

INK CARTRIDGE (M) H086077-00**1. Identification of the substance/preparation and of the company/undertaking****1.1 Identification of the substance or preparation:**

Product name : INK CARTRIDGE (M)
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:**

NK Works Co., Ltd.
579-1 Umehara
640-8550 Wakayama-shi Japan
Tel: +81 73 456 39 69
Fax: +81 73 456 39 91
e-mail address: msds@noritsu.com

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. EINECS/ELINCS No.	Conc. (%)	Hazards (R-phrases)	Hazard symbol
glycerol	56-81-5 200-289-5	5-10	- (2)	-
2-[2-(2-butoxyethoxy)ethoxy]ethanol	143-22-6 205-592-6	5-10	41 (1)(2)	Xi

(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:

- Wash with water and soap
- Take victim to a doctor if irritation persists

4.3 Eye contact:

- Rinse with water
- Take victim to an ophthalmologist if irritation persists

4.4 After ingestion:

- Rinse mouth with water
- Do not induce vomiting
- Consult a doctor/medical service if you feel unwell

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Reference number : BIG\45540GB Revision number : 002
Reason for revision : Reference to REACH regulation

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5. Fire-fighting measures

- 5.1 Suitable extinguishing media:**
- ABC powder
 - Carbon dioxide
- 5.2 Unsuitable extinguishing media:**
- No data available
- 5.3 Special exposure hazards:**
- The contents are not easily combustible
- 5.4 Instructions:**
- No specific firefighting instructions required
- 5.5 Special protective equipment for fire-fighters:**
- Heat/fire exposure: compressed air/oxygen apparatus
 - Protective clothing for exposure to chemicals

6. Accidental release measures

- 6.1 Personal precautions:**
See heading 8.2/13
- 6.2 Environmental precautions:**
Accidental release of the contents:
- Contain leaking substance
- 6.3 Methods for cleaning up:**
- Take up liquid spill with absorbent paper
 - Clean contaminated surfaces with an excess of water
 - Wash clothing and equipment after handling

7. Handling and storage

- 7.1 Handling:**
Accidental release of the contents:
- Observe normal hygiene standards
 - Clean contaminated clothing
- 7.2 Storage:**
- Keep container tightly closed
 - Keep out of direct sunlight
 - Protect against frost
 - 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)

8. Exposure controls/Personal protection

8.1 Exposure limit values:

- Not required for normal conditions of use

8.1.1 Occupational exposure:

glycerol

TLV-TWA	:	10	mist	mg/m ³		ppm
TLV-STEL	:	-		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	:			mg/m ³		ppm
MAC-TGG 8 h	:	10	nevel	mg/m ³		
MAC-TGG 15 min.	:			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
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
WEL-LTEL	:			mg/m ³		ppm
WEL-STEL	:			mg/m ³		ppm
TRGS 900	:			mg/m ³		ppm
MAK	:	-		mg/m ³	-	ppm
MAC-TGG 8 h	:			mg/m ³		
MAC-TGG 15 min.	:			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
EC	:			mg/m ³		ppm
EC-STEL	:			mg/m ³		ppm

8.1.2 Sampling methods:

- Glycerin Mist (Particulates)
- Glycerin Mist (Respirable and total dust)

NIOSH 600
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: No data available

- Breakthrough time: N.D.

c) Eye protection:

- Not required for normal conditions of use

d) Skin protection:

Accidental release of the contents: protective clothing
Suitable materials: No data available

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) : Toner cartridge
Odour : The contents: odourless
Colour : The contents: red

9.2 Important health, safety and environmental information:

pH value (at %) : 8.8
Boiling point/boiling range : N.D. °C
Flash point/flammability : > 100 °C
Explosion limits (explosive properties) : N.D. vol%
Oxidising properties : N.D.
Vapour pressure (at 20°C) : N.D. hPa
Vapour pressure (at 50°C) : N.D. hPa
Relative density (at 20°C) : 1.1
Water solubility : The contents are: soluble
Soluble in : No data available
Relative vapour density : N.D.
Viscosity (at 20°C) : < 0.005 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 : N.D. °C
Auto-ignition temperature : N.D. °C
Saturation concentration : N.D. g/m³
Specific conductivity : N.D. pS/m

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 formation of CO, CO₂ and small quantities of nitrous vapours

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:

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) : not listed

IARC classification : not listed

11.3 Routes of exposure:

In normal conditions of use, the contents cannot be released

11.4 Acute effects/symptoms:

The following symptoms may appear when the components are released:

AFTER SKIN CONTACT
- Slight irritation

AFTER EYE CONTACT
- Slight irritation

11.5 Chronic effects:

- Not listed in carcinogenicity class (IARC,EC,TLV,MAK)
- Not listed in mutagenicity class (EC,MAK)
- Not classified as toxic to reproduction (EC)

12. Ecological information

12.1 Ecotoxicity:

glycerol:

- LC50 (96 h) : 54000 mg/l (SALMO GAIIRDNERI/ 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.%

- The contents are soluble in water

For other physicochemical properties see heading 9

12.3 Persistence and degradability:

- biodegradation BOD₅ : N.D. % ThOD

- water : - No data available

- 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 18 (waste printing toner other than those mentioned in 08 03 17)

13.2 Disposal methods:

- Special waste (VLAREA, M.B. 30/4/2004)

- Refer to manufacturer/supplier for information on recovery/recycling

- Do not landfill

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 :
- 14.2 ADR (transport by road)
CLASS : Not subject
PACKING :
CLASSIFICATION CODE :
DANGER LABEL TANKS :
DANGER LABEL PACKAGES :
PROPER SHIPPING NAME :
- 14.3 RID (transport by rail)
CLASS : Not subject
PACKING :
CLASSIFICATION CODE :
DANGER LABEL TANKS :
DANGER LABEL PACKAGES :
PROPER SHIPPING NAME :
- 14.4 ADNR (transport by inland waterways)
CLASS : Not subject
PACKING :
CLASSIFICATION CODE :
DANGER LABEL TANKS :
DANGER LABEL PACKAGES :
- 14.5 IMDG (maritime transport)
CLASS : Not subject
SUB RISKS :
PACKING :
MFAG :
EMS :
MARINE POLLUTANT :
- 14.6 ICAO (air transport)
CLASS : Not subject
SUB RISKS :
PACKING :
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

NOT APPLICABLE

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