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## SAFETY DATA SHEET

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### Section 1: IDENTIFICATION

**Product Name:** HCS 401 Ink Remover  
**Product Code:** B13130  
**MSDS Date:** December 15, 2014

PRI  
700 Industrial Drive  
Dupo, IL 62239

**General Information:** 618-286-5000

**Emergency Information:** 618-286-5000

### Section 2: HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW:

#### GHS Classification:

Flammable liquids (Category 3)  
Skin irritation (Category 2)  
Serious eye damage (Category 1)  
Reproductive toxicity (Category 1B)  
Specific target organ toxicity - single exposure (Category 3), Respiratory system

#### GHS Labeling



**Symbol:**

**Signal Word:** Danger

#### Hazard Statements:

Flammable liquid and vapor  
Causes skin irritation.  
Causes serious eye damage.  
May damage fertility or the unborn child  
May cause respiratory irritation

#### Precautionary Statements:

##### **Prevention:**

Avoid breathing mist/vapors/spray.  
Do not handle until all safety precautions have been read and understood.  
Ground/bond container and receiving equipment.  
Keep away from heat/sparks/open flames/hot surfaces-no smoking.  
Keep container tightly closed.  
Obtain special instructions before use.  
Take precautionary measure against static discharge.  
Use only non-sparking tools.  
Use only outdoors or in a well-ventilated area.  
Wash thoroughly after handling.

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

**Response:**

Call a poison center/doctor if you feel unwell.

If exposed or concerned: Get medical advice/attention.

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

Continue rinsing.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water shower.

If on skin: Wash with plenty of water.

If skin irritation occurs: Get medical advice/attention.

Immediately call a poison center/doctor.

In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

Take off contaminated clothing and wash it before reuse.

**Storage:**

Store in a well-ventilated place. Keep cool. Keep container tightly closed.

Store locked up.

**Disposal:**

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

**Potential Health Effects:** See Section 11 for more information.

This product does not contain carcinogens or potential carcinogens as listed by OSHA, IARC, or NTP.

This material contains components that are considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Potential Environmental Effects:** See Section 12 for more information.

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

| No. | Component<br>CAS REG. NO.                 | Amount % | OSHA      |           | ACGIH     |           |
|-----|---|----------|-----------|-----------|-----------|-----------|
|     |   |          | TWA       | STEL      | TWA       | STEL      |
| 1   | N-methyl-2-pyrrolidone<br>CAS # 872-50-4  | 1-60     | Not avail | Not avail | Not avail | Not avail |
| 2   | 1-Butoxy-2-Propanol<br>CAS # 5131-66-8    | 1-60     | Not avail | Not avail | Not avail | Not avail |
| 3   | 2-Butoxy-1-Propanol<br>CAS #15821-83-7    | 1-20     | Not avail | Not avail | Not avail | Not avail |
| 4   | 2-Amino-2-methylpropanol<br>CAS #124-68-5 | 1-20     | Not avail | Not avail | Not avail | Not avail |

### Section 4: FIRST AID MEASURES

**Emergency first aid procedures by route of exposure:**

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

**Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Skin:** Wash off with soap and plenty of water. Consult a physician.

**Eyes:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

## Section 5: FIRE FIGHTING MEASURES

**Flash Point (1-Butoxy-2-Propanol):** 59 °C (138 °F) - closed cup

**Lower Explosion Limit (N-methyl-2-pyrrolidone):** 1.3%(v)

**Upper Explosion Limit (N-methyl-2-pyrrolidone):** 9.5% (v)

### Suitable Extinguishing Media:

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

### Products of Combustion:

Upon decomposition this product may emit Carbon oxides, nitrogen oxides (NOx)

### Fire Fighting Equipment/Instructions:

Wear self contained breathing apparatus for fire fighting if necessary.

Use water spray to cool unopened containers

| HAZARD     | HMIS | NFPA |
|------------|------|------|
| Toxicity   | 2    | 2    |
| Fire       | 2    | 2    |
| Reactivity | 0    | 0    |

## Section 6: ACCIDENTAL RELEASE MEASURES

**Personal Protection:** Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Method for Containment:** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

**Methods for Clean-up:** Ventilate area of leak or spill. Use spark-proof tools to sweep or scrape up and containerize in approved chemical waste container. Wash spill area with water.

## Section 7: HANDLING AND STORAGE

### Handling:

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.

### Storage:

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

## Section 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

**Engineering Controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### Personal Protective Equipment (PPE)

**Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air

respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Eye/Face Protection:** Safety glasses. Use splash goggles and face shield when eye contact may occur.

**Hand Protection:** Use chemical resistant butyl rubber gloves.

**Body:** Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Other Protective Equipment:**

Facilities storing or utilizing this material should be equipped with eyewash and safety shower facilities.

