SAFETY DATA SHEET

Revision Date: 28-Jul-2020
Issuing Date: 18-Sep-2015
Revision Number: 2
Safety data sheet number: 5VA926-M4-1

Product Name: TZe cassette r bbon, TZ cassette ribbon (Gold)

1. IDENTIFICATION

Product identifier

Product Name TZe cassette ribbon, TZ cassette ribbon (Gold)

Model Number List For applicable model numbers see the model number list in "16.Other information"

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use These products are ink ribbons for TZe / TZ cassette manufactured by Brother Industries, Ltd.

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address Brother Industries, Ltd.
15-1 Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan
Telephone (for information): +81-52-824-2735

Supplier Address Brother International Corporation
200 Crossing Boulevard, Bridgewater, NJ 08807, USA
Telephone (for information): +1-877-276-8437

Emergency telephone number

Emergency Telephone CHEMTREC +1-703-527-3887 (International)
CHEMTREC +1-800-424-9300 (North America)

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance
Physical state film **Odor:** Slight wax odor

Other Information
Harmful to aquatic life with long lasting effects

Unknown acute toxicity
99.1 % of the mixture consists of ingredient(s) of unknown toxicity
91.1 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
91.1 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
99.1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
99.1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
99.1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical nature Ink on substrate film (Mixture). Article.

Chemical name	CAS No	Weight-%	Trade secret
Copper	7440-50-8	17	*
Paraffin wax	8002-74-2	8	-
Zinc	7440-66-6	<2	*
Wax	**	**	-
Synthetic resin	**	**	*
Styrene-acrylate copolymer	**	**	*
Resin	**	**	-
Polyethylene terephthalate film	**	**	-
Organic filler	**	**	*
Dispersant	**	**	*
Colorant	**	**	*
Brass powder	**	**	*
Additive	**	**	-

*The exact percentage (concentration) of composition has been withheld as a trade secret.

** Trade secret

4. FIRST AID MEASURES

Description of first aid measures

General advice If symptoms persist, call a physician.

Inhalation Not applicable.

Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact:	Wash off immediately with soap and plenty of water.
Ingestion	Obtain immediate medical attention. Wash out mouth with water and give 100-200 ml of water to drink.

Most important symptoms and effects, both acute and delayed

Symptoms	No specific effects and/or symptoms have been reported or known.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Dry chemical, CO_2, water spray or regular foam
Unsuitable extinguishing media	None.
Specific hazards arising from the chemical	No information available
Explosion data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Special protective equipment for fire-fighters	Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Not normally required.
For emergency responders	Use personal protection recommended in Section 8.

Environmental precautions

Avoid release to the environment.

Methods and material for containment and cleaning up

Methods for containment	Not applicable.
Methods for cleaning up	Not applicable

Prevention of secondary hazards Not applicable.

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

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin and eyes.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep away from oxidizing agents.

These products are ink ribbons for TZe / TZ cassette manufactured by Brother Industries, Ltd.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Copper 7440-50-8	TWA: 0.2 mg/m^3 fume TWA: 1 mg/m^3 Cu dust and mist	TWA: 0.1 mg/m^3 fume TWA: 1 mg/m^3 dust and mist (vacated) TWA: 0.1 mg/m^3 Cu dust, fume, mist	IDLH: 100 mg/m^3 dust, fume and mist IDLH: 100 mg/m^3 Cu dust and mist TWA: 1 mg/m^3 dust and mist TWA: 0.1 mg/m^3 fume TWA: 1 mg/m^3 Cu dust and mist
Paraffin wax 8002-74-2	TWA: 2 mg/m^3 fume	(vacated) TWA: 2 mg/m^3	TWA: 2 mg/m^3 fume

Appropriate engineering controls

Engineering controls Good general ventilation should be sufficient under normal use.

Individual protection measures, such as personal protective equipment

Eye/face protection If there is a risk of contact:. Safety goggles.

Hand protection If there is a risk of contact:. Protective gloves.

Skin and body protection Not normally required.

