

## Safety Data Sheet (SDS)

Printing date 05/08/2015

Prepared on 05/08/2015

### 1. Product and Company Identification

- **Product identifier**
- **Trade name: MARK IV, Fountain Solution**
- **Item Number/Size:**  
#79G: 1-Gallon Bottle, #79-5C: 5-Gallon Pail, #79-53D: 53-Gallon Drum
- **Relevant identified uses of the substance or mixture and uses advised against**  
Water Base Mixture/Preparation – Fountain Solution Concentrate for Lithographic Printing Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Nikken Chemical Laboratory Co., Ltd.  
Sakae 2-16-1, Naka-Ku, Nagoya, Aichi 460-0008, Japan  
overseas@nikken-chemical.co.jp  
Ph. +81-52-220-1398 Fax +81-52-219-2495 for product information
- **Emergency telephone number: Infotrac: 1-800-535-5053, 1-352-326-2510**

www.nikken-chemical.co.jp

### 2. Hazard(s) identification

- **GHS classification and label elements of the product**  
GHS classification  
PHYSICAL HAZARDS  
Flammable liquids : Category 4  
HEALTH HAZARDS  
Skin corrosion/irritation : Category 2  
Serious eye damage /eye irritation : Category 2A
- **Hazard pictograms**



- **Signal word: Warning**
- **Hazard statements:**  
H227: Combustible liquid.  
H302: Harmful if swallowed.  
H315: Causes skin irritation.  
H319: Causes serious eye irritation.  
H335: May cause respiratory irritation.  
H372: Causes damage to organs (central nervous system, peripheral nerve, respiratory organs, nervous system) through prolonged or repeated exposure.
- **Precautionary statements:**  
Prevention  
P264: Wash hands thoroughly after handling.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P260: Do not breathe dust/fume/gas/mist/vapors/spray.  
P270: Do not eat, drink or smoke when using this product.  
P271: Use only outdoors or in a well-ventilated area.  
P284: Wear respiratory protection.  
Response  
P301+P312+P330: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313: If eye irritation persists: Get medical advice/attention.  
P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
P332+P313: If skin irritation occurs: Get medical advice/attention.

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P361+P363: Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.  
 P304+P340+P310: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

P314: Get Medical advice/attention if you feel unwell.

Storage

P405: Store locked up.

P403: Store in well-ventilated place.

P233: Keep container tightly closed.

Disposal

P501: Dispose of contents/container in accordance with local/regional/national regulations.

### 3. Composition/information on ingredients

· **Substance/Preparation:** Preparation

Ingredient name	content(%)	CAS No.	ECNO
Water	25 – 60	7732-18-5	231-791-2
2-Butoxy ethanol	5 – 30	111-76-2	203-905-0
Propylene glycol	5 – 15	57-55-6	200-338-0
Ammonium nitrate	1 – 3	6484-52-2	229-347-8

### 4. First-aid measures

· **General information:**

Call a POISON CENTRE or doctor/physician if you feel unwell.

· **IF INHALED:**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

· **IF ON SKIN(or hair):**

Immediately take off contaminated clothing and rinse skin (and/or hair) with plenty of soap and water.

If skin irritation occurs, get medical advice/attention. Wash contaminated clothing before reuse.

· **IF IN EYES:**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. If eye irritation persists, get medical advice/attention.

· **IF SWALLOWED:**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Do not induce vomiting. Get medical advice/attention.

· **Protective measures for first aid:**

Do not touch the victim directly. And wear the protective equipment.

### 5. Fire-fighting measures

· **Suitable extinguishing media:**

In case of fire, use foam, dry powder, CO2.

· **Specific fire-fighting measures:**

Apply water from a safe distance to cool and protect surrounding area.

Stand at upwind and do the fire-fighting, to avoid breathing toxic gas.

Do not discharge water of extinguishing to flow out to the environment and take the appropriate.

· **Special protective equipment and precautions for fire-fighters:**

Wear the protective equipment.

### 6. Accidental release measures

· **Personnel precautions, protective equipment and emergency procedures:**

Wear proper protective equipment.

Eliminate all sources of ignition and ventilate the area.

Stand at upwind. Evacuate personnel at downwind.



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· **Environmental precautions:**

Prevent spills from entering sewers, watercourses or low areas.

· **Methods and materials for neutralization, containment and cleaning up:**

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

### 7. Handling and storage

· **Precautions for safe handling**

Do not breathe dust/fume/gas/mist/vapors/spray.

· **Preventive measures:**

(Protective measures against fire & explosion)

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

· **Safety Measures/Incompatibility:**

Wear protective gloves.

Wear protective gloves and face protection.

Wear eye protection/face protection.

Wash hands et al thoroughly after handling.

· **Conditions for safe storage, including any incompatibilities**

· **Recommendation for storage:**

Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 122F° (=50° C). Do not store at temperatures below 32F° or 0° C.

· **Incompatible storage condition:**

Store away from strong acids, strong bases, oxidizing agents.

### 8. Exposure controls/personal protection

Control parameters e.g. occupational exposure limit values or biological limit values

Adopted value

(2-Butoxy ethanol)

ACGIH(1996) TWA: 20ppm (Eye & URT irr)

OSHA-PEL

(2-Butoxy ethanol)

TWA 50ppm, 240mg/m<sup>3</sup>

NIOSH-REL

(2-Butoxy ethanol)

TWA 5ppm, 24mg/m<sup>3</sup>

Protective equipment

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye protection.

Skin and body protection

Wear protective clothing.

Safety and Health measures

Wash ... thoroughly after handling.

Take off contaminated clothing and wash before reuse.

