

SDS

Safety Data Sheet

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Ink Ribbon (H086044-00-)

SDS Number: MSDSH086044-00-01-OT-E--- *Effective Date: 07/10/20019*

1. PRODUCT IDENTIFICATION

Product Name: Ink Ribbon

2. HAZARDS IDENTIFICATION

【GHS CLASSIFICATION】

Physical hazards	Flammable solids	: Classification not possible
Health Hazards	Acute toxicity (Oral)	: Classification not possible
	Acute toxicity (Dermal)	: Classification not possible
	Acute toxicity (Inhalation)	: Classification not possible
	Skin corrosion/irritation	: Classification not possible
	Serious eye damage/eye irritation	: Category 2B
	Respiratory sensitization	: Classification not possible
	Skin sensitization	: Classification not possible
	Germ cell mutagenicity	: Classification not possible
	Carcinogenicity	: Classification not possible
	Reproductive toxicity	: Classification not possible
	Specific target organ toxicity (Single exposure)	: Classification not possible
	Specific target organ toxicity (Repeated exposure)	: Classification not possible
	Aspiration hazard	: Classification not possible
EnvStainless steelmental Hazards	Hazardous to the aquatic envStainless steelment (Acute hazard)	: Classification not possible
	Hazardous to the aquatic envStainless steelment (Long-term hazard)	: Classification not possible

Hazardous to the ozone Layer : Classification not possible

[GHS LABEL ELEMENTS]

Symbols



Signal word	: Warning
Hazard statement	• Causes eye irritation
Precautionary statement	
[Prevention]	• Wash hands and eyes thoroughly after handling.
[Response]	• If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. • If eye irritation persists: Get medical advice/attention.
[Storage]	• None
[Disposal]	• None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Articles

Product name or common name

: Inked ribbon for printing paper reverse side printing

Ingredients	Composition(%)	Chemical formula	CAS No.
ABS resin	60 – 70	—	9003-56-9
POM resin	1 - 10	—	24969-26-4
Solvent 1	1 - 10	Trade secret	Trade secret
Solvent 2	1 - <10	Trade secret	Trade secret
Nylon fiber	1 - 10	—	32131-17-2
PET fiber	1 - 10	—	25038-59-9
Dye	1 - 10	Trade secret	Trade secret
Iron	1 - 10	Fe	7439-89-6
Wool	1 - 10	—	—
Rubber material 1	<1	C ₁₀ H ₇ NO ₂	9003-18-3
Rubber material 2	<0.1	C	1333-86-4
Organic pigment	<1	Trade secret	Trade secret

4. FIRST-AID MEASURES

Inhalation	<ul style="list-style-type: none">• When inhaled volatiled gases, remove victim to fresh air and keep at rest covering the body with a blanket etc.• If breathing is difficult, provide oxygen inhalation or artificial respiration after loosening tight clothing and having secured an airway.
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- Get medical advice/attention if necessary.
- Wash away affected portion with running water, then wash adequately with soap.
- Remove all contaminated clothing and shoes immediately.
- If you feel skin abnormality such as itching or pain, etc., get medical attention.
- Wash eyes with plenty of clean water for at least 15 minutes.
- When washing eyes, open eyelids well with fingers and move the eyes around to reach water to every corner of the eyes.
- Get medical advice/attention immediately.
- Rinse mouth with water, next get medical attention.
- Do not induce vomiting.
- If vomiting occurs naturally, incline the body not to enter into the trachea.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media • Dry chemical powder, carbon dioxide, dry sand, foam, water spray

Unsuitable extinguishing media

- Nothing special.

Specific hazards arising from the chemical

- Toxic gases (carbon monoxide, etc.) may be generated upon combustion.

Specific extinguishing methods • Use chemical powder, carbon dioxide, or dry sand for an early stage of fire.

- For large fire, in order to extinguish a fire at once, cut off the air using foam.
- In case of fire in the surrounding areas, cool equipment by water spraying.
- If possible, move containers to safe areas.
- Be careful not to cause environmental pollution by the outflow of fire extinguishing and/or dilution water.

Special protective equipment for firefighters

- Firefighters should wear proper protective equipment such as self-contained breathing apparatus. Extinguish fire from windward.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- If this product was scattered, refer to “7. Handling and storage precautions” .
- Wear proper protective equipment during recovery operation.
- Do not collect spillage at the leeward.

EnvStainless steelmental precautions

- If this product is scattered, collect it promptly and do not dispose of it to soil, sewage, river, drainage etc.

