

## SAFETY DATA SHEET

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MILLION SR DEVELOPER

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Million SR Developer

Catalogue Number(s): 067768 - package 20 liters

Recommended main uses for the substance or mixture: Developing solution of thermal offset plates.

Manufacturer: IBF - INDÚSTRIA BRASILEIRA DE FILMES

Address : Rua Lauro Muller, 116 10º andar CEP 22290 900 Rio de Janeiro Brasil

Phone.: 55 21 2103-1000

SDS prepared by : IBF INDÚSTRIA BRASILEIRA DE FILMES

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Phone.: 55 21 2103-1000

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### 2. HAZARDS IDENTIFICATION

**Classification system adopted on the basis of ABNT NBR 14725-2.**

**Hazard information is based on information from the ingredients.**

#### 2.1 Classification of the mixture:

Corrosion and skin irritation - Category 1B, H314

Serious eye damage/eye irritation - Category 1, H318;

#### 2.2 Element GHS label:



#### Word of warning:

Danger

#### Sentence of danger:

H314 - Causes severe skin burns and eye damage.

H318 - Causes serious eye damage.

#### Precautionary statements: Prevention.

P260 - Do not inhale dust, fumes, gas, mist / vapors / spray.

P264 - Wash thoroughly after handling.

P270 - Do not eat, drink or smoke while using this product.

P280 - Wear protective gloves / protective clothing / eye protection / face protection.

#### Precautionary statements: emergency response.

P301+P330+P331- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353- IN CASE OF CONTACT WITH SKIN (or hair): Immediately remove all contaminated clothing. Rinse skin with water / take a shower.

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P304+P340- IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P310- Contact immediately TOXICOLOGICAL INFORMATION CENTER or doctor.

P363- Wash contaminated clothing before using it again.

P321- Specific treatment consult doctor.

P305 + P351 + P338 - IN CASE OF EYE CONTACT: Rinse thoroughly with water for several minutes. In the case of use of contact lenses, remove them if it is easy. Continue rinsing.

**Precautionary statements: storage.**

P405 - Store in a lockable room.

**Precautionary statements: disposal.**

P501 - Dispose of contents / container in local licensed by the environmental agency.

**2.3 Other hazards:**

None known.

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

**3.1 Mixture related information:**

**Product name:** Million SR Developer.

**This product is a mixture:** Wash solution thermal sensitive lithographic (offset) printing plates.

**Chemical nature:** water-based solution.

**3.2 Hazard ingredients:**

Weight%	Component (CAS Registry No.)
1 / 5	Potassium Citrate ( 6100-05-6 )
1 / 5	Potassium Hydroxide ( 1310-58-3 )

Note: Exact percentage (concentration) of composition has been withheld as a trade secret is required.

**3.3 Impurities contributing to the hazard:**

Not identified.

### 4. FIRST AID MEASURES

**4.1 First aid measures:**

**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician immediately.

**Skin contact:** Wash with soap and plenty of water. Consult a physician. Remove all contaminated clothing.

**Eye contact:** Rinse thoroughly with water, keeping the lid open for at least 15 minutes.

**Ingestion:** Rinse mouth. Do not induce vomiting, seek medical attention. Never give anything by mouth to an unconscious person.

After first aid urgently forward to the doctor.

**4.2 Most important symptoms and effects, both acute and delayed:**

Alkaline product. Causes burns.

Irritating to respiratory system.

Can cause permanent eye damage.

**4.3 Notes to physician (recommendations for immediate medical care and special treatment needed, if necessary):**

Direct treatment according to the symptoms and the clinical condition of the patient. Seek medical attention immediately.

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### 5. FIRE FIGHTING MEASURES

#### 5.1 Extinguishing Media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Specific hazards of the substance or mixture:

In case of combustion may generate carbon monoxide, and carbon dioxide.

#### 5.3 Protective measures of the fire fighting team:

Wear self-contained breathing apparatus for fire fighting if necessary.

The water jets may be used to cool the sealed containers.

### 6. MEASURES SPILL OR LEAK

#### 6.1 Personal precautions, protective equipment and emergency procedures.

**6.1.1 Advice for non-emergency:** Keep people away. Isolate the area. Avoid contact with the material and stay upwind.

**6.1.2 Advice for emergency responders:** Use personal protective equipment. Avoid breathing vapor / mist / gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Pay attention to the accumulation of vapors that can form explosive concentrations. Vapors can accumulate in low areas.

#### 6.2 Environmental precautions.

Prevent leakage or spillage if safe. Do not allow product enter drains.

Contain spilled material with earth dikes or sand.

