SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the substance or mixture:
Product name : L5300b LITHOSTAR ULTRA FINISHER
MSDS Number : 000001010737

1.2 Use of the substance/mixture:
Use of the Substance/Preparation : Offset plate finisher solution
Business group : GS

1.3 Company/undertaking identification
Agfa Corporation
611 River Drive
Center 3
Elmwood Park, NJ 07407
U.S.A.
Transport Emergency : Non-transportation
Call CHEMTREC : +1 800 4249300
International : +1 703 5273887
Health Emergency Phone : +1 303 6235716
Agfa Information Phone : +1 201 4402500

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:
GHS (Globally Harmonized System of Classification and Labelling of Chemicals)
Based on available data, the classification criteria are not met.

2.2 Label elements:
This product is non hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture related information:
Aqueous offset plate finisher solution, mainly consisting of:

3.2 Hazard ingredients:
The hazard and labelling information in this section is that of the individual ingredients. The corresponding information relative to this product as supplied is given in section 2.1.
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Hazardous components

- Potassium citrate
  Concentration [%] : 1.0 - 5.0
  CAS-No. : 866-84-2

- Sodium nitrate
  Concentration [%] : 1.0 - 5.0
  CAS-No. : 7631-99-4
  Hazard classes : Oxidizing solids
  Acute toxicity Oral
  Serious eye irritation, Acute toxicity Oral, Serious eye irritation
  Hazard categories : Category 3, Category 4, Category 2
  Hazard statements : H272, H302, H319

Components with a community workplace exposure limit

This product does not contain components with a community exposure limit.

3.3 Remark:

Full text of each relevant H-phrase is listed in section 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

- Eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- Skin contact : Wash immediately with plenty of water and soap. If symptoms persist, seek medical advice.
- Ingestion : Rinse mouth with plenty of water. Seek medical advice.
- Inhalation : Take person to fresh air. Seek medical advice.

4.2 Most important symptoms and effects:

4.3 Indication of immediate medical attention and special treatment needed:

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : All extinguishing media are suitable.

5.2 Special hazards arising from the substance or mixture:

Further information : Product is not combustible.

5.3 Advice for fire-fighters:

Special protective equipment : Firefighters should be equipped with self-contained breathing
## SECTION 6. ACCIDENTAL RELEASE MEASURES

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

- **Personal precautions:** See section : Exposure controls / personnel protection.
- **Additional advice:** Wash away residues with plenty of water.

### 6.2 Environmental precautions:

- **Environmental precautions:** For waste disposal see section 13.

### 6.3 Methods and material for containment and cleaning up:

- **Methods for cleaning up:** Dike the spill if necessary. Soak up with absorbent material. Collect large spills into a properly labelled and sealable container. Prevent release into the drain, soil or surface water.

### 6.4 Reference to other sections:

- For waste disposal see section 13.
- For personal protection see section 8.

## SECTION 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling:

- **Hygiene measures:** Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

### 7.2 Conditions for safe storage:

- **Requirements for storage areas and containers:** Keep container tightly closed. Protect from direct sunlight.

### 7.3 Specific end use:
Air limit values (US)
We are not aware of any national exposure limit.

Air limit values (CA)
We are not aware of any national exposure limit.

Biological limit values (US)
We are not aware of any national exposure limit.

Biological limit values (CA)
We are not aware of any national exposure limit.

8.1.1.2 Additional exposure limits under the conditions of use:

8.2 Exposure controls:

Occupational exposure controls:

➢ Instruction measures to prevent exposure:
Employees should wash their hands and face before eating, drinking, or using tobacco products.

➢ Technical measures to prevent exposure:
Ensure adequate ventilation.

➢ Personal measures to prevent exposure:

Respiratory protection : Under normal conditions of use, respirator protection is not required. If respirators are used, institute a program in accordance with OSHA standard 29CFR1910.134 or Canada CSA Standard Z94.4-02.

