1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: CU - 12 (KOPPERKLEEN)  
SDS Number: SDS-4144  
Product Use: Industrial Use - Copper Cleaner  
Revised Date: 23 FEBRUARY 2015

MANUFACTURER:

In America: The Indium Corporation of America  
1676 Lincoln Ave., Utica NY 13502  
Information: (315) 853-4900  
nswarts@indium.com

EMERGENCY PHONE: CHEMTREC 24 hrs.  
USA: 1 (800) 424-9300  
Outside USA: +1 (703) 527-3887

In Europe: Indium Corporation of Europe  
7 Newmarket Ct,  
Kingston, Milton Keynes, UK, MK 10 OAG  
Information: +44 [0] 1908 580400

In China: Indium Corporation (Suzhou), Co., Ltd.  
No. 428 Xinglong Street  
Suzhou Industrial Park  
Suchun Industrial Square  
Unit No. 14-C  
Jiangsu Province, China 215126  
Information: (86) 512-6283-4900

In Asia: Indium Corporation of America  
Asia-Pacific Operations-Singapore  
29 Kian Teck Avenue  
Singapore 628908  
Information: +65 6268-8678
2. HAZARDS IDENTIFICATION

**PRIMARY ROUTES OF ENTRY:**
- Eye
- Inhalation
- Skin
- Ingestion

**Carcinogen listed in**
- NTP
- IARC
- OSHA
- Not Listed

**GHS**

**Signal Word:** Danger

**Hazard statement(s):**
- H314 Causes severe skin burns and eye damage
- H318 Causes serious eye damage
- H332 Harmful if inhaled

**Precautionary statement(s):**
- P233 Keep container tightly closed
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray
- P270 Do not eat, drink or smoke when using this product
- P273 Avoid release to the environment
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P362 Take off contaminated clothing and wash before reuse
- P301 + P311 IF SWALLOWED: Call POISON CENTER or doctor/physician
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water
- P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
- P305 + P351 IF IN EYES: Rinse continuously with water for several minutes (15 mins)

**GHS Classification**
- Acute toxicity, Oral (Category 4)
- Skin corrosion (Category 1B)
- Serious eye damage (Category 1)

**POTENTIAL HEALTH EFFECTS:**

**Eye Contact:** Vapors may be irritating, liquid may damage eye tissue.

**Ingestion:** May cause irritation. May be harmful and cause burns.

**Inhalation:** Harmful if inhaled. May cause irritation.

**Skin Contact:** May cause irritation or burns to the skin. May be harmful if absorbed through the skin.

**Chronic:** Not established.

**NOTE:** The Indium Corporation does not recommend, manufacture, market or endorse any of its products for human consumption.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>% wt</th>
<th>CAS Registry #</th>
<th>PEL ( \text{mg/m}^3 )</th>
<th>TLV-TWA ( \text{mg/m}^3 )</th>
<th>TLV-STEL ( \text{mg/m}^3 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLYCOLLIC ACID</td>
<td>50-55</td>
<td>79-14-1</td>
<td>N.E</td>
<td>N.E</td>
<td>N.E</td>
</tr>
<tr>
<td>WATER</td>
<td>30-35</td>
<td></td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>GLYCOL ADDITIVE</td>
<td>15-20</td>
<td>107-21-1</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

Risk Phrases: R36/37/38
N.E. = Not established

PRODUCT DOES NOT CONTAIN ANY EU REACH REPORTABLE SUBSTANCES OF VERY HIGH CONCERN

4. FIRST AID MEASURES

**Eye Contact:** Hold eyelids apart and flush eyes with plenty of tepid water for at least 15 minutes. Seek immediate medical attention.

**Ingestion:** If patient is conscious, ONLY induce vomiting as directed by trained personnel. NEVER give anything by mouth to an unconscious person. Seek medical attention immediately.

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration or oxygen by trained personnel. Seek immediate medical attention.

**Skin Contact:** Remove contaminated clothing. Wash affected area with soap and water. Wash clothing before reuse. If irritation persists, obtain medical attention.