#### 6.3 Methods and materials for containment and cleaning.

Transfer the spilled materials (solid and liquid) into suitable containers and deliver to an authorized manager for waste disposal. Collect the debris with absorbent materials.

### 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling.

Use in well ventilated area. Prevent inhalation of the product, contact with eyes, skin and clothing through proper protection. If accidental contact, the site should be washed immediately.

Emergency showers and eyewash should be available in appropriate locations.

Wash hands and face thoroughly after handling. Wash contaminated clothing before reuse. When using do not eat, drink or smoke.

Use goggles and gloves.

#### 7.2 Conditions of safe storage, including any incompatibilities.

Store in a covered, well-ventilated, sheltered from sun light and away from heat sources or open flames.

Ensure that the storage location has temperature, pressure and humidity appropriate. Keep containers tightly closed when not in use.

**Incompatibility:** Avoid contact with strong acids.

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### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

#### 8.1 Control Parameters:

The control limits are for substances.

##### Exposure Limits

Potassium Citrate

##### ACGIH TLV

no data

##### OSHA PEL

no data

Potassium Hydroxide

CEIL 2 mg / m<sup>3</sup>

no data

#### 8.2 Engineering measures:

Recommended Decontamination Facilities: Lava eyes, emergency shower and washing facilities. Use only with adequate ventilation.

#### 8.3 Personal protection measures:

**Eye / Face Protection:** It is recommended industrial hygiene practice to minimize eye contact. Wear safety glasses with side shields or goggles broad view.

**Skin Protection:** It is recommended industrial hygiene practice to minimize skin contact. Use impermeable gloves and protective clothing appropriate for risk of exposure. Use gloves resistant to chemicals, such as PVC or nitrile rubber gloves.

**Respiratory protection:** It must be kept a good local ventilation. It is recommended practice to use mask with filter element when the adverse effects such as respiratory irritation or discomfort have been experienced.

**Thermal hazards:** None known.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless.

Odor: Slight odor

pH ( as is ) ( ± 0,05 ): 13,70

Melting / Freezing Point: Not available.

Initial boiling point and boiling range temperature: Not available.

Flash Point: Not applicable.

Evaporation Rate: Not available.

Flammability (solid, gas): Not applicable.

Lower limit / upper flammability or explosive limits: Not applicable.

Vapor Pressure: Not available.

Vapor Density: Not available.

Relative density(± 0,02) : 1,035 g/cm<sup>3</sup> at 20 ° C

Solubility in Water: Easily soluble in water.

n-octanol/água Partition coefficient: Not available.

Auto-ignition temperature: Not available.

Decomposition Temperature: Not available.

Viscosity: Not available.

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### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

No dangerous reaction in normal use.

#### 10.2 Stability

Chemically stable product at ambient conditions. The decomposition by heating can generate carbon monoxide plus carbon dioxide. Not polymerize.

#### 10.3 Possibility dangerous reactions

Polymerisation does not occur.

#### 10.4 Conditions to be avoided

Strong heating and ignition source.

#### 10.5 Incompatible materials

##### Potassium hydroxide

Nitro compounds, Organic materials, Magnesium, Copper, Water, reacts violently with: Metals, Metals Light, Contact with aluminum, tin and zinc liberates hydrogen gas. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts, violent reaction with, Alkali metals, Halogens, Azides, Anhydrides.

#### 10.6 Hazardous decomposition products

##### Potassium hydroxide

Hidrogênio

### 11. TOXICOLOGICAL INFORMATION

The information mix refers to the toxicological data of hazardous ingredients of the mixture based on information from manufacturers.

#### 11.1 Acute toxicity:

##### Potassium Citrate

LD50, oral, rat - 3000 mg / kg

##### Potassium hydroxide

LD50, oral, rat - 275 mg kg.

LD50, oral, rabbit - 500 mg / kg.

LD50, dermal, rabbit - 1, 35mg / kg.

LC50, inhalation, rat-rat h 4.4 -> 2.06 mg / l.

LD50, dermal, rat-rat -> 5,000 mg / kg.

#### 11.2 Corrosion / skin irritation:

##### Potassium hydroxide

Causes skin burns.

#### 11.3 Serious eye damage / irritation:

##### Potassium hydroxide

Caustic effects.

#### 11.4 Respiratory sensitization or skin:

No information available.

#### 11.5 Germ cell mutagenicity:

No information available.

#### 11.6 Carcinogenesis:

Carcinogenic rating (components present at 0.1% or more):

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- 
- International Agency for Research on Cancer (IARC): none
  - American Conference of Governmental Industrial Hygienists: none
  - National Toxicology Program (NPT): none
  - Security Management and Occupational Health - OSHA: None

### **11.7 Reproductive toxicity:**

No information available.

