

INK CARTRIDGE (M) (H086037-00-01)

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Product name : INK CARTRIDGE (M) (H086037-00)
 Synonyms : none

CAS No. : N.A.
 EC index No. : N.A.
 EINECS No. : N.A.
 RTECS No. : N.A.

NFPA code : N.D.
 Molecular weight : N.A.
 Formula : N.A.

1.2 Use of the substance/preparation:

- Toner

1.3 Company/undertaking identification:

NORITSU KOKI Co., Ltd.
 579-1 Umehara
 640-8550 Wakayama-shi Japan
 Tel: +81 73 454 03 09
 Fax: +81 73 454 46 18
 e-mail address: msds@nkc.noritsu.co.jp

1.4 Emergency telephone:

+32 14 58 45 45 (24h/24h)
 Information centre on dangerous goods (BIG)
 Technische Schoolstraat 43A, B-2440 Geel, Belgium

2. Hazards identification

- Not classified as dangerous in compliance with Directive 67/548/EEC and/or Directive 1999/45/EC

3. Composition/information on ingredients

Hazardous ingredients	CAS No.	Conc. (%)	Hazards (R-phrases)	Hazard symbol
	EINECS/ELINCS No.			
glycerol	56-81-5	15-20	- (2)	-
	200-289-5			
2-[2-(2-butoxyethoxy)ethoxy]ethanol	143-22-6	<2	41 (1)(2)	Xi
	205-592-6			

(1) For R-phrases in full: see heading 16

(2) Substance with a Community workplace exposure limit

(3) PBT-substance

4. First aid measures

4.1 After inhalation:

- Remove the victim into fresh air
 - Respiratory problems: consult a doctor/medical service

4.2 Skin contact:

- Rinse with water
 - Take victim to a doctor if irritation persists

4.3 Eye contact:

- Rinse immediately with plenty of water
 - Do not apply neutralizing agents
 - Take victim to an ophthalmologist if irritation persists

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 Reason for revision : 3; 8.1; 9; 11

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- 4.4 After ingestion:**
- Rinse mouth with water
 - Do not induce vomiting
 - Consult a doctor/medical service if you feel unwell

5. Fire-fighting measures

- 5.1 Suitable extinguishing media:**
- all extinguishing media allowed
- 5.2 Unsuitable extinguishing media:**
- No data available
- 5.3 Special exposure hazards:**
- Not easily combustible
 - Upon combustion CO and CO2 are formed
- 5.4 Instructions:**
- No specific fire-fighting instructions required
- 5.5 Special protective equipment for firefighters:**
- Heat/fire exposure: compressed air/oxygen apparatus
 - Protective clothing

6. Accidental release measures

- 6.1 Personal precautions:**
See heading 8.2/13
- 6.2 Environmental precautions:**
- Contain leaking substance
- 6.3 Methods for cleaning up:**
- Take up liquid spill into inert absorbent material, e.g.: sand/earth
 - Scoop absorbed substance into closing containers
 - Clean contaminated surfaces with an excess of water
 - Wash clothing and equipment after handling

7. Handling and storage

- 7.1 Handling:**
- Observe normal hygiene standards
- Accidental release of the contents:
- Clean contaminated clothing
- 7.2 Storage:**
- Keep container tightly closed
 - Store in a cool area
 - Ventilation at floor level
 - Meet the legal requirements
 - Keep away from: heat sources, oxidizing agents
- | | | |
|----------------------------|--------|------|
| Storage temperature | : N.D. | °C |
| Quantity limits | : N.D. | kg |
| Storage life | : N.D. | days |
- Materials for packaging** :
- suitable : no data available
 - to avoid : no data available
- 7.3 Specific use(s):**
- See information supplied by the manufacturer for the identified use(s)

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8. Exposure controls/Personal protection

8.1 Exposure limit values:

Exposure is limited because of the form in which the product is placed on the market

8.1.1 Occupational exposure:

glycerol

TLV-TWA	: 10 mist	mg/m ³		ppm
TLV-STEL	: -	mg/m ³		ppm
TLV-Ceiling	:	mg/m ³		ppm
WEL-LTEL	: 10 mist	mg/m ³	-	ppm
WEL-STEL	: -	mg/m ³	-	ppm
TRGS 900	:	mg/m ³		ppm
MAK	: 50 E	mg/m ³		ppm
GWBNI-TGG 8 h	: 10 nevel	mg/m ³		
GWKNI-TGG 15 min.	:	mg/m ³		
Ceiling	:	mg/m ³		
VME-8 h	: 10 aéros.	mg/m ³	-	ppm
VLE-15 min.	: -	mg/m ³	-	ppm
GWBB-8 h	: 10 nevel	mg/m ³	-	ppm
GWK-15 min.	: -	mg/m ³	-	ppm
Momentary value	:	mg/m ³		ppm
EC	:	mg/m ³		ppm
EC-STEL	:	mg/m ³		ppm