### 9. Physical and chemical properties

· **Physical properties:**

Appearance: Light Green Clear Liquid

Form: Liquid

Color: Light Green (Clear)

Odor: Mild glycol odor

pH: No data

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Flash point: 149F° (=65° C) Closed Cup

Solubility (water): Soluble (100%)

Specific gravity: No data

### 10. Stability and reactivity

This product is stable and non-reactive under normal conditions of use, storage and transport.

Hazardous decomposition products: No hazardous decomposition products are known.

### 11. Toxicological information

There is no experimentally determined data available on the preparation (product) itself.

· **Information on toxicological effects:**

Inhalation: None known.

Ingestion: harmful if swallowed. May be fatal if swallowed and enters airways.

Skin contact: Causes skin irritation.

Eye contact: Cause eye irritation.

Acute Toxicity (Component)

Oral

(2-Butoxyethanol) Oral LD-50: (Rat): 1,300 mg/kg, Oral LD-50: (Guinea Pig): 1,400 mg/kg

(Propylene glycol) Oral LD-50: (Rat): 22,000 mg/kg

(Ammonium nitrate) Oral LD-50: (Rat): 2,462 mg/kg

Dermal

(2-Butoxyethanol) Dermal LD-50: (Rat): >2,000 mg/kg, Oral LD-50: (Guinea Pig): >2,000 mg/kg

(Propylene glycol) Dermal LD-50: (Rabbit): >2,000 mg/kg

Inhalation

(2-Butoxyethanol) Vapour: LC50 (Rat, 3h): >4.9 mg/l, Vapour: LC0 (Guinea Pig, 1h): >3.4 mg/l

(Propylene glycol) Vapour: LC50 (Rat, 2h): >317 mg/l (highest concentration tested)

Repeated Dose Toxicity (Component)

(2-Butoxyethanol) LOAEL (Rat, Oral Study): 69 mg/kg (Target Organ(s): Liver)

NOAEL (Rat, Dermal Study): 150 mg/kg

LAEC (Rat, Inhalation Study): 152 mg/m<sup>3</sup> (Target Organ(s): Blood)

Skin corrosion/irritation (Component)

(2-Butoxyethanol) (Rabbit, 24h): Moderate

(Propylene glycol) (Rabbit, 24h): None

Serious eye damage/eye irritation (Component)

(2-Butoxyethanol) (Rabbit, 24h): Moderate

(Propylene glycol) (Rabbit, 24h): Very slight

Respiratory or skin sensitization: (Component)

(2-Butoxyethanol) (Guinea Pig): Not a skin sensitizer

(Propylene glycol) (Human): Not a skin sensitizer

Mutagenicity (Component)

(2-Butoxyethanol) In vitro: Salmonella typhimurium assay (Ames test): Negative +/- activation

In vivo: Chromosomal aberration intraperitoneal injection (Mouse, Male): Negative

Carcinogenicity (Component)

(2-Butoxyethanol) IARC-Gr.3: Not Classifiable as a Human Carcinogen.

ACGIH-A3(1996): Confirmed Animal Carcinogen with Unknown Relevance to Humans

Reproductive toxicity (Component)

Based on available data the classification criteria are not met. Not classified as hazardous.

Specific target organ toxicity (Component)

Single exposure Not classified

Repeated exposure Not classified



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Aspiration hazard

(2-Butoxyethanol)

Droplets of the products aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Other adverse effects (Component)

No data available.

### 12. Ecological information

There is no experimentally determined data available on the preparation (product) itself.

· **Toxicity** (Component)

Acute toxicity

Fish

(2-Butoxyethanol) LC-50 (Oncorhynchus mykiss): 1,474 mg/l – 96h

Daphnia and other aquatic invertebrates

(2-Butoxyethanol) EC-50 (Water Flea, 48h): 1,550 mg/l

Chronic toxicity

Fish

(2-Butoxyethanol) NOEC (Zebra Fish, 21d): >100 mg/l

Aquatic invertebrates

(2-Butoxyethanol) NOEC (Daphnid, 21d): 100 mg/l

Toxicity to Aquatic Plants

(2-Butoxyethanol) EC-50 (Algae (Pseudokirchneriella subcapitata), 72h): 1,840 mg/l

· **Persistence and degradability**

(2-Butoxy ethanol)

BOD Degradation : 96% (Registered chemicals data check & review, Japan)

· **Bioaccumulative potential**

(2-Butoxy ethanol)

log Pow=0.83 (PHYSPROP Database, 2005)

No Mobility in soil data available

Known or predicted distribution to environmental compartments No data available.

Results of PBT and vPvB assessment No data available.

No ozone depleting chemical data available

Other adverse effects No data available.

### 13. Disposal considerations

· **Disposal methods:**

Avoid release to the environment (- if this is not the intended use).

Dispose of contents/container in accordance with local/national regulation.

### 14. Transport information

· **Regulatory information:**

· UN No, UN CLASS

Not applicable to Un NO.

· USDOT

Not classified as a dangerous good under transport regulations.

· IMDG

Not classified as a dangerous good under transport regulations.

· IATA/ICAO

Not classified as a dangerous good under transport regulations.

### 15. Regulatory information

· GHS classification and labeling:

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Flam. Liq. 4 : H227 Combustible liquid

Skin Corr. 2 : H315 Causes skin irritation.

Eye Irrit. 2 : H319 Causes serious eye irritation

· US major regulations:

Toxic Substance Control Act (TSCA) Inventory Status:

The components of this product are listed or have been registered for inclusion on the Section 8(B) Chemical Substance Inventory List (40 CFR 710).

### 16. Other information

· Reference Book

Globally Harmonized System of classification and labelling of chemicals, (4th ed., 2011), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 18th edit., 2013 UN Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)

2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2014 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

#### Notice to reader

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*The GHS classification data given here is based on current EU official data.*