5. FIRE FIGHTING MEASURES

**Flash Point:** N/A  **Method:** N/A

**Auto-ignition Temperature:** Not available

**Flammable Limits:** Not applicable

**Extinguishing Media:** Water, CO2, Dry chemical. Use extinguishers appropriate for the surrounding fire conditions.

**Special Fire Fighting Procedures:** Standard fire fighting equipment and proper practices.

6. ACCIDENTAL RELEASE MEASURES

**Spill or Leak Procedures:** Do not allow material to enter sewer system or waterway. Wear personal protective equipment, such as gloves and depending on the quantity a respirator with organic cartridges may be required. Clean up by absorption. Eliminate sources of ignition. Keep unnecessary personnel away. Put clean-up materials in a properly labeled metal drum. Dispose of following all Federal, State and Local regulations. In the EU refer to the Special Waste Regulations.
7. HANDLING AND STORAGE
   Handling: Keep containers tightly closed when not in use. Use care to avoid spills. Wear personal protective equipment.
   Storage Precautions: Store product in tightly capped original containers in a cool, dry area away from sources of ignition. Refer to product label for specific storage temperature requirements. Rotate stock to ensure use before expiration date on the label.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION
   Engineering Controls: Face velocity >2.1 cubic feet/minute in confined areas. Exhaust ventilation is recommended to keep exposure limits as low as possible. Avoid inhalation of fumes.
   Personal protection:
   Eyes: Chemical safety glasses/goggles. Face shield for splash hazards.
   Respirator: An approved or compliant marked air-purifying respirator with a fume/organic chemical cartridge is recommended where airborne concentrations are expected to be elevated.
   Skin: Compatible chemical resistant gloves should be worn when handling. Avoid skin contact.
   Other: Lab coat, eyewash fountain in work area. Avoid the use of contact lenses in high fume areas.
   Work/Hygienic Practices: Good personal hygiene is essential. Avoid eating, smoking or drinking in the work area. Wash hands thoroughly with soap and water immediately upon leaving the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES
   Appearance: Amber
   Boiling Point: 212°F
   Odor: Mild
   Melting Point: Not applicable
   Specific Gravity: 1.150
   pH: 1.9 (Corrosive)
   Vapor Pressure: Same as water
   Solubility in Water: Soluble
   Vapor Density: Same as water

10. STABILITY AND REACTIVITY
    General: Stable.
    Conditions to Avoid: Direct heat, open flames and storage in aluminum.
    Incompatible Materials: Strong alkali
    Hazardous Decomposition / Combustion: Carbon dioxide/carbon monoxide.
    Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION
    Carcinogenicity: NTP: No
12. ECOLOGICAL INFORMATION

Product not tested.

May be harmful to aquatic organisms.

13. DISPOSAL CONSIDERATION

Waste Disposal Method: Dispose of in accordance with all Federal, State and Local environmental regulations. In Europe follow the Special Waste Regulations.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

UN3265, Corrosive Liquid, Acidic, Organic, N.O.S., 8, PGIII (glycolic acid solution)


15. REGULATORY INFORMATION

The information in this Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated hereunder (29 CFR 1910.1200 ET. SEQ.).

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR).

Canadian WHMIS:

Class E Corrosive Material  D2B Materials Causing Other Toxic Effects - irritant

This product has been classified in accordance with the guidelines set by the Dept of Industrial Health of the Republic of Singapore.
This product has been classified in accordance with Mexican regulations NOM-0180-STPS-2000 and NOM-010-STPS-1999.

This product has been classified using the Chinese Occupational Exposure Limit for Hazardous Agents in the Workplace, GBZ2-2002.

SARA 313 Listing - 40 CFR 372.65: None

All ingredients are listed on the EPA TSCA Inventory.

EC Classification, Packaging and Labeling Requirements:

Symbol and Hazard Classification of Product

Risk Phrases:
R36/37/38 Irritating to eyes, respiratory system and skin

Safety Phrases:
S20/21 When using do not eat, drink or smoke
S24/25 Avoid contact with skin and eyes
S28 After contact with skin wash immediately with plenty of soap and water
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection
S7 Keep container tightly closed

16. OTHER INFORMATION

HMIS Hazard Rating:
Health: 2
Fire: 1
Physical Hazard: 0

Revised Date: 23 FEBRUARY 2015
Prepared by: Nancy Swarts, Indium Corporation of America

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