Respiratory protection	No special protective equipment required.
Environmental exposure controls	Not normally required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	
Physical state	film
Color	Gold
Odor	Slight wax odor
Odor threshold	No information available

Property	Values	Remarks • Method
pH	Not applicable	
Melting point / freezing point	Not applicable	
Boiling point / boiling range	Not applicable	
Flash point	>150 °C	
Evaporation rate	No data available	None known
Flammability (solid, gas)	Not flammable	
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	Not applicable	
Vapor density	Not applicable	
Relative density	No data available	None known
Water solubility	negligible	
Solubility(ies)	No information available	
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	
Kinematic viscosity	Not applicable	
Dynamic viscosity	Not applicable	
Explosive properties	Not explosive	No information available.
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.

Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	No information available.
Conditions to avoid	Keep away from heat. Avoid friction, sparks, or other means of ignition.
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	Carbon monoxide, Carbon dioxide (CO_2), Nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

Product Information

Inhalation	No information available
Eye contact	No information available.
Skin contact:	No information available.
Ingestion	No information available
Skin corrosion/irritation	No information available pH: Not applicable
Serious eye damage/irritation	No information available pH: Not applicable
Respiratory or skin sensitization	No information available
Germ cell mutagenicity	No information available
Carcinogenicity	Printing inks: IARC Classification: Group 3 (Non-classified Human Carcinogen) 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.

12. ECOLOGICAL INFORMATION

Ecotoxicity .

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Copper 7440-50-8	0.0426 - 0.0535: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 0.031 - 0.054: 96 h Pseudokirchneriella subcapitata mg/L EC50 static	0.0068 - 0.0156: 96 h Pimephales promelas mg/L LC50 0.3: 96 h Pimephales promelas mg/L LC50 static 0.2: 96 h Pimephales promelas mg/L LC50 flow-through 0.052: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.3: 96 h Cyprinus carpio mg/L LC50 semi-static 0.112: 96 h Poecilia reticulata mg/L LC50 flow-through 1.25: 96 h Lepomis macrochirus mg/L LC50 static 0.8: 96 h Cyprinus carpio mg/L LC50 static	-	0.03: 48 h Daphnia magna mg/L EC50 Static
Zinc 7440-66-6	0.11 - 0.271: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 0.09 - 0.125: 72 h Pseudokirchneriella subcapitata mg/L EC50 static	2.16 - 3.05: 96 h Pimephales promelas mg/L LC50 flow-through 0.211 - 0.269: 96 h Pimephales promelas mg/L LC50 semi-static 0.24: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 7.8: 96 h Cyprinus carpio mg/L LC50 static 2.66: 96 h Pimephales promelas mg/L LC50 static 3.5: 96 h Lepomis macrochirus mg/L LC50 static 30: 96 h Cyprinus carpio mg/L LC50 0.45: 96 h Cyprinus carpio mg/L LC50 semi-static 0.59: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.41: 96 h Oncorhynchus mykiss mg/L LC50 static	-	0.139 - 0.908: 48 h Daphnia magna mg/L EC50 Static

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose in accordance with federal, state and local regulations.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Copper 7440-50-8	Toxic
Zinc 7440-66-6	Ignitable powder Toxic

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO (air) Not regulated

IATA Not regulated

IMDG Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies

PICCS	Complies
AICS	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Copper 7440-50-8	-	X	X	-
Zinc 7440-66-6	-	X	X	-

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Copper 7440-50-8	5000 lb	-
Zinc 7440-66-6	1000 lb	-

U.S. State Right-to-Know Regulations

US State Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Copper 7440-50-8	X	X	X
Paraffin wax 8002-74-2	X	X	X
Zinc 7440-66-6	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Model Number List
The model number of the cassette covered by this Safety Data Sheet is as follows.

TTZe-334	TZe-344	TZe-354	TZe-M34	TZe-MQ934
TZe-MQ954	TZe-MT3403	TZe-MT3406	TZe-MT3411	TZe-PR234
TZe-PR254	TZe-Z334			
TZ-164	TZ-324	TZ-334	TZ-344	TZ-354
TZ-364	TZ-MQ934			

NFPA	**Health hazards**	0	**Flammability**	0	**Instability**	0	**Section 9: Physical and chemical properties** -
HMIS	**Health hazards**	0	**Flammability**	0	**Physical hazards**	0	**Personal protection** X

Issuing Date 18-Sep-2015

Revision Date 28-Jul-2020

Revision Note
Safety data sheet number changed.
Revision number corrected.
SDS sections updated
As the Product Safety Information Sheet (PSIS) has been abolished, the model number has been added to "Section 16. Other Information"

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).

End of Safety Data Sheet