

**MATERIAL SAFETY DATA SHEET**  
**According to 91/155/EEC**

**Product ROLLERBALL CORROSION  
INHIBITED INK  
34-62-B BLACK, 46-63-A2 BLUE, 36-20-B4 RED, 36-20-D3 GREEN**

Date: 09-15-2006  
Revision Date: 09-10-2007

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**1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: ROLLERBALL CORROSION INHIBITED INK  
SUPPLIER:  
Name: SHANGHAI NATIONAL INK  
Address: NO. 38 LANE 451 MAO JIA RD.  
LUODIAN TOWN, BAOSHAN DISTRICT  
SHANGHAI, 201908 P.R.C.  
Telephone number: 86-21-66864551

Recommended use: Writing pens and markers containing less than 3 grams of ink.

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**2 COMPOSITION / INFORMATION ON INGREDIENTS**

PREPARATION:  
Chemical nature: Mixture based on water, glycols and organic dyes  
Components contributing to the hazard:  
Ethylene Glycol (CAS# 107-21-1) Weight: 35 - 50%  
Hazardous constituents: Ethylene Glycol (CAS# 107-21-1) Weight: 35 - 50%  
Hazard Codes: Xi- Irritant, Xn- Harmful

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**3 HAZARDS IDENTIFICATION**

MOST IMPORTANT HAZARDS:  
Adverse human health effects:  
Environmental effects: Contains hazardous substances(s) for the environment  
Physical and chemical hazards:  
-Fire or explosion: Non-Flammable Waterbased Ink  
Burning and thermal decomposition may form toxic by products  
Classification of the product: According to European regulations, this product supplied as a bulk liquid is classified as:  
Xi- IRRITANT  
Xn- HARMFUL  
Further information: In a usual writing situation, quantities of ink laid down or vapors emitted by the pen are normally too small to occasion significant exposure and cause adverse effects on the user's health.

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**4 FIRST AID MEASURES**

Inhalation:	Move the affected person away from the contaminated area and into the fresh air
Skin contact:	Immediately wash and rinse with plenty of water
Eye contact:	Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 min. minimum) Always refer to an eye specialist, even if there are no immediate symptoms.
Ingestion:	Never attempt to induce vomiting Call a doctor immediately

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**5 FIRE FIGHTING MEASURES**

Suitable extinguishing media:	Carbon dioxide (CO <sub>2</sub> ) Foam Powders
Not suitable extinguishing media:	None to our knowledge. If there is a fire close by, using suitable extinguishing agents
Specific hazards:	During combustion: Toxic Vapors may be released if product is heated to dryness.
Specific fire fighting methods:	Do not attempt to fight the fire without suitable protective equipment may intervene
Protection of fire-fighters:	Self-contained breathing apparatus Complete protective clothing

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**6 ACCIDENTAL RELEASE MEASURES**

Personal precautions:	Avoid contact with skin and eyes Do not breathe vapours Do not smoke
Environmental precautions:	Do not discharge into drains and rivers
Methods for cleaning up:	
-Neutralization:	Absorb spillage with: - inert absorbent material - earth or sand
-Cleaning/decontamination:	Wash non-recoverable remainder with large amounts of water
-Disposal:	Dispose of contaminated materials in accordance with current regulations

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**7 HANDLING AND STORAGE**

**HANDLING**

Technical measures: Vapour extraction at source  
Material and equipment suitable for use with  
Strongly colored water based liquids.

Precautions: Avoid any direct contact with the product  
Work in a well-ventilated area  
Smoking is forbidden  
Avoid the build-up of electrostatic charge

**STORAGE**

Technical measures: The floor of the depot must be impermeable, non-combustible and designed to form a basin, in order that stored liquids should not, under any circumstances, be released outside

Storage conditions:

- Recommended: Store:  
- in a cool, well-ventilated area  
- the container tightly closed  
- away from any source of ignition

Incompatible materials: Strong oxidizing agents

Packaging materials:  
- Not suitable: Can cause some metals to rust

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**8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

Engineering measures: Ensure good ventilation of the work station  
Extraction to remove vapours at their source

Occupational exposure limits:  
- France: Ethylene Glycol

Personal protective equipment:  
- Respiratory protection: In the event of insufficient ventilation:  
Suitable breathing apparatus

- Hand protection: Impermeable protective gloves

- Eye protection: Safety spectacles

- Skin and body protection: Suitable clothing

Collective emergency equipment: Eye fountain  
Safety shower

Hygiene measures: Do not drink, eat or smoke in the workplace

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**9 PHYSICAL AND CHEMICAL PROPERTIES**

