## Material safety data sheet

## Section 1. Material and Corporate Identification

Product name		
Black Pigment ink for Inkjet Printer		
Description		
Water based ink-jet ink, Black color		
Company		
AlphaChem Co.,Ltd		
Address		
Maetan-dong 407-1, Yeongtong-gu, Suwon-city, Gyeonggi-do,		
Korea		
Tel.: +82-31-214-4428		
Fax : + 82-31-216-4429		

## Section 2. Composition Information

Ingredient and content of ink composition				
Ingredients	CAS No.	Contents(%)		
Carbon Black	Registered	1 - 5		
Acrylic copolymer	Registered	1 - 5		
Nonionic Surfactant	Registered	0.1 - 5		
Glycerin	56-81-5	5 - 20		
Deionized water	_	20 - 90		

### Section 3. Hazard Identification

## Emergency Overview

This health hazard assessment is based on information that is available on the properties of its components.

## Potential Health Effects

	Skin : Inl	k contact with skin may cause irritation, swelling, or
redness.		ness.
	Eyes:	Ink contact with eye may cause irritating.
	Inhalation :	Ink vapors may cause respiratory irritation.
	Ingestion :	May cause upset stomach.

#### Section 4. First Aid Measures

Critical hazards to man and the environment : none
Skin : Wash material off of the skin with plenty of soap and water. If any other symptom is developed get medical attention.
Eyes : Immediately flush with plenty of water and have eyes examined and treated by medical personnel.
Inhalation : Take affected persons out in the fresh air, if necessary.
Swallowed : Have patient rinsed out mouth with water.

#### Section 5. Fire Fighting Measures

Non flammable liquid.

No special explosion hazards are known.

### Section 6. Accidental Release Measures

Should be handle carefully, can be contaminated color if spilled. Steps to be taken in case material is released or spilled: Wear skin protection during cleanup. Contain spill and keep out of sewers and drains. Soak up material with absorbent and shovel into a chemical waste container. Wash residue from spill area with water and flush to a sewer serviced by a wastewater treatment facility. Use care to minimize the amount of colored material that reaches the sewer.

# Section 7. Precautions for Safe Handling and Use

Handling	
Keep out of children and do not drink ink.	
A container is sealed each time.	
Wear suitable protection implements(glove, apron, etc) for work.	
<u>Storage</u>	
Do not store the ink and ink cartridge in the high or freezi	ng
Temperatures.	
Keep ink and ink cartridge out of direct sunlight.	
Do not dismantle cartridge.	
Do not store cartridge with oxidizing agents or explosives.	

## Section 8. Exposure Controls and Personal Protection

Exposure Controls :	None required.
Ventilation :	Use ventilation for the safety air conditions.
	If needed, use gloves, apron, mask, goggles.
Personal Protection :	None required when ink and ink cartridges are
	used as intended.

## Section 9. Physical and Chemical Properties

Shape and appearence : black color, liquid
Odour : distinct.
Specific gravity : 1.05
Solubility in water : Fully miscible
Solubility in other solvents : depends on solvent sort.
Flash point : Non-flammable liquid
Boiling point : over 100 °C
pH value : 7.5 ~ 10.0
Viscosity : 2.5-6.0 cps at 25°C
 Hazardous reactions : None

#### Section 10. Stability and reactivity

Hazardous decomposition product : None No dangerous reaction will occur with correct handling and storage.

#### Section 11. Toxicological Information

Routes of Overexposure : Eye, skin, inhalation, and oral
Acute Health Hazards :

Overexposure of eye surface to ink may be mildly irritating.
Overexposure of skin to ink contact man cause irritation and in some people swelling and redness.
Intentional inhalation overexposure to ink vapors may result in respiratory tract irritation.
Intentional or accidental oral ingestion may cause an upset stomach.
Chronic Health Hazards : None known

#### Section 12. Ecological Information

Follow the appearance cautions which do not affect environment in the cases, such as abandonment, at the time of disclosure.

#### Section 13. Disposal considerations

#### Container disposal

Empty container retains product residue.

Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product.

#### Section 14. Transport Information

#### Common

General cautions of the clause of the cautions on handling and storage are followed.

#### Land transportation

When it corresponds to Fire Service Law and labor security and hygiene law, the place appointed about transportation of a statute is followed.

#### Marine transportation

The place set to Law for Safety of Vessels is followed.

#### Air transportation

The place set to the Aviation Act is followed.

#### Section 15. Regulatory Information

CERCLA section 103(40CFR302.4): N
SARA section 302(40CFR355.30): N
SARA section 304(40CFR355.40): N
SARA section 313(40CFR372.65): N
SARA hazard categories, SARA section 311/312(40CFR370.21):
Acute: N / Chronic: N / Fire: N / Reactive: N / Sudden release: N
OSHA process safety (29CFR1910.119) : N
State regulations :
California proposition 65 : N
European regulations :
EC number : Not assigned.

# Section 16. Other Information

This MSDS contains health, safety, and environmental information and it was created based on the data which can come to hand at present, information, and data since evaluation of danger and detrimental nature is not necessarily enough, be careful of handling enough.