Hand protection : Use chemical resistant gloves. In case of prolonged immersion or frequently repeated contact use gloves made of the materials: butyl rubber (thickness >= 0.36 mm, breakthrough time > 480 min), nitrile rubber (thickness >= 0.38 mm, breakthrough time > 480 min) or neoprene (thickness >= 0.65 mm, breakthrough time > 240 min). For intermittent splash protection corresponding gloves with breakthrough times > 60 min can be used. Avoid gloves made of: natural latex.

Eye protection : Safety glasses.
Body Protection : Safety clothes.
Personal protective equipment : Observe normal precautions when handling chemicals.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic physical and chemical properties:

9.1.1 Appearance:
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State of matter: Liquid
Form: Liquid.
Color: Colourless.
Odor: Nearly odourless
Odor threshold: No data available

9.1.2 Important health, safety and environmental information:

- pH (25 °C): 6.0
- Melting point/range: < 0 °C
- Boiling point/range: > 100 °C
- Flash point: Not combustible.
- Autoignition temperature: does not ignite
- Vapour pressure (20 °C): 23.00 hPa
- Relative vapour density: aqueous solution
- Relative density (20 °C): 1.050
- Solubility/qualitative: Miscible with water at all ratios.
- Partition coefficient (n-octanol/water): No data available
- Viscosity, dynamic: No data available
- Viscosity, kinematic: No data available
- Lower explosion limit: Not applicable
- Upper explosion limit: Not applicable
- Evaporation rate: No data available
- Flammability (solid, gas): Product is not combustible.

9.2 Other information:

- VOC content: 56.6 g/l
  VOC content excluding water
- Ignition temperature: Not applicable

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:
  Reactivity: Reacts with strong alkalis. Reacts vigorously with oxidizing agents.

10.2 Chemical stability:
  Stability: The product is stable under normal conditions of storage and use.

10.3 Possibility of hazardous reactions:
  Hazardous reactions: Strong oxidizing agents, Strong bases. The product is stable under normal conditions of storage and use.

10.4 Conditions to avoid:
  Conditions to avoid: Avoid temperatures above 60°C (140°F), direct sunlight and contact
with sources of heat.

10.5 Materials to avoid:

Materials to avoid: oxidizing agents, alkaline

10.6 Hazardous decomposition products:

Hazardous decomposition products: None

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicity data specific for individual ingredients in their pure state:

Toxicokinetics, metabolism and distribution:

- Sodium nitrate
  No data available

Acute effects (toxicity tests):

- **Acute Toxicity**
  - Potassium citrate

<table>
<thead>
<tr>
<th>Effect dose</th>
<th>Species</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>LD50</td>
<td>rat</td>
<td>&gt; 2,000 mg/kg</td>
</tr>
</tbody>
</table>

- Sodium nitrate

<table>
<thead>
<tr>
<th>Effect dose</th>
<th>Species</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>LD50</td>
<td>rat</td>
<td>1,267 mg/kg</td>
</tr>
<tr>
<td>Acute oral toxicity</td>
<td>LD50</td>
<td>rat</td>
<td>3,500 mg/kg</td>
</tr>
<tr>
<td>Acute oral toxicity</td>
<td>LD50</td>
<td>rat</td>
<td>3,200 mg/kg</td>
</tr>
<tr>
<td>Acute oral toxicity</td>
<td>LD50</td>
<td>rat</td>
<td>3,430 mg/kg</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>LD50</td>
<td>rat</td>
<td>&gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>Acute inhalation toxicity</td>
<td></td>
<td></td>
<td>No data available</td>
</tr>
</tbody>
</table>
Specific target organ toxicity (STOT):

- Sodium nitrate

<table>
<thead>
<tr>
<th>Specific effects</th>
<th>Affected organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product dust may be irritating to eyes, skin and respiratory system.</td>
<td></td>
</tr>
</tbody>
</table>

Irritant and corrosive effects:

