leave the area to prevent significant exposure to toxic combustion gases from any source.

## Section 6: Accidental release measures

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

For non-emergency personnel Avoid generation of dust. Do not breathe dust. A suitable dust mask or dust respirator with

filter type A/P may be appropriate

6.2. Environmental precautions

**Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas.

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

Methods for containment Sweep the spilt toner or remove it with a vacuum cleaner and transfer into a sealed

container carefully. Sweep slowly to minimize generation of dust during cleanup. If a vacuum cleaner is used, the motor must be rated as dust explosion proof. Potential for very fine particles to be taken into the vacuum only to be passed back into the environment due

to pore size in the bag or filter.

Methods for cleaning up

Take up mechanically, placing in appropriate containers for disposal

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

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# Section 7: Handling and storage

## 7.1. Precautions for safe handling

Keep out of the reach of children. Avoid generation of dust. Avoid inhalation of high Advice on safe handling

concentrations of dust. Avoid contact with eyes.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions. Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Specific use(s) These products are cyan toner in a cartridge for Brother Industries, Ltd. laser printers,

multifunction devices and fax receivers. The cartridge should be used as supplied by

Brother and for use in the products stated.

## Section 8: Exposure controls and personal protection

### 8.1. Control parameters

### **Exposure Limits**

| Chemical name                                 | Austria                  | Switzerland | Poland | Norway | Ireland |
|---|--------------------------|-------------|--------|--------|---------|
| Silicon dioxide<br>(amorphous)<br>112945-52-5 | TWA: 4 mg/m <sup>3</sup> | -           | -      | -      | -       |

**Derived No Effect Level (DNEL)** No information available.

Predicted No Effect Concentration No information available.

(PNEC)

8.2. Exposure controls

Appropriate engineering controls No information available.

Not normally required. For use other than in normal operating procedures (such as in the Personal protective equipment

event of large spill), the following should be applied:

Eye/face protection Safety goggles.

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Hand protection Protective gloves.

Skin and body protection If there is a risk of contact:, Apron, Boots

Respiratory protection Use appropriate respiratory protection.

**Environmental exposure controls** Avoid release to the environment.

## Section 9: Physical and chemical properties

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

**Appearance** 

Physical state Powder Color blue Odor Odorless

Odor threshold No information available

**Property Values** Remarks • Method

Not applicable None known

pH (as aqueous solution) Not applicable

No data available Melting point / freezing point None known Boiling point / boiling range Not applicable None known Flash point No data available None known **Evaporation rate** No data available None known Flammability (solid, gas) No data available None known Flammability Limit in Air None known

Upper flammability limit: No data available Lower flammability limit: No data available

Vapor pressure No data available None known Vapor density No data available None known Relative density No data available None known

Water solubility Insoluble in water

Solubility(ies) No data available None known **Partition coefficient** No data available None known **Autoignition temperature** No data available None known **Decomposition temperature** No data available None known Kinematic viscosity Not applicable None known **Dynamic viscosity** Not applicable None known

**Explosive properties** No information available Explosive limits of toner particles suspended in air

approximately equal to that of coal dust

Oxidizing properties No information available

#### 9.2. Other information

### 9.2.1. Information with regard to physical hazard classes

No information available

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### 9.2.2. Other safety characteristics

No information available

# Section 10: Stability and reactivity

#### 10.1. Reactivity

No information available.

#### 10.2. Chemical stability

Stable under normal conditions.

## 10.3. Possibility of hazardous reactions

No information available.

### 10.4. Conditions to avoid

Keep away from heat. Avoid friction, sparks, or other means of ignition

### 10.5. Incompatible materials

Strong oxidizing agents

### 10.6. Hazardous decomposition products

Carbon oxides, Nitrogen oxides (NOx)

# Section 11: Toxicological information

## 11.1. Information on toxicological effects

### **Product Information**

Inhalation Acute  $LC_{50} > 5.24 \text{ mg/l (4-hr) (OECD 436 method)}$ 

Eye contact No information available

**Skin contact:** No information available

**Ingestion** Acute LD<sub>50</sub> > 2000 mg/kg (OECD 420 method)



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**Skin corrosion/irritation** May cause slight irritation (OECD 404 method)

