

**INK CARTRIDGE (C) H086076-00**

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

**1.1 Identification of the substance or preparation:**

Product name : INK CARTRIDGE (C)  
 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\45539GB 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
- |                                |                    |      |
|--------------------------------|--------------------|------|
| <b>Storage temperature</b>     | : N.D.             | °C   |
| <b>Quantity limits</b>         | : N.D.             | kg   |
| <b>Storage life</b>            | : N.D.             | days |
| <b>Materials for packaging</b> | :                  |      |
| - 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:

- Not required for normal conditions of use

#### 8.1.1 Occupational exposure:

glycerol

TLV-TWA	: 10	mist	mg/m <sup>3</sup>		ppm
TLV-STEL	: -		mg/m <sup>3</sup>		ppm
WEL-LTEL	: 10	mist	mg/m <sup>3</sup>	-	ppm
WEL-STEL	: -		mg/m <sup>3</sup>	-	ppm
TRGS 900	:		mg/m <sup>3</sup>		ppm
MAK	:		mg/m <sup>3</sup>		ppm
MAC-TGG 8 h	: 10	nevel	mg/m <sup>3</sup>		
MAC-TGG 15 min.	:		mg/m <sup>3</sup>		
VME-8 h	: 10	aéros.	mg/m <sup>3</sup>	-	ppm
VLE-15 min.	: -		mg/m <sup>3</sup>	-	ppm
GWBB-8 h	: 10	nevel	mg/m <sup>3</sup>	-	ppm
GWK-15 min.	: -		mg/m <sup>3</sup>	-	ppm
EC	:		mg/m <sup>3</sup>		ppm
EC-STEL	:		mg/m <sup>3</sup>		ppm

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

TLV-TWA	:		mg/m <sup>3</sup>		ppm
TLV-STEL	:		mg/m <sup>3</sup>		ppm
WEL-LTEL	:		mg/m <sup>3</sup>		ppm
WEL-STEL	:		mg/m <sup>3</sup>		ppm
TRGS 900	:		mg/m <sup>3</sup>		ppm
MAK	: -		mg/m <sup>3</sup>	-	ppm
MAC-TGG 8 h	:		mg/m <sup>3</sup>		
MAC-TGG 15 min.	:		mg/m <sup>3</sup>		
VME-8 h	:		mg/m <sup>3</sup>		ppm
VLE-15 min.	:		mg/m <sup>3</sup>		ppm
GWBB-8 h	:		mg/m <sup>3</sup>		ppm
GWK-15 min.	:		mg/m <sup>3</sup>		ppm
EC	:		mg/m <sup>3</sup>		ppm
EC-STEL	:		mg/m <sup>3</sup>		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: green-blue

### 9.2 Important health, safety and environmental information:

pH value (at %) : 8.2/9.6  
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/m<sup>3</sup>  
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, CO<sub>2</sub> 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 BOD<sub>5</sub>** : N.D. % ThOD
- **water** : - No data available
- **soil** : T  $\frac{1}{2}$ : N.D. days

### 12.4 Bioaccumulative potential:

- **log P<sub>ow</sub>** : N.D.
- **BCF** : N.D.

### 12.5 Results of PBT assessment:

- No data available

### 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

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