

**SAFETY DATA SHEET****TR 364 L-M****1. PRODUCT AND COMPANY IDENTIFICATION**

GHS PRODUCT IDENTIFIER: TR 364 L-M

OTHER MEANS OF IDENTIFICATION:

Product Type Cleaning liquid mixture

Product Code M-364

RECOMMENDED USE OF THE CHEMICAL AND RESTRICTIONS ON USE:

Product Use Industrial cleaning. Professional use only.

Uses Advised Against none identified

SUPPLIER'S DETAILS:

SDS SUPPLIED BY:

Oliver Chemical Company, Inc.

2908 Spring Grove Avenue

Cincinnati, OH 45225

1-888-541-6526 (Monday – Friday 8:30 am – 4:30 pm)

MANUFACTURED BY:

Oliver Chemical Company, Inc.

2908 Spring Grove Avenue

Cincinnati, OH 45225

1-888-541-6526 (Monday – Friday 8:30 am – 4:30 pm)

DISTRIBUTED BY:

A & B Deburring

625 Carr Street

Cincinnati, Ohio 45203

1-800-552-7111

24 Hour Emergency Contact:

CHEMTREC 1-800-424-9300

**2. HAZARD IDENTIFICATION**GHS CLASSIFICATION OF THE SUBSTANCE/MIXTURE:

CODE	HAZARD STATEMENT	HAZARD CLASS	CATEGORY
	<b>PHYSICAL</b>		
H290	May be corrosive to metals	Corrosive to metals	1
	<b>HEALTH</b>		
H314	Causes severe skin burns and eye damage	SKIN - CORROSION/IRRITATION	1B
H318	Causes serious eye damage	EYE - SERIOUS EYE DAMAGE/EYE IRRITATION	1
H302	Harmful if swallowed	ORAL - ACUTE TOXICITY	4
H370	Causes damage to: Gastrointestinal System, Respiratory System.	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)	1
	<b>ENVIROMENTAL</b>		
H402	Harmful to aquatic life	AQUATIC ENVIROMENT-ACUTE HAZARD	3

LABEL ELEMENTS:

SIGNAL WORD:

**DANGER**HAZARD STATEMENTS:**PHYSICAL**

H290 May be corrosive to metals.

**HEALTH**

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H302 Harmful if swallowed

H370 Causes damage to organs (Gastrointestinal System and Respiratory System).

**PRECAUTIONARY STATEMENTS:****PREVENTION**

- P234 Keep only in original container.
- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

**RESPONSE**

- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P303+P361+P353 IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.
- P363 Wash contaminated clothing before reuse.
- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P308+P311 If exposed or concerned: call a POISON CENTER or a doctor/physician.
- P321 Specific treatment (see First Aid information on product label and/or Section 4 of the SDS).
- P390 Absorb spillage to prevent material-damage.

**STORAGE**

- P406 Store in corrosive resistant/and NON-ALUMINUM/container with a resistant inner liner (NOTE: flammable hydrogen gas may be generated if aluminum container and/or aluminum fittings are used).
- P405 Store locked up.

**DISPOSAL**

- P501 Dispose of contents and container in accordance with applicable local, regional, and/or international regulations.

**HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)**

None identified.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****MIXTURE**

<u>HAZARDOUS COMPONENT</u>	<u>%</u>	<u>CAS NUMBER</u>
Potassium hydroxide	<6	1310-58-3

#### 4. FIRST-AID MEASURES

##### DESCRIPTION OF NECESSARY FIRST AID MEASURES:

**INHALATION:** If inhalation of mists, vapors, or spray occurs and adverse effects result, remove to uncontaminated area. Evaluate ABC's (is Airway constricted, is Breathing occurring, and is blood Circulating) and treat symptomatically. GET MEDICAL ATTENTION IMMEDIATELY.

**SKIN CONTACT:** Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry and shoes. Wash contaminated areas with large amounts of water. GET MEDICAL ATTENTION IMMEDIATELY. Thoroughly clean and dry contaminated clothing before reuse. Discard contaminated leather goods.

**EYE CONTACT:** Immediately flush contaminated eyes with a direct stream of water for as long as possible. Remove contact lenses, if present, then continue rinsing. GET MEDICAL ATTENTION IMMEDIATELY.

**INGESTION:** If swallowed, do not induce vomiting. For definite or probable ingestion, do not administer oral fluids. If vomiting occurs spontaneously, keep airway clear. Monitor airway. Volume resuscitation (IV fluids) and circulatory support (CPR) may be required. Never give anything by mouth to an unconscious or convulsive person. GET MEDICAL ATTENTION IMMEDIATELY.

##### MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED:

**CORROSIVE** this material may be corrosive to any tissue it comes in contact with. It can cause serious burns and extensive tissue destruction resulting in: liquefaction, necrosis, and/or perforation.

