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Product Name: BTS THERMAL TRANSFER RIBBON TYPE *BTS229*

MATERIAL SAFETY DATA SHEET (ANSI FORM)

Section 1 – Chemical Product and Company Identification

Product Name : BTS THERMAL TRANSFER RIBBON TYPE BTS229
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Section 2 – Composition, Information on Ingredients

Ingredients Cas No. / Common Name	Contents (%)	ACGIH (TLV)			OSHA (PEL)	
		TWA	STEL	C	TWA	C
25038-59-9 Polyester film	65	Not Available	Not Available	Not Available	Not Available	Not Available
8016-86-9 Carnauba Wax	21	Not Available	Not Available	Not Available	Not Available	Not Available
Confidential Wax	7	Not Available	Not Available	Not Available	Not Available	Not Available
1333-86-4 Carbon Black	3	3.5mg/m3	Not Available	Not Available	3.5mg/m3	Not Available
Confidential Resin	4	Not Available	Not Available	Not Available	Not Available	Not Available

Section 3 – Hazards Identification

Emergency Overview

HMIS Health: 0 Flammability: 1 Reactivity: 0 PPE: See Section 8

Potential Health Effects

Primary entry Routes:

Inhalation : No
Skin : No
Ingestion : Yes

Carcinogenicity

Carbon Black was reclassified as a Group 2B by IARC in 1996 based on the result of only the inhalation study in rats. However there was not observed the incidence of tumors on the test results on dermal or oral studies. There will be no possibility to inhale the carbon black which will not be released from the product as a fine powder.

Medical Conditions Aggravated by Exposure:

Not applicable.

Chronic Effects

No data is available on this product.

Section 4 – First Aid Measures

Inhalation

Not applicable.

Skin Contact

No skinsensitive in normal use.

Eye Contact

Immediately wash eyes with large amounts of water. If unsuccessful, get medical attention.

Ingestion

Induce vomiting. Seek medical attention immediately.

Section 5 – Fire-Fighting Measures

Flash Point (°C)

Not applicable

Burning Rate (mm/sec)

Not available

Autoignition Temperature (°C)

Not Applicable

Flammable Limits (%)

LEL not applicable

UEL not applicable

Extinguishing Media

CO₂, dry chemicals, foam or water

Fire-Fighting Instructions

No special fire protecting method is required

Section 6 – Accidental Release Measures

Personal Precautions

Not applicable

Environment Precautions

Not applicable

Methods for Cleaning Up

Not applicable

Section 7 – Handling and Storage

Handling (technical measures, precautions, safe handling material)

Avoid chemicals, water and fire (for quality).

Storage (technical measures, storage conditions, packaging material)

Store in cool and dry place (for quality).

Section 8 – Exposure Controls / Personal Protection

Ventilation

None needed under normal use condition.

Respiratory Protections (Specify Type)

None required under normal conditions of use.

Eye Protection

None required under normal conditions of use.

Protective Gloves

None required under normal conditions of use.

Protective Clothing or Equipment

None required under normal conditions of use.

Section 9 – Physical and Chemical Properties

Form : Ribbon

Color : Black

Odor : No odor

pH	: not applicable	Measuring Temp. (°C)	: -
Boiling Point (°C)	: not applicable		
Vapor Pressure (Pa)	: not applicable	Measuring Temp. (°C)	: -
Vapor Density (AIR=1)	: not applicable		
Density (g/cm ³)	: not available	Measuring Temp. (°C)	: -
Formula Weight	: not applicable		
Melting Point (°C)	: not available		
Viscosity (Pa)	: not applicable	Measuring Temp. (°C)	: -
Volatile (%)	: -		
Evaporation Rate (Butyl Acetate=1)	: not applicable		
Water Solubility (g/L)	: Insoluble	Measuring Temp. (°C)	: -
Other Solvent name	: -		
Other Solvent Solubility (g/L): -		Measuring Temp. (°C)	: -

Section 10 – Stability and Reactivity

Condition to Avoid

Not applicable in normal use.

Materials to Avoid

No applicable in normal use.

Hazardous Polymerization: None

Hazardous Decomposition or Byproducts

Will not occur.

Section 11 – Toxicological Information

Acute Toxicity

Acute Oral Toxicity : (not available)
Acute Dermal Toxicity : not available
Acute Inhalation Toxicity : not applicable

Sensitization

Acute Skin Irritation : not available
Acute Eye Irritation : not applied
Acute Allergenic Effects : non-skingsensitive

Specific Effects

Carcinogenicity:

In 1996 IARC reevaluated Carbon Black as a Group 2B carcinogen (possible human carcinogen). This evaluation is given to carbon black for which there is inadequate human evidence, but sufficient animal evidence. The latter 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 have not demonstrated an association between carbon black and lung tumors. Moreover, 2 years cancer bioassay using a typical toner preparation containing carbon black did not demonstrate an association between toner exposure and tumor development in rats.

Mutagenicity : negative
Effects on the reproductive System : No data is available on this product.
Teratogenic : not available

Section 12 – Ecological Information

Persistence / Degradability: not known

Bioaccumulation

Not available

Ecotoxicity

Acute Toxicity for Flash : not available (mg/kg/96hr)

Acute Toxicity for Daphnia : not available (mg/kg/48hr)

Algae Inhibition Test : not available (mg/kg/72hr)

Section 13 – Disposal Consideration

Recommended Method for Safe Environmentally Preferred Disposal

Used ribbon should be disposed of in an environmentally appropriate manner and in accordance with governmental regulations.

Section 14 – Transport Information

International Regulations

RID / ADR: not applicable

DOT 49 CFR: not applicable

ADNR : not applicable

IMDG Code : not applicable

ICAO-TI / IATA-DGR : not applicable

The UN Classification Number : not applicable

Specific Precautionary Transport Measures

Store in cool and dry place.

Specific Materials to Avoid

None in normal use.

Section 15 – Regulation Information

Regulations

Not known