Physical state: Liquid

Colour: Black, Red, Blue or Green

Odour: watery slightly sour smell

pH: 7.0-8.3

Flammability characteristics: non-flammable water based ink

- Flash point: 111°C for ethylene glycol in this product

- Auto-ignition temperature: 398°C for ethylene glycol in this product

Explosive limits in air:

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Vapour density (air=1): greater than 1  
Solubility:  
- In water: Miscible (in all proportions)  
- In organic solvents: Miscible (in all proportions) with:

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**10 PHYSICAL AND CHEMICAL PROPERTIES**

Stability: Stable at ambient temperature and under normal conditions of use

Hazardous reactions:  
- Conditions to avoid: May ignite on heating to dryness when all water is evaporated  
- Materials to avoid: - Strong oxidizing agents  
- Hazardous decomposition products: On combustion or on thermal decomposition (pyrolysis) releases:  
Carbon oxides (CO, CO<sub>2</sub>)

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**11 TOXICOLOGICAL INFORMATION**

Acute toxicity: Vapours may cause drowsiness and dizziness  
Acute symptoms: On ingestion:  
Nausea  
Vomiting  
Central Nervous System depressant  
On inhalation:  
Dizziness  
Headaches

Local effects: At high concentrations, the vapours can be irritating to the eyes, nose and throat  
Repeated or prolonged contact may cause slight irritation to the skin  
Eye contact:  
May cause severe ocular lesions

Further information: Above information is for the ink. The ink will be contained in the fibrous reservoir of a small capacity marker containing 3 grams or less which will limit considerably the exposure possibilities for the user.

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**12 ECOLOGICAL INFORMATION**

Product as is: Avoid discharge of the product as is into the environment

ECOTOXICITY:  
Effects on the aquatic environment: Ethylene Glycol  
May cause adverse effects to the aquatic

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environment.

**13 DISPOSAL CONSIDERATIONS**

**WASTE FROM PRODUCT:**

Destruction/Disposal: Dispose of in accordance with relevant local regulations

**CONTAMINATED PACKAGING:**

Destruction/disposal: Destroy at an authorized site

NOTE: The user's attention is drawn to the possible existence of specific European, national or local regulations regarding disposal

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**14 TRANSPORT INFORMATION**

**INTERNATIONAL REGULATIONS:**

Land transportation:

- Rail/road (RID/ADR): UN Number:  
Class:  
Classification code:  
Packaging group:  
Labeling:  
Hazard identification number:

- Sea (IMO/IMDG): UN Number:  
Class:  
Classification code:  
Packaging group:  
Labeling:  
Hazard identification number

- Air (ICAO-IATA): UN Number:  
Class:  
Classification code:  
Packaging group:  
Labeling:  
Hazard identification number

Further information: Prescriptions on the transport of dangerous goods apply to the bulk ink only. They don't apply to the marker.

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**15 REGULATORY INFORMATION**

EC LABELING: Marker: not applicable  
Ink:  
Mandatory labeling (self-classification) of hazardous preparations: applicable.

Symbols and indications of danger: - Xi -IRRITANT

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- R phrases:	Xn -HARMFUL R 22: Harmful if swallowed R 36: Irritating to eyes
-S phrases:	S2 Keep out of reach of children S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice S 37: Wear suitable gloves (to protect hands from staining) S46 If swallowed, seek medical advice immediately and show this container or label.

**FURTHER REGULATIONS:**

National prescriptions:

France: Maladies professionnelles (tableaux (x) n° 84) concerné

**NOTE:**

The regulatory information given above only indicate the principal regulations specifically applicable to the product described in the MSDS

The cited basic community texts are being updated and transcribed in national law  
Refer to all applicable international, national and local regulations or provisions

The user's attention is drawn to the possible existence of additional provisions which complete these regulations

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**16 OTHER INFORMATION**

Restrictions on use:	This product must not be used for other applications than mentioned in §1
Safety data sheet established by:	Dr. Ben Fabian, Technical Director
Revised by :	Bruce Gindelberger, Shanghai National Ink

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This sheet completes the technical sheets but it does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the risks possibly incurred by using the product for any other purpose than that for which it was intended.

This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product.

The mandatory regulations mentioned are only intended to help the user to fulfill his obligations regarding the use of hazardous products.

This listing must not be considered exhaustive. It does not exonerate the user from ensuring that other legal obligations than those mentioned do not exist, relating to the use and storage of the product for which he solely is responsible.

Note: The supplying of a material safety data sheet is not mandatory for manufactured articles which contain dangerous substances or preparations, when these latter's are packaged so that they do not present any danger for the user.