

**Material Safety Data Sheet**

Issue Date :16 Apr. 2012

**1. PRODUCT**

Product name : CD-R CMY-U

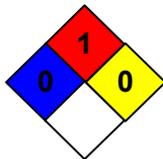
Recommended use and restrict : Thermal Ribbon

Reference Number : A-L22225-01

**2. HAZARDS IDENTIFICATION**

[Hazard Communication Standard]

NFPA Diamond



HMLS Label

HEALTH	0
FLAMMABILITY	1
INSTABILITY	0
SPECIFIC	0

[GHS classification]

Physical hazards	: Pyrophoric solid	: Classification not possible
	: Self-heating substance and mixtures	: Classification not possible
	: Substance and mixture which, in contact with water, emit flammable gases	: Classification not possible
	: Oxidizing solid	: Classification not possible
Health hazards	: Acute toxicity (oral)	: Classification not possible
	: Acute toxicity (dermal)	: Classification not possible
	: Skin corrosion/irritation	: Classification not possible
	: Serious eye damage/eye irritation	: Classification not possible
	: 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
Environmental hazards	: Aspiration hazard	: Classification not possible
	: Acute aquatic toxicity	: Classification not possible
	: Chronic aquatic toxicity	: Classification not possible
[GHS label element]	: None	
[Signal word]	: None	
[Hazardous statement]	: None	

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**[Precautions]**

- Safety precaution: : Do not handle until all safety precautions have been read and understood.  
Avoid release to the environment. Wash hands thoroughly after handling.  
Do not handle near heat/ignition source.
- Response : If in eyes, Rinse cautiously with water for several minutes.  
Remove contact lenses and wash, if present and easy to do.  
If eye irritation persists: Get medical advice/attention.
- If on skin, Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/attention.
- If swallowed, Get medical advice/attention if feel unwell.
- Disposal : Dispose of contents and container in accordance with international/national/regional/  
local/ regulation.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical substance/mixtur : Mixture

Components	Formula	CAS.No.	Contents(wt%)	GHS Classification
Polyethylenetelephthalate	$-(OCH_2CH_2COO(C_6H_4)CO)-$	25038-59-9	75 - 80	-
Resin	confidential	registered	5 - 15	-
Pigment	confidential	registered	3 - 10	-
Silica	confidential	registered	1 - 5	-
Carbon Black	C	1333-86-4	< 1	Carcinogenicity Category 2B

**4. FIRST-AID MEASURES**

- If inhaled, : Inhalation doesn't occur if use normally.
- If on skin, : Wash well with soap and plenty of water. If aberration occurs, get medical advice.
- If in eyes, : Film may damage eyes. Get medical advice.
- If swallowed : Rinse mouth well with plenty of water and get medical advice.

**5. FIRE-FIGHTING MEASURES**

- Suitable extinguisher : Powder-type fire extinguisher, carbon dioxide gas, foam-type fire extinguisher
- Unsuitable extinguisher : Not known
- Specific hazards : Toxic gas, such as carbon monoxide, is generated in combustion.
- Specific fire fighting method : Normal fire-fighting method would be applied.  
Avoid scattering the films
- Protection of fire fighter : Fire fighter should wear appropriate protective equipment  
(gloves, mask, glasses, etc).

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**6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions : Avoid contact to eyes and skin.  
 Environmental precautions : Do not leave the film in environment  
 Method and material for containment and cleaning up : Scoop  
 Second accident prevention : Immediately remove ignition sources and prepare fire extinguisher

**7. HANDLING AND STORAGE****[Handling]**

- Technical measures : Not required  
 Ventilation : Not applicable  
 Precautions for safe handling : Avoid contact to eyes and skin. Wear protective equipment such as protective gloves if necessary. Do not use fire near the products.  
 Wash hands thoroughly after handling.