### **11.8 toxicity for specific target organs - single exposure:**

No information available.

### **11.9 toxicity for specific target organs - repeated exposure:**

#### **Potassium hydroxide**

The chronic effect may consist of multiple areas of superficial skin destruction or irritant dermatitis primary. Simultaneously, inhalation sprays or product droplets can lead to varying degrees of irritation or damage to the tissues of the airways and increased susceptibility to respiratory disease. The health condition can be aggravated by overexposure.

### **11.10 Aspiration hazard:**

No information available.

## **12. ECOLOGICAL INFORMATION**

**The mixture of information refers to data of hazardous ingredients of the mixture based on information from manufacturers.**

### **12.1 Ecotoxicity:**

#### **Potassium hydroxide**

LC50, 96h, Gambusia affinis - 80-85 mg / l.

EC50, 48 h, Daphnia magna - 40-240 mg / l (estimate).

The pH  $\geq 9$  has corrosive effect on certain body (and can cause fish kills). pH  $\geq 8.5$  destroys algae. Lepomis macrochirus LC50 (96h) pH = 10.5.

LC50, 24 h, Poecilia reiculata - 80 mg / l.

### **12.2 Persistence and degradability:**

No data available.

### **12.3 Bioaccumulative potential:**

Partition coefficient (Kow): no data available.

Bioconcentration factor (BCF): no data available.

### **12.4 Mobility in soil:**

No data available.

### **12.5 Other adverse effects:**

No data available.

## **13. DISPOSAL CONSIDERATIONS**

### **13.1 Methods recommended for disposal:**

The discharge, treatment or disposal may be subject to national, state and local laws. Do not discharge into drains, soil or any water course. All disposal practices must be in compliance with all local laws and regulations, state / municipal and federal. May require the approval of the licensing authority and may require pretreatment. If allowed, refer to an authorized manager for waste disposal.



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Packaging that can not be fully sanitized should receive the same treatment applied to the product. Recondition or dispose of empty container in accordance with government regulations. To minimize exposure read to Section 8 (Exposure Controls/Personal Protection) of the SDS.

### 14. TRANSPORT INFORMATION

DOT Classification :	Class 8 Corrosive.
Proper Shipping Name :	POTASSIUM HYDROXIDE SOLUTION
UN number :	1814
Packing Group :	II
Marine Pollutant :	Not pollutant.
TDG Classification :	TDG Class 8 Corrosive liquid.
ADR/RID Classification :	ADR Class 8 Corrosive liquid.
IMO/IMDG Classification :	IMDG Class 8 Corrosive liquid.
Proper Shipping Name :	POTASSIUM HYDROXIDE SOLUTION
UN number :	1814
Packing Group :	II
ICAO/IATA :	IATA Class 8 Corrosive liquid.
Proper Shipping Name :	POTASSIUM HYDROXIDE SOLUTION
UN number :	1814
Packing Group :	II

### 15. REGULATORY INFORMATION

Specific regulations safety, health and the environment for the chemical.

Transport regulation in Brazil: Resolution 420: 2004 - ANTT.

IMDG Code - 2010 Edition - IMO (International Maritime Organization).

Dangerous Goods Regulations - 52nd Edition - IATA (International Air Transport Association).

Dangerous Goods by Road (ADR) - Applicable since January 1, 2011 - UNECE (United Nations Economic Commission for Europe).

Decree 96.044 / 88 of the Ministry of Transport.

Brazilian Association of Technical Standards (ABNT) - NBR 14725 - Part 1-4.

### 16. OTHER INFORMATION

Important information, but not specifically described in the previous sections.

This information document is in accordance with the NBR 14725: 2014 Part 4.

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#### References:

SDS from suppliers of substances.

United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) – 6<sup>th</sup> Edition.

#### Captions and abbreviations:

ANTT - National Agency of Land Transport.

IMDG - International Maritime Dangerous Goods

ICAO / IATA - International Civil Aviation Organization / International Air Transport Association.



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LC50 - lethal concentration for 50% of the test animals

LD50 - lethal dose 50%

ACGIH - American Conference of Governmental Industrial Hygienists, Inc.

TLV-STEL: Narrow Tolerance - short time (15 minutes maximum).

TLV-TWA: tolerance limit - time weighted average

OSHA - Occupational Safety and Health Administration

HSDB - Hazardous Substance Data Bank

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The product should be stored, handled and used in accordance with proper industrial hygiene practices and in conformity with legal regulations.

The information contained herein is provided without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make their own decisions as to the applicability and completeness of such information, taking into account all possible sources, the correct use and disposal of materials, safety and health of their employees and customers and the protection of the environment.