1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

Product name
KOCHKLEEN® L-11

Product Use Description
Membrane Cleaner

MANUFACTURER/IMPORTER/SUPPLIER/DISTRIBUTOR INFORMATION
Company Name
John R Hess & Company, Inc.
Address
400 Station St
Cranston, RI 02910
USA

Telephone
(401) 785-9300 (800) 556-4377
E-mail
custerv@jrhess.com
Emergency Phone Numbers
Chemtrec 1-800-424-9300 (Spill, Leak, Fire, Exposure, Accident)
+1 (703) 527-3887 (outside USA)

2 HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Serious Eye Damage
Category 1

Skin Corrosion
Category 1B

Classification of the substance or mixture:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR §1910.1200).

Globally Harmonized System (GHS) Classification and Labeling

Signal Word
Danger

HAZARD STATEMENTS
H314 – Causes severe skin burns and eye damage.

PRECAUTIONARY STATEMENTS
P260 – Do not breathe dust or mist.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P270 – Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331 – IF SWALLOWED: rinse mouth. Do not induce vomiting.
P310 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
P303 + P361 + P353 – IF ON SKIN (or hair): Remove / take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.
P363 – Wash contaminated clothing before reuse.
P405 – Store locked up.

OTHER HAZARDS

HEALTH HAZARDS
Causes burns of the mouth and throat.
Aspiration hazard if swallowed - can enter lungs and cause damage
**See "toxicological information" (section 11) for more information

FLAMMABILITY HAZARDS NON-COMBUSTIBLE

REACTIVITY HAZARDS STABLE

POTENTIAL HEALTH EFFECTS, SKIN
The following evaluation is based on a component(s) of this material.
CORROSIVE. Prolonged or repeated exposure may cause skin irritation, even a burn. Contact may cause reddening, itching and inflammation. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

POTENTIAL HEALTH EFFECTS, EYE
The following evaluation is based on a component(s) of this material.
CORROSIVE. May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Mists may cause eye irritation. Direct contact may cause pain, tears, burns, sensitivity to light, swelling and possible corneal damage.

POTENTIAL HEALTH EFFECTS, INHALATION
The following evaluation is based on a component(s) of this material.
Under normal conditions, inhalation is not expected to be a problem. However, respiratory tract irritation may occur if exposed to fumes or mists. Symptoms may include sore throat, coughing, labored breathing, sneezing and burning sensation, depending on the concentration and duration of exposure.

POTENTIAL HEALTH EFFECTS, INGESTION
CORROSIVE. Not a normal route of exposure. May cause severe irritation with intense burning of the mouth and throat followed by abdominal pain and distress, nausea, vomiting, and diarrhea.

Aspiration into lungs may cause chemical pneumonia and lung damage. Overexposure to this material may cause systemic damage including target organ effects listed under "Toxicological Information" (Section 11).

Other specific symptoms of exposure are listed under "Toxicological Information" (Section 11).
3 COMPOSITION I INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS Number</th>
<th>Concentration*</th>
<th>Exposure Limits/Health Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrasodium Ethylenediamine Tetraacetate</td>
<td>64-02-8</td>
<td>10%</td>
<td>ND</td>
</tr>
</tbody>
</table>

*Values do not reflect absolute minimums and maximums; these values are typical which may vary from time to time.

WHMIS Classification: D2B, E.

Local authorities should be consulted for exposure limits in effect in your region.

4 FIRST AID MEASURES

SKIN
Immediately flush skin with plenty of water, for at least 15 minutes, while removing contaminated clothing and shoes. GET IMMEDIATE MEDICAL ATTENTION.

Place contaminated clothing in closed container for storage until laundered or discarded. If clothing is to be laundered, inform person performing operation of contaminant's hazardous properties. Discard contaminated leather goods.

EYE
Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. GET IMMEDIATE MEDICAL ATTENTION.

INHALATION
Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear and give oxygen.

Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

INGESTION
Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

Never give anything by mouth to an unconscious person. Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis.

Have victim rinse mouth thoroughly with water, then drink 2 to 8 oz. (60 to 240 ml) of water.