Methods and material for containment and cleaning up

- Remove ignition sources nearby and prevent from fire outbreaks.

- The waste shall be disposed of in accordance with “13.DISPOSAL CONSIDERATIONS” .

7. HANDLING AND STORAGE

Precautions for safe handling

- Avoid breathing vapors or contact with skin as much as possible. If there is a risk of exposure, wear appropriate protective equipment.
- Enforce gargle, hand washing and face washing after handling.
- Be careful in handling because there is possibility of dermal absorption.
- If you feel abnormality or abnormality has occurred in the body, take Measures according to section 4 “FIRST-AID MEASURES” , and then be sure to consult a physician.

Storage

- Keep away from heat and sunlight. Store in a dry and well-ventilated location.
- Keep fire away at storage location.
- Keep away from incompatible materials. (Refer to section 10)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Appropriate engineering controls

- Airborne concentration management of dust is necessary when cutting or machining process of products.

Occupational Exposure Limits

OSHA-PELs

ACGIH-TLV ¹⁾

- (TWA) 3.5 mg/m³ (Carbon black)
- (TWA) 3 mg/m³ (I) (Carbon black)
Note) (TWA): Time-Weighted Average (8 hours) (I):Inhalable fraction

Personal protective equipment

Respiratory protection : Wear appropriate personal protective equipment as necessary.

Hands protection : Wear appropriate personal protective equipment as necessary.

Eye protection : Wear appropriate personal protective equipment as necessary.

Skin and body protection : Wear appropriate personal protective equipment as necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : (Ink alone) Black liquid

Odor : (Ink alone) Slightly

Odor threshold : No data available

pH : No data available

Melting/Freezing point : No data available

Initial boiling point and boiling range : No data available

Flash point : (Ink alone) $\geq 200^{\circ}\text{C}$

Evaporation rate (n-BuAc = 1)	: No data available
Upper/lower flammability or explosive limits	: No data available
Vapor pressure	: No data available
Vapor density	: No data available
Relative density	: (Ink alone) 0.8 - 1.0
Solubility	: (Ink alone) Low solubility in water
Partition coefficient: n-octanol/water (log value)	: No data available
Auto-ignition temperature	: (Ink alone) $\geq 350^{\circ}\text{C}$
Decomposition temperature	: No data available
Viscosity	: No data available

10. STABILITY AND REACTIVITY

Reactivity	• See the item on hazardous reaction possibility.
Chemical stability	• Stable under normal handling conditions.
Possibility of hazardous reactions	• May react with incompatible materials.
Conditions to avoid	• Direct sunlight and high temperature
Incompatible materials 2)	• Acids, oxidizing agents
Hazardous decomposition products	• Toxic gases (carbon monoxide, etc.) may be generated on combustion.

11. TOXICOLOGICAL INFORMATION

There are no data available on the mixture itself. Data of ingredients are as follows.

Acute toxicity

[Oral]

Solvent 1	Rat	LD50	3000 mg/kg ³⁾
Solvent 2	Rat	LD50	25000 mg/kg ³⁾
Stainless steel	Rat	LD50	750 mg/kg ³⁾
Rubber material 1	Rat	LD50	153 mg/kg ⁴⁾
Rubber material 2	Rat	LD50	>8000 mg/kg ⁴⁾

[Dermal]

Solvent 1	Rabbit	LD50	17808 mg/kg ³⁾
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[Inhalation]

No ingredients data available
 Note) LD50: Lethal Dose, 50% kill

Skin corrosion/irritation

Solvent 1	Showed mild irritation in skin irritation tests of rabbits. ³⁾
Solvent 2	Showed moderate irritation in skin irritation tests in humans. ³⁾
Rubber material 2	Showed no irritation in skin irritation tests of rabbits. ⁴⁾

Serious eye damage/eye irritation	
Solvent 1	Showed mild irritation in eye irritation tests of rabbits. ³⁾
Solvent 2	Showed mild irritation in eye irritation tests of rabbits. ³⁾
Rubber material 2	Showed no irritation in eye irritation tests of rabbits. ⁴⁾
Respiratory sensitization	
	No ingredients data available
Skin sensitization	
	No ingredients data available
Germ cell mutagenicity	
	No ingredients data available
Carcinogenicity	
Rubber material 2	IARC: Group 2B (Possibly Carcinogenic to Humans) ¹⁾ JSOH: Group 2B (Possibly carcinogenic to humans with less evidence) ⁵⁾ ACGIH: A3 (Confirmed animal carcinogen with unknown relevance to humans) ¹⁾
Reproductive toxicity	
	No ingredients data available
Specific target organ toxicity (Single exposure)	
	No ingredients data available
Specific target organ toxicity (Repeated exposure)	
Rubber material 2	Causes damage to organs (Respiratory system) through prolonged or repeated exposure. ⁴⁾
Aspiration hazard	
	No ingredients data available