**[Storage]**

- Technical measures : Should be kept in a place where ventilation  
 Storage condition : Keep away from fire, water, humidity, direct sunlight.  
 Safe container : Use appropriate container which prevent product fall.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

- Facility measures : Not required

**Control parameters**

Substance	Acceptable concentration limit	
	The Japan Society fo Occpnational Health	ACGIH
Carbon black(*1)	[Dust] (category 2) Inhalant dust 1mg/m <sup>3</sup> Total dust 4mg/m <sup>3</sup>	TWA 3.5mg/m <sup>3</sup>

(\*1) Dust would not be generated when using normally

**Protective equipment**

- Respiratory protection : Wear mask if necessary  
 Hand protection : Wear safety gloves  
 Eye protection : Wear safety glasses or goggles if necessary  
 Skin protection : Wear Long-sleeved protective clothing and safety shoes if necessary

**9. PHYSICAL AND CHEMICAL PROPERTIES**

- Physical state  
 Appearance : Film roll  
 Color : Cyan/Magenta/Yellow/Black/Clear  
 Odor : Very little  
 pH : Not applicable  
 Melting point : 255 - 265°C(PET)  
 Boiling point : Not applicable

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Flash point	:	346-399°C(PET)
Ignition point	:	>483°C (PET)
Explosion limit	:	No data
Vapor pressure/density	:	Not applicable
Density(vs. water)	:	1.35 - 1.45
Solubility	:	Not soluble
n-Octanol-water partition coefficient	:	No data
Decomposition temperature	:	No data

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**10. STABILITY AND REACTIVITY**

Stability	:	Stable in normal condition
Reactivity	:	Unknown
Hazardous reactions under specific condition	:	When ignition, fire spread, and toxic gases such as carbon monoxide would be generated
Condition to avoid	:	Heat
Materials to avoid	:	Unknown
Hazardous decomposition products	:	Unknown

**11. TOXICOLOGICAL INFORMATION**

Acute toxicity (oral/dermal)	:	No data
Skin corrosion/irritation	:	No data
Serious eye damage/eye irritation	:	No data
Sensitization(respiratory /skin)	:	No data
Germ cell mutagenicity	:	No data
Carcinogenicity	:	Carbon black is IARC Group 2
Reproductive toxicity	:	Substances which have reproductive toxicity are not included
Specific target organ toxicity (single exposure)	:	No data
Specific target organ toxicity (repeated exposure)	:	No data
Aspiration hazard	:	No data

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**12. ECOLOGICAL INFORMATION**

Ecotoxicity	:	No data
Persistence and degradability	:	No data
Bioaccumulative potential	:	No data
mobility in soil	:	No data
Harmful to the ozone layer	:	Not applicable

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**13. DISPOSAL CONSIDERATIONS**

Waste from residues	:	Follow relevant law and regulations on disposal.
Contaminated packaging	:	Cleaning up to reuse or dispose under relevant law and regulations.

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**14. TRANSPORT INFORMATION**

International regulations	:	
UN number	:	Not applicable
UN class	:	Not applicable
Special safety precautions	:	Keep away from direct sunlight and heat

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**15. REGULATORY INFORMATION**

[US law]

TSCA : No new chemicals are included

[Japan law]

Law Concerning Reporting, etc. of Releases to the Environment of Specific  
Chemical Substances and Promoting Improvements in Their Management (PRTR) : Not applicable

Industrial Safety and Health Law (ISHL) : MSDS Notification

Poisonous and Deleterious Substances Control Act : Not applicable

**16. OTHER INFORMATION**

References : Japan Industrial Standards - JIS Z 7250:2010  
Japan Industrial Standards - JIS Z 7252:2009  
WHO International Agency for Research on Cancer  
Agents Classified by the IARC Monographs, Volumes 1–102  
<http://monographs.iarc.fr/ENG/Classification/index.php>

Other : 1) - Contents herein are prepared based on currently available reference,  
information and data. These may be modified by the new knowledge.

2) - Contents herein are intended to provide information and not guaranteed.  
Precautions are subject to normal handling. Please take appropriate safety  
measures in case of special handling.