- Sodium nitrate

<table>
<thead>
<tr>
<th>Exposure time</th>
<th>Species</th>
<th>Evaluation</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary irritation to the skin</td>
<td>rabbit</td>
<td>No skin irritation</td>
<td>OECD Test Guideline 404</td>
</tr>
<tr>
<td>Irritation to eyes</td>
<td>rabbit</td>
<td>Severe eye irritation.</td>
<td>OECD Test Guideline 405</td>
</tr>
</tbody>
</table>

Irritation to the respiratory tract:

- Sodium nitrate

No data available

Sensitisation:

- Sodium nitrate

<table>
<thead>
<tr>
<th>Species</th>
<th>Evaluation</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>mouse</td>
<td>Non-sensitizer</td>
<td>Mouse local lymphoma assay.</td>
</tr>
</tbody>
</table>

Aspiration hazard:

- Sodium nitrate

No data available

Sub-acute, sub-chronic and chronic toxicity

Repeated dose toxicity:

- Potassium citrate
- Sodium nitrate

<table>
<thead>
<tr>
<th>Effect dose</th>
<th>Value</th>
<th>Exposure time</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method: Literature. Based on available data, the classification criteria are not met.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specific target organ toxicity (STOT):
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- Potassium citrate
  - Sodium nitrate
  No information available.

➢ CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):

- Carcinogenicity
  - Potassium citrate
  - Sodium nitrate
  
<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Species</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Method: Literature.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
</tbody>
</table>

- Mutagenicity
  - Sodium nitrate
  Based on available data, the classification criteria are not met.

- Genetic toxicity in vitro
  - Potassium citrate
  - Sodium nitrate

<table>
<thead>
<tr>
<th>Type</th>
<th>Test system</th>
<th>Concentration</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ames test</td>
<td></td>
<td></td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Method: OECD Test Guideline 471.</td>
<td></td>
</tr>
</tbody>
</table>

- Genetic toxicity in vivo
  - Potassium citrate
  - Sodium nitrate

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Species</th>
<th>Exposure time</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mouse</td>
<td></td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>Method: Literature.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Based on available data, the classification criteria are not met.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Teratogenicity
  - Potassium citrate
  - Sodium nitrate
Based on available data, the classification criteria are not met.

- **Toxicity to reproduction**
  - Potassium citrate
  - Sodium nitrate
  No data available

➢ **Summarised evaluation of the CMR properties:**

  - Sodium nitrate
  Carcinogenicity : Based on available data, the classification criteria are not met.
  Mutagenicity : Based on available data, the classification criteria are not met.
  Teratogenicity : Based on available data, the classification criteria are not met.
  Toxicity to reproduction : No data available

**Experiences made in practice:**

  - Sodium nitrate
  Components of the product create formation of methaemoglobin.

### SECTION 12. ECOLOGICAL INFORMATION

#### 12.1 Ecotoxicity:

  - Sodium nitrate

<table>
<thead>
<tr>
<th>Effect to</th>
<th>Exposure dose</th>
<th>Exposure time</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to fish</td>
<td>LC50</td>
<td>96 h</td>
<td>Pisces (fish)</td>
<td>2,000 mg/l</td>
</tr>
<tr>
<td>Toxicity to daphnia</td>
<td>EC50</td>
<td>24 h</td>
<td>Daphnia magna</td>
<td>6,000 mg/l</td>
</tr>
<tr>
<td>Toxicity to algae</td>
<td>EC50</td>
<td>240 h</td>
<td>Algae</td>
<td>&gt; 1,700 mg/l</td>
</tr>
<tr>
<td>Toxicity to bacteria</td>
<td>EC50</td>
<td></td>
<td></td>
<td>&gt; 1,000 mg/l</td>
</tr>
</tbody>
</table>

**12.2 Persistence and degradability:**

**Physico-chemical removability**

  - Potassium citrate
  - Sodium nitrate
No data available

**Chemical Oxygen Demand (COD)**
- Potassium citrate
- Sodium nitrate
No data available

**Adsorbed organic bound halogens (AOX)**
- Potassium citrate
- Sodium nitrate
Product does not contain any organic halogens.