See section 3 for exposure limits.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

|   |  |
|---|--|
| <b>Appearance, State</b>                          | Clear liquid   |
| <b>Color</b>                                      | Colorless  |
| <b>Odor</b>                                       | Not available  |
| <b>pH (1%soln/water)</b>                          | Not available  |
| <b>Vapor Density</b>                              | Not Available  |
| <b>Boiling Point (N-methyl-2-pyrrolidone)</b>     | 202 °C (396 °F)<br>81 - 82 °C (178 - 180 °F) at 13 hPa (10 mmHg) |
| <b>Vapor Pressure (N-methyl-2-pyrrolidone)</b>    | 0.39-0.43 hPa (0.29-0.32mmHg) at 20°C (68°F)                     |
| <b>Melting Point (N-methyl-2-pyrrolidone)</b>     | Melting point/range: -24 °C (-11 °F)                             |
| <b>Freezing Point</b>                             | Not Available  |
| <b>Flash Point (See Section 5)</b>                |  |
| <b>Flammability Properties (See section 5)</b>    |  |
| <b>Solubility (in water)</b>                      | Miscible in water  |
| <b>Relative density (N-methyl-2-pyrrolidone):</b> | 1.028 g/mL at 25°C (77°F)  |
| <b>Evaporation Rate</b>                           | Not Available  |
| <b>Octanol/Water partition coefficient (Kow)</b>  | Not Available  |
| <b>Auto-ignition temperature:</b>                 | Not Available  |
| <b>Decomposition temperature:</b>                 | Not Available  |
| <b>Viscosity:</b>                                 | Not Available  |

## Section 10: STABILITY AND REACTIVITY

**Stability:** This material is considered stable at ambient temperatures 70°C (21°C).

**Condition to Avoid:** Flames, sparks, electrostatic discharge, heat and other ignition sources.

**Incompatible Materials:** This product reacts with strong acid, and oxidizing agents.

**Hazardous Decomposition:** No data available

**Hazardous Reactions:** This product will not undergo polymerization.

## Section 11: TOXICOLOGICAL INFORMATION

**ACUTE EFFECTS:**

**Analysis LD50**

N-methyl-2-pyrrolidone CAS# 872-50-4

LD50 Oral - rat - 3,914 mg/kg

LDLO Inhalation - rat - 4 h - > 5100 ppm

LD50 Dermal - rabbit - 8,000 mg/kg

1-Butoxy-2-Propanol CAS# 5131-66-8  
LD50 Oral – rat – 5,009 mg/kg

2-Amino-2-methylpropanol CAS #124-68-5  
LD50 Oral - rat - 2,900 mg/kg (2-Amino-2-methylpropanol)  
Inhalation: no data available (2-Amino-2-methylpropanol)  
LD50 Dermal - rabbit - > 2,000 mg/kg (2-Amino-2-methylpropanol)

#### CHRONIC EFFECTS:

N-methyl-2-pyrrolidone CAS# 872-50-4

**Carcinogenicity:** No component identified as a carcinogen

**Neurotoxicity:** Not available

**Mutagenicity:** Not available

**Reproductive:** Not available

**Developmental:** Damage to fetus possible

**Target Organs:** Eye irritation. Inhalation - May cause respiratory irritation. prolonged or repeated exposure can cause: Vomiting, Diarrhea, Abdominal pain, Rats exposed to 1-methyl-2- pyrrolidinone at a concentration of 1 mg/L as an aerosol for 10 days showed depletion of hematopoietic cells in the bone marrow and atrophy of the lymphoid tissues of the thymus, spleen, and lymph nodes.

1-Butoxy-2-Propanol CAS# 5131-66-8

**Carcinogenicity:** No component identified as a carcinogen

**Neurotoxicity:** Not available

**Mutagenicity:** Not available

**Reproductive:** Not available

**Developmental:** Not available

**Target Organs:** Not available

2-Amino-2-methylpropanol CAS #124-68-5

**Carcinogenicity:** No component identified as a carcinogen

**Neurotoxicity:** Not available

**Mutagenicity:** Not available

**Reproductive:** Not available

**Developmental:** Not available

**Target Organs:** Result: Corrosive to eyes. Did not cause sensitization on laboratory animals.

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity:** N-methyl-2-pyrrolidone CAS# 872-50-4

LC50 - other fish - 4,000 mg/l - 96 h

LC50 - Leuciscus idus (Golden orfe) - > 500 mg/l - 96 h

EC50 - Daphnia magna (Water flea) - > 1,000 mg/l - 24 h

Toxicity to bacteria LC50 - Bacteria - > 9,000 mg/l

**Ecotoxicity:** 2-Amino-2-methylpropanol CAS #124-68-5

static test LC50 - Lepomis macrochirus (Bluegill) - 190 mg/l - 96.0 h (2-Amino-2-methylpropanol)

Daphnia magna (Water flea) - 65 mg/l - 24 h (2-Amino-2-methylpropanol) (OECD Test Guideline 202)

Growth inhibition EC50 - Scenedesmus capricornutum (fresh water algae) - ca. 520 mg/l - 72 h (2-Amino-2-methylpropanol) (OECD Test Guideline 201)

## Section 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state, and federal regulations.

## Section 14: TRANSPORTATION INFORMATION

**Proper Shipping Name:** Combustible Liquid, n.o.s. (contains N-Methyl-2-Pyrrolidone)  
**Hazard Class:** Comb. Liq.  
**Identification No.:** NA1993  
**Packing Group:** III  
**Placard:** Combustible (Bulk)

## Section 15: REGULATORY INFORMATION

**TSCA Inventory:** This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.

**SARA 302/304:** The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.

**SARA 313:** n-Methyl-2-Pyrrolidone (CAS #872-50-4)

**CERCLA:** The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are: No components were identified.

**SARA 311/312 Hazard:** The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: Fire Hazard, Acute (Immediate) Health Hazard, Chronic (Delayed) Health Hazard

**California Prop 65:** N-Methylpyrrolidone developmental hazard

## Section 16: OTHER INFORMATION

Prepared on 12/1/14

### Disclaimer:

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