If vomiting occurs naturally, have the victim lean forward to reduce risk of aspiration. Repeat administration of water. Quickly transport to emergency care facility.

5 FIRE FIGHTING MEASURES

HAZARDOUS COMBUSTION PRODUCTS
Combustion may produce Cox, Nox, Sox

EXTINGUISHING MEDIA
Use water spray, dry chemical, alcohol foam, all-purpose AFFF or carbon dioxide to extinguish fire.

BASIC FIRE FIGHTING PROCEDURES
Evacuate area and fight fire from a safe distance.
If leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapor and to protect personnel attempting to stop a leak.

Use water spray to cool adjacent structures and to protect personnel. Shut off source of flow if possible. Stay away from storage tank ends. Withdraw immediately in case of rising sound from venting safety device or any discoloration of storage tank due to fire.

Firefighters must wear MSHA/NIOSH approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

**UNUSUAL FIRE & EXPLOSION HAZARDS**
Reacts with most metals to produce hydrogen gas which can form an explosive mixture with air. Flash Point WILL NOT FLASH
Autoignition Temperature ND
Flammability Limits in Air, Lower, % by Volume ND
Flammability Limits in Air, Upper, % by Volume ND

### 6 ACCIDENTAL RELEASE MEASURES

**EMERGENCY ACTION**
Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind. (See Exposure Controls Personal Protection in Section 8.)

**ENVIRONMENTAL PRECAUTIONS**
If product is released to the environment, take immediate steps to stop and contain release. Caution should be exercised regarding personnel safety and exposure to the released product.

Notify local, provincial and/or federal authorities, if required.

**SPILL OR LEAK PROCEDURE**
Absorb spill with inert material (e.g. dry sand or earth) then place in a chemical waste container. Large Spills: Dike far ahead of liquid spill for later disposal. Stop leak when safe to do so.

Spilled material may be slippery.

See Exposure Controls Personal Protection (Section 8).

### 7 HANDLING & STORAGE

**HANDLING**
Avoid overheating or freezing.
Spilled material may be slippery.
Do not eat, drink or smoke in areas of use or storage.

**STORAGE**
Store in tightly closed containers in a cool, dry, isolated, well-ventilated area away from heat, sources of ignition and incompatibles. Avoid contact with strong oxidizers.

Store at room temperature (41°F to 100°F). Product will be cloudy at or below 65°F.

Avoid contact with carbon steel, zinc, nickel, copper, copper alloy and aluminum. Contact with aluminum may produce flammable hydrogen gas.

Empty containers may contain product residue. Do not reuse without adequate precautions.
8 EXPOSURE CONTROLS | PERSONAL PROTECTION

ENGINEERING CONTROLS
General or local exhaust ventilation and other forms of engineering controls are the preferred means for controlling exposures.

EYE PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)
Wear chemical safety goggles and face shield. Have eye washing facilities readily available where eye contact can occur.

SKIN PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)
Avoid skin contact with this material. If skin contact is anticipated, protective clothing, including impervious gloves, should be worn.

Provide safety showers at any location where skin contact can occur. Use good personal hygiene.

RESPIRATORY PROTECTION: PERSONAL PROTECTION EQUIPMENT (PPE)
A NIOSH/MSHA approved air purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

9 PHYSICAL & CHEMICAL PROPERTIES

ODOR AND APPEARANCE
CLEAR TO SLIGHTLY YELLOW LIQUID WITH SLIGHT ODOR. Product will be cloudy at or below 65° F.

Boiling Point 212 ° F (100° C)
Specific Gravity 1.04
Melting Point 32 ° F (0° C)
Percent Volatile >90
Vapor Pressure ND
Vapor Density ND
Bulk Density 8.5 - 9 LBS/GAL
Solubility in water ND
Octanol Water Partition ND
Volatile Organic ND
Pour Point 12.9
pH Value ND
Freezing Point ND
Viscosity ND
Evaporation Rate ND
Molecular Formula NA
Molecular Weight ND
Chemical Family Cleaning Solution
Odor Threshold ND

10 STABILITY & REACTIVITY

STABILITY/INCOMPATIBILITY
Incompatible with strong oxidizing agents.
Avoid contact with aluminum. Flammable hydrogen gas may be formed in the presence of aluminum. See precautions under Handling & Storage (Section 7).

HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS
Combustion may produce COx, NOx, SOx, reactive hydrocarbons, hydrogen sulfide and ammonia.

11 TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE
Inhalation, ingestion, skin and eye contact.

LD50
LD50 (skin-rabbit) > 5,000 mgIkg [For EDTA tetrasodium salt] LD50 (oral-rats) = 3,030 mgIkg [For EDTA tetrasodium salt]

TERATOGENICITY, MUTAGENICITY, OTHER REPRODUCTIVE EFFECTS
EDTA and its sodium salts have been reported to cause birth defects in laboratory animals only at exaggerated doses that were toxic to the mother. These effects are likely associated with zinc deficiency due to chelation. Exposures having no effect on the mother should have no effect on the fetus.

PRE-EXISTING CONDITIONS AGGRAVATED BY EXPOSURE
Pre-existing medical conditions which may be aggravated by exposure include disorders of the eye, skin and respiratory system.

12 ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
Not determined on product as a whole. Studies using EDTA sodium salts did not show toxicity below 100 mgIkg.

13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL
This product as supplied, when discarded or disposed of, is a hazardous waste according to Federal regulations (40 CFR 261) due to its corrosivity. Under the Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the product to determine, at the time of disposal, whether the material is a hazardous waste subject to RCRA.

The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Disposal can occur only in properly permitted facilities. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Disposal of this material must be conducted in compliance with all federal, state and local regulations.

In Canada, wastes should be disposed of according to federal, state, provincial and local regulations.

14 TRANSPORT INFORMATION

BILL OF LADING - BULK (U. S. DOT)
Corrosive Liquid, Basic, Organic, N.O.S. (tetrasodium ethylenediaminetetraacetate ), 8, UN3267, PG III

BILL OF LADING - NON-BULK (U. S. DOT)
Corrosive Liquid, Basic, Organic, N.O.S. (tetrasodium ethylenediaminetetraacetate), 8, UN 3267, PG III
15 REGULATORY INFORMATION

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

This product, as supplied, contains no hazardous substances regulated under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302), or any extremely hazardous substances regulated under the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355), and thus a release of this product as supplied has no reporting requirements under these regulations.

Failure to report may result in substantial civil and criminal penalties. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations.

This product does not contain toxic chemicals (in excess of the applicable de minimis concentration) that are subject to the annual toxic chemical release reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313 (40 CFR 372).

There may be specific regulations at the local, regional or state/provincial level that pertain to this product.

SARA TITLE III RATINGS
Immediate Hazard: X Delayed Hazard: X Fire Hazard: 
- Pressure Hazard: - Reactivity Hazard:

STATE REGULATIONS
Based on available information this product does not contain any components or chemicals currently known to the State of California to cause cancer, birth defects or reproductive harm at levels which would be subject to Proposition 65. Reformulation, use or processing of this product may affect its composition and require re-evaluation.

PENNSYLVANIA - Non-hazardous ingredients present at >3%: Water, CAS # 7732-18-5.

INTERNATIONAL REGULATIONS
CANADA
All known major components of this product are listed on the Canadian DSL.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.

WHMIS Classification: D2B, E.

WHMIS RATINGS
Compressed Gas Flammable/Combustible Oxidizer Acutely Toxic
Other Toxic Effects X Bio Hazardous Corrosive X Dangerously Reactive

HAZARDOUS MATERIAL INFORMATION SYSTEM (U.S.A.)

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be
purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

NATIONAL FIRE PROTECTION ASSOCIATION (U.S.A.)

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interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals.
The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA
325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the
704 systems to classify chemicals does so at their own risk.

16 OTHER INFORMATION

Prepared By:       HSE Department
Issue Date:   06/9/2017
Version:     2
Precedes:  09/25/2015

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