**Biodegradation**
- Potassium citrate
- Sodium nitrate
No data available

**Biochemical Oxygen Demand (BOD)**
- Potassium citrate
- Sodium nitrate
No data available

**12.3 Bioaccumulative potential:**

**Partition coefficient (n-octanol/water)**
No data available

**Bioconcentration factor (BCF)**
- Potassium citrate
- Sodium nitrate

<table>
<thead>
<tr>
<th>Value</th>
<th>Species</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Literature.</td>
</tr>
</tbody>
</table>

Bioaccumulation is unlikely.

**12.4 Mobility in soil:**
- Sodium nitrate
Soluble in water.

**Henry's constant**
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Value | Temperature Method
No information available.

Transport between environmental compartments

- Potassium citrate
- Sodium nitrate
No data available

12.5 Results of PBT and vPvB assessment:

- Potassium citrate
- Sodium nitrate
This product does not meet the criteria concerning PBT or vPvB substances as described in Annex XIII of the REACH regulation (1907/2006 EC)

12.6 Other adverse effects:

- Sodium nitrate
This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods
Waste disposal should be in accordance with existing federal, state and local environmental control laws. Recover nonusable free liquid and/or contaminated water, and dispose of in an approved and permitted treatment system. Discharge to sewer may require approval of permitting authority and may require pretreatment.

Empty containers.
Recondition or dispose of empty container in accordance with governmental regulations.

US. RCRA Hazardous Waste Classification (40 CFR 261)
If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

SECTION 14. TRANSPORT INFORMATION

Not regulated according to IMO/IMDG.
Not regulated according to ICAO/IATA aircraft only.
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Not regulated according to ICAO/IATA passenger and cargo aircraft.
Not Regulated according to US Department of Transportation (DOT) 49 CFR
Not regulated according to Transport of Dangerous Goods (TDG)

SECTION 15. REGULATORY INFORMATION

US. Toxic Substances Control Act (TSCA)

All of the components of this product are listed on the TSCA Inventory.

US. OSHA Classification

This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

US. SARA 311/312 Hazard Categories

Immediate Health Hazard.

US. California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

State Right-to-Know Information

The following chemicals are specifically listed by individual states. Other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>7631-99-4</td>
<td>&gt;= 1.0 - &lt;= 5.0</td>
</tr>
</tbody>
</table>

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>7631-99-4</td>
<td>&gt;= 1.0 - &lt;= 5.0</td>
</tr>
</tbody>
</table>

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>7631-99-4</td>
<td>&gt;= 1.0 - &lt;= 5.0</td>
</tr>
</tbody>
</table>

US. Rhode Island Hazardous Substances Right-to-Know Act (R.I. Gen. Laws Section 28-21-1 et. seq.)

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>7631-99-4</td>
<td>&gt;= 1.0 - &lt;= 5.0</td>
</tr>
</tbody>
</table>

L5300b LITHOSTAR ULTRA FINISHER

US. Massachusetts, New Jersey, Pennsylvania or Rhode Island Right to Know Substance Lists:
See Section 2.

Canadian WHMIS Classification
D2B : Toxic Material Causing Other Toxic Effects

Canadian Environmental Protection Act (CEPA)
All components of this product are on the Canadian DSL list.

SECTION 16. OTHER INFORMATION

Text of H-phrases referred to under headings 2 and 3:

H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.

This MSDS is replacing Agfa MSDS number 461G

This information is furnished without warranty, expressed or implied, and is believed to be accurate to the best knowledge of Agfa Corporation. The data on this SDS relates only to the specific material designated herein. Agfa Corporation assumes no legal responsibility for use or reliance upon these data. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.