2-[2-(2-butoxyethoxy)ethoxy]ethanol

TLV-TWA	:	mg/m ³		ppm
TLV-STEL	:	mg/m ³		ppm
TLV-Ceiling	:	mg/m ³		ppm
WEL-LTEL	:	mg/m ³		ppm
WEL-STEL	:	mg/m ³		ppm
TRGS 900	:	mg/m ³		ppm
MAK	: -	mg/m ³	-	ppm
GWBNI-TGG 8 h	:	mg/m ³		
GWKNI-TGG 15 min.	:	mg/m ³		
Ceiling	:	mg/m ³		
VME-8 h	:	mg/m ³		ppm
VLE-15 min.	:	mg/m ³		ppm
GWBB-8 h	:	mg/m ³		ppm
GWK-15 min.	:	mg/m ³		ppm
Momentary value	:	mg/m ³		ppm
EC	:	mg/m ³		ppm
EC-STEL	:	mg/m ³		ppm

8.1.2 Sampling methods:

- Glycerin Mist (Particulates) NIOSH 600
- Glycerin Mist (Respirable and total dust) OSHA CSI

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8.2 Exposure controls:

8.2.1 Occupational exposure controls:

Accidental release of the contents:

- Work under local exhaust/ventilation

Personal protective equipment:

a) Respiratory protection:

- Not required for normal conditions of use
- Accidental release of the contents:
- Wear gas mask with filter type A if conc. in air > exposure limit

b) Hand protection:

- Accidental release of the contents: Gloves
- Suitable materials: PVA
PVC
- Breakthrough time: N.D.

c) Eye protection:

- Accidental release of the contents: Safety glasses

d) Skin protection:

- Accidental release of the contents: Protective clothing
- Suitable materials: PVA
PVC

8.2.2 Environmental exposure controls: see headings 6.2, 6.3 and 13

9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C) : Ink cartridge
Odour : The contents: odourless
Colour : The contents: red

9.2 Important health, safety and environmental information:

pH value (at %) : 8.7 - 10.1
Boiling point/boiling range : > 100 °C
Flash point/flammability : > 100 °C
Explosion limits (explosive properties) : N.D. vol%
Oxidising properties :
Vapour pressure (at 20°C) : < 23 hPa
Vapour pressure (at 50°C) : N.D. hPa
Relative density (at 20°C) : 1.07
Water solubility : N.D.
Soluble in : The contents are: miscible with water
Relative vapour density : < 3.1
Viscosity (at °C) : N.D. Pa.s
Partition coefficient n-octanol/water : N.D.
Evaporation rate :
ratio to butyl acetate : N.D.
ratio to ether : N.D.

9.3 Other information:

Melting point/melting range : < 0 °C
Auto-ignition temperature : > 369 °C
Saturation concentration : N.D. g/m³
Specific conductivity : N.D. pS/m

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10. Stability and reactivity

10.1 Conditions to avoid:

- Stable under normal conditions

10.2 Materials to avoid:

- Keep away from: heat sources, oxidizing agents

10.3 Hazardous decomposition products:

- Upon combustion CO and CO₂ are formed
- Reacts with (strong) oxidizers

11. Toxicological information

11.1 Acute toxicity:

glycerol

LD50 oral rat	: 12600	mg/kg
LD50 dermal rabbit	: > 10000	mg/kg

2-[2-(2-butoxyethoxy)ethoxy]ethanol

LD50 oral rat	: > 5000	mg/kg
LD50 dermal rabbit	: 3480	mg/kg

11.2 Chronic toxicity:

glycerol

EC carc. cat.	: not listed
EC muta. cat.	: not listed
EC repr. cat.	: not listed

Carcinogenicity (TLV)	: not listed
Carcinogenicity (MAC)	: not listed
Carcinogenicity (VME)	: not listed
Carcinogenicity (GWBB)	: not listed

Carcinogenicity (MAK)	: not listed
Mutagenicity (MAK)	: not listed
Teratogenicity (MAK)	: C

IARC classification	: not listed
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11.3 Routes of exposure:

Exposure is limited because of the form in which the product is placed on the market

11.4 Acute effects/symptoms:

The following symptoms may appear when the components are released:

- **AFTER SKIN CONTACT**
 - Slight irritation
- **AFTER EYE CONTACT**
 - Irritation of the eye tissue

11.5 Chronic effects:

- Contains a substance of group C (MAK-Schwangerschaftsgruppe) (glycerol)
- Not listed in carcinogenicity class (IARC, EC, TLV, MAK)
- Not listed in mutagenicity class (EC, MAK)

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12. Ecological information

12.1 Ecotoxicity:

glycerol:

- LC50 (96 h) : 54000 mg/l (SALMO GAIRDNERI/ ONCORHYNCHUS MYKISS)
- EC50 (24 h) : >10000 mg/l (DAPHNIA MAGNA)