12. ECOLOGICAL INFORMATION

Eco-toxicity

Rubber material 2	Tribolodon hakonensis	LC50 (96h)	>1000 mg/l ⁴⁾
	Daphnia magna	EC50 (24h)	>5600 mg/l ⁴⁾
	Scenedesmus	EC50 (72h)	>10000 mg/l ⁴⁾

Hazard is lower than GHS hazard category. ⁴⁾

Note) LC50: Lethal concentration, 50% kill EC50: Median Effect Concentration

Persistence and Biodegradability

Solvent 1	[Degradation (BOD)] 0% ⁶⁾ Evaluated to be non-degradable in Biodegradation and Bioconcentration Data of Existing Chemicals based on the CSCL Japan. ⁶⁾
Solvent 2	[Degradation (BOD)] 78% ⁶⁾ Evaluated to be readily degradable in Biodegradation and Bioconcentration Data of Existing Chemicals based on the CSCL Japan. ⁶⁾
Dye	Evaluated to be non-degradable in Biodegradation and Bioconcentration Data of Existing Chemicals based on the CSCL Japan. ⁶⁾
Rubber material 1	Evaluated to be non-degradable in Biodegradation and Bioconcentration Data of Existing Chemicals based on the CSCL Japan. ⁶⁾
Rubber material 2	Hardly water-soluble ⁴⁾
Bioaccumulation potential	

Solvent 1	Evaluated to be low bioconcentration in Biodegradation and Bioconcentration Data of Existing Chemicals based on the CSCL Japan. ⁶⁾
Dye	Evaluated to be low bioconcentration in Biodegradation and Bioconcentration Data of Existing Chemicals based on the CSCL Japan. ⁶⁾
Rubber material 2	Evaluated to be low bioconcentration in Biodegradation and Bioconcentration Data of Existing Chemicals based on the CSCL Japan. ⁶⁾
Mobility in soil	No ingredients data available
Hazardous to the ozone Layer	No ingredients data available

13. DISPOSAL CONSIDERATIONS

Residual waste	<ul style="list-style-type: none"> • Entrust disposal wastes to a special authority or certificated processing suppliers. • Follow all relevant laws, regulations and municipality instructions.
Contaminated containers and packaging	<ul style="list-style-type: none"> • Dispose of appropriately according to relevant laws and local government standards. • In case of disposing of empty containers, remove the contents completely.

14. TRANSPORT INFORMATION

UN Number	: Not applicable
Proper shipping name	: Not applicable
UN Class	: Not applicable
Packing group	: Not applicable
Emergency Response Guide No.	: Not applicable
Marine pollutants	: Not applicable
Special safety measures applicable to transport or conveyance	<ul style="list-style-type: none"> • Load containers carefully to avoid shock, falling, dropping and damage. Perform prevention of collapse of cargo surely. • When loading and unloading cargoes, put the parking brake on, shut down the engine, and put car stops under tires. • Handle in accordance with the description of “7 HANDLING AND STORAGE.” • Observe strictly transportation related laws and regulations.

15. REGULATORY INFORMATION

Classification and labeling in accordance with OSHA HCS (29CFR 1910.1200 (d) , revised in 2012: See section 2.

TSCA (Toxic Substances Control Act)

: All the ingredients of this product are listed on the TSCA Active Inventory.

Proposition 65

Chemicals known to cause cancer

: Carbon black (airborne, unbound particles of respirable size [\leq 10 micrometers]), Benzidine-based dyes

Chemicals known to cause reproductive toxicity

: None

Regulatory information with regard to this product in your country or in your region should be examined by your own responsibility.

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

References cited

- 1) 2019 Guide to Occupational Exposure Values (ACGIH)
- 2) International Chemical Safety Cards (ICSC) (International Labour Organization/ILO)
- 3) Registry of Toxic Effects of Chemical Substances (CCOHS)
- 4) GHS Classification Data Base (National Institute of Technology and Evaluation, Japan)
- 5) Recommendation of Occupational Exposure Limits; Journal of Japan Society for Occupational Health 2018 vol.60
- 6) J-CHECK (Japan CHEMicals Collaborative Knowledge database)

Disclaimer:

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