Serious eye damage/eye irritation Minimal irritant to the eye (OECD 405 method)

**Respiratory or skin sensitization** It is not a skin sensitizer (OECD 429 method)

Germ cell mutagenicity AMES test: Negative (OECD 471 method)

Carcinogenicity Ingredients of this product have not been classified as carcinogens according to IARC

monographs, NTP and OSHA

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

STOT - repeated exposure No information available

**Aspiration hazard** No information available.

Potential health effects Eye: May cause slight irritation

Skin: Prolonged exposure may cause skin irritation

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea Inhalation: Not an expected route of exposure Over exposure may cause respiratory

irritation.

### 11.2. Information on other hazards

No information available

# Section 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity** The environmental impact of this product has not been fully investigated Contains 0 % of components with unknown hazards to the aquatic environment

## 12.2. Persistence and degradability

No information available.

### 12.3. Bioaccumulative potential

No information available.

## 12.4. Mobility in soil

No information available.

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### 12.5. Results of PBT and vPvB assessment

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

#### 12.6. Endocrine disrupting properties

No information available.

#### 12.7. Other adverse effects

No information available.

# Section 13: Disposal considerations

#### 13.1. Waste treatment methods

Do not put toner or toner cartridges into a fire, this can cause fire to spread with the risk of causing burn injuries. Shred toner cartridges in a dust/explosion controlled environment. Finely dispersed particles may form explosive mixtures in the air. Dispose of in accordance with Federal, State, and local regulations.

# Section 14: Transport information

## <u>IMDG</u>

|                                  | UN/ID no                 | Not regulated         |  |  |  |
|----------------------------------|--------------------------|-----------------------|--|--|--|
| 14.2                             | Proper shipping name     | Not regulated         |  |  |  |
| 14.3                             | Hazard Class             | Not regulated         |  |  |  |
| 14.4                             | Packing group            | Not regulated         |  |  |  |
|                                  | Marine pollutant         | Not applicable        |  |  |  |
| 14.6                             | Special Provisions       | None                  |  |  |  |
| 14.7                             | Transport in bulk accord | ding toNot applicable |  |  |  |
| Annex II of MARPOL 73/78 and the |                          |                       |  |  |  |
| IBC Code                         |                          |                       |  |  |  |

# RID

| 14.1 | UN/ID no                    | Not regulated  |
|------|-----------------------------|----------------|
| 14.2 | Proper shipping name        | Not regulated  |
| 14.3 | Hazard Class                | Not regulated  |
| 14.4 | Packing group               | Not regulated  |
| 14.5 | <b>Environmental hazard</b> | Not applicable |
| 14.6 | Special Provisions          | None           |

#### ADR

| 14.1 | UN/ID no                    | Not regulated  |
|------|-----------------------------|----------------|
| 14.2 | Proper shipping name        | Not regulated  |
| 14.3 | Hazard Class                | Not regulated  |
| 14.4 | Packing group               | Not regulated  |
| 14.5 | <b>Environmental hazard</b> | Not applicable |
| 14.6 | Special Provisions          | None           |

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#### IATA

14.1UN/ID noNot regulated14.2Proper shipping nameNot regulated14.3Hazard ClassNot regulated14.4Packing groupNot regulated14.5Environmental hazardNot applicable

14.6 Special Provisions None

# Section 15: Regulatory information

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

### **EU-Regulations**

- \* Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XVII.
- \* Contains no substance listed in REACH Regulation (EC) No.1907/2006 Candidate List for Authorization.
- \* Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XIV.

### **National Regulations**

No information available

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

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## Section 16: Other information

## Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

SVHC: Substances of Very High Concern for Authorization:

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

\* Trade secret

Key literature references and sources for data

No information available

Revision Date 28-May-2021

Issuing Date 12-Sep-2013

**Revision Note** 

Importer information has been changed. SDS sections updated: 1

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

#### **Disclaimer**

The information relates only to this product. It may not be valid, if used in combination with any other materials or in any other process, and it is based on our best knowledge as of the date of preparation (revision).