2-[2-(2-butoxyethoxy)ethoxy]ethanol:

- LC50 (96 h) : 2200 mg/l (LEUCISCUS IDUS)
- EC50 (48 h) : > 500 mg/l (DAPHNIA MAGNA)
- EC50 (72 h) : > 500 mg/l (SCENEDESMUS SUBSPICATUS)

- **Effect on waste water purification** : no data available

12.2 Mobility:

- **Volatile organic compounds (VOC):** N.D. %
- Miscible with water

For other physicochemical properties see heading 9

12.3 Persistence and degradability:

- **biodegradation BOD₅** : N.D. % ThOD
- **water** : N.D.
- **soil** : T ½: N.D. days

12.4 Bioaccumulative potential:

- **log P_{ow}** : N.D.
- **BCF** : N.D.

12.5 Results of PBT assessment:

- Not applicable, based on available data.

12.6 Other adverse effects:

- **WGK** : N.A.
- **Effect on the ozone layer** : Not dangerous for the ozone layer (1999/45/EC)
- **Greenhouse effect** : no data available

13. Disposal considerations

13.1 Provisions relating to waste:

- Waste material code (75/442/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 08 03 13 (waste ink other than those mentioned in 08 03 12)
- LWCA (the Netherlands): KGA category 03

13.2 Disposal methods:

- Special waste (VLAREA, M.B. 30/4/2004)
- Refer to manufacturer/supplier for information on recovery/recycling
- Do not landfill
- Contains a component for which a prohibition exists against discharge into surface water

13.3 Packaging/Container:

- No available data

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14. Transport information

- 14.1 Classification of the substance in compliance with UN Recommendations
UN number :
CLASS : -
SUB RISKS :
PACKING GROUP :
- 14.2 ADR (transport by road)
CLASS : Not subject
PACKING GROUP :
CLASSIFICATION CODE :
DANGER LABEL TANKS :
DANGER LABEL PACKAGES :
PROPER SHIPPING NAME :
- 14.3 RID (transport by rail)
CLASS : Not subject
PACKING GROUP :
CLASSIFICATION CODE :
DANGER LABEL TANKS :
DANGER LABEL PACKAGES :
PROPER SHIPPING NAME :
- 14.4 ADNR (transport by inland waterways)
CLASS : Not subject
PACKING GROUP :
CLASSIFICATION CODE :
DANGER LABEL TANKS :
DANGER LABEL PACKAGES :
- 14.5 IMDG (maritime transport)
CLASS : Not subject
SUB RISKS :
PACKING GROUP :
MFAG :
EMS :
MARINE POLLUTANT :
- 14.6 ICAO (air transport)
CLASS : Not subject
SUB RISKS :
PACKING GROUP :
PACKING INSTRUCTIONS PASSENGER AIRCRAFT :
PACKING INSTRUCTIONS CARGO AIRCRAFT :
- 14.7 Special precautions : Not restricted for any mode of international transport

15. Regulatory information

15.1 EU legislation:

Not classified as dangerous in compliance with Directive 67/548/EEC and/or Directive 1999/45/EC

15.2 National provisions:

The Netherlands:
Waterbezwaarlijkheid: N.B.

Germany:
WGK : N.A.

16. Other information

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED
(*) = INTERNAL CLASSIFICATION (NFPA)

PBT-substances = persistent, bioaccumulative and toxic substances

Exposure limits:

TLV : Threshold Limit Value - ACGIH USA
WEL : Workplace Exposure Limits - United Kingdom
TRGS 900 : Technische Regel für Gefahrstoffe 900 (Arbeitsplatzgrenzwerte) - Germany
MAK : Maximale Arbeitsplatzkonzentrationen - Germany
MAC : Maximale aanvaarde concentratie - The Netherlands
VME : Valeurs limites de Moyenne d'Exposition - France
VLE : Valeurs limites d'Exposition à court terme - France
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium
GWK : Grenswaarde kortstondige blootstelling - Belgium
EC : Indicative occupational exposure limit values - directive 2000/39/EC

I : Inhalable fraction = **T**: Total dust = **E**: Einatembarer Aerosolanteil
R : Respirable fraction = **A**: Alveolengängiger Aerosolanteil/Alveolar dust
C : Ceiling limit

a:	aerosol	r:	rook/Rauch	(fume)
d:	damp (vapour)	st:	stof/Staub	(dust)
du:	dust	ve:	vezel	(fibre)
fa:	Faser (fibre)	va:	vapour	
fi:	fibre	om:	oil mist	
fu:	fume	on:	olienevel/Ölnebel	(oil mist)
p:	poussière (dust)	part:	particles	

Chronic toxicity:

K : List of the carcinogenic substances and processes - The Netherlands

Full text of any R phrases referred to under headings 2 and 3:

R41 : Risk of serious damage to eyes