##### **ACUTE SYMPTOMS/EFFECTS:**

**INHALATION (Breathing):** Respiratory System Effects: Exposure to airborne material may cause irritation, redness of upper and lower airways, coughing, laryngeal spasm and edema, shortness of breath, bronchi-constriction, and possible pulmonary edema. Severe and permanent scarring may occur. Aspiration of this material may cause the same conditions.

**SKIN:** Skin Corrosion. Exposure to skin may cause redness, itching, irritation, swelling, burns (first, second, or third degree), liquefaction of skin, and damage to underlying tissues (deep and painful wounds).

**EYE:** Serious Eye Damage. Eye exposures may cause eye lid burns, conjunctivitis, corneal edema, corneal burn, corneal perforation, damage to internal contents of the eye, permanent visual defects, and blindness and/or loss of eye.

**INGESTION (Swallowing):** Gastrointestinal System Effects. Exposure by ingestion may cause irritation, swelling, and perforation of upper and lower gastrointestinal tissues. Permanent scarring may occur.

##### **DELAYED SYMPTOMS/EFFECTS:**

Repeated or prolonged exposures to skin that cause irritation may cause a chronic dermatitis.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY:

**Medical Conditions Aggravated by Exposure:** Corrosive. May aggravate pre-existing eye, skin, and respiratory conditions (including asthma and other breathing disorders).

**Protection of First-Aiders:** Refer to Section 8 for specific personal protective equipment recommendations.

**Notes to Physician:** Medical observation and assessment is recommended for all ingestions, all eye exposures, and symptomatic inhalation and dermal exposures. For symptomatic ingestion, do not administer oral fluids and consider investigation by endoscopy, X-ray, or CT scan. Esophageal perforation, airway compromise, hypotension, and shock are possible. For prolonged exposures and significant exposures, consider delayed injury to exposed tissues. There is no antidote. Treatment is supportive care. Follow normal parameters for airways, breathing, and circulation. Surgical intervention may be required.

## 5. FIRE-FIGHTING MEASURES

SUITABLE (AND UNSUITABLE) EXTINGUISHING MEDIA:

Use extinguishing agents appropriate for surrounding fire.

SPECIFIC HAZARDS:

Flash Point: N/A

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. May react with chemically reactive metals such as aluminum, zinc, magnesium, copper, etc. to release hydrogen gas which can form explosive mixtures in air.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS:

Move container from fire area if it can be done without risk. Cool containers with water. Do not apply water directly on this product. Heat is generated when mixed with water. Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Avoid contact with skin.

## 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PERCAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

Avoid contact with skin, eyes and clothing. Wear appropriate personal protective equipment recommended in section 8, Exposure Controls / Personal Protection, of the SDS.

ENVIROMENTAL PRECAUTIONS:

Keep out of water supplies and sewers. This material is alkaline and may raise the pH of surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:**

In case of spill or leak, stop the leak as soon as possible. Small and large spills: Contain spilled material if possible. Completely contain spilled materials with dikes, sandbags, etc. After containment, collect the spilled material and transfer to a chemical waste area. Liquid material may be removed with a vacuum truck. Neutralize residue with dilute acid and follow with a liberal covering of sodium bicarbonate or other acceptable drying agent. See Section 13, Disposal Considerations, of the SDS for additional information.

**7. HANDLING AND STORAGE****PERCAUTIONS FOR SAFE HANDLING:**

Avoid breathing vapor or mist. Do not get into eyes, on skin or on clothing. Wash thoroughly after handling. When mixing, slowly add to water to minimize heat generation and spattering.

**CONDITIONS FOR SAFE STORAGE INCLUDING ANY INCOMPATIBILITIES:**

Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Do not store in aluminum container or use aluminum substances.

**Incompatibilities / Materials to avoid** Flammable liquids, acids, halogenated compounds, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****CONTROL PARAMETERS:****Occupational Exposure Limits:**

## Regulatory Exposure Limit(s):

CHEMICAL NAME	CAS NUMBER	OSHA Final PEL TWA
Potassium hydroxide	1310-58-3	2 mg/m <sup>3</sup>

## Non-Regulatory Exposure Limit(s):

CHEMICAL NAME	CAS NUMBER	ACGHIA
Potassium hydroxide	1310-58-3	2 mg/m <sup>3</sup>

The Non-Regulatory OSHA limits, if shown are the Vacated 1989 PEL's (vacated by 58 FR 35338, June 30, 1993).

**OSHA:** Occupational Safety and Health Administration.

**ACGIH:** The American Conference of Governmental Industrial Hygienists.

**PEL:** Permissible Exposure Limit; **TWA:** Time Weighted Average; **STEL:** Short Term Exposure Limit;

**TLV:** Threshold Limit Values;

**ENGINEERING CONTROLS:**

Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT:**

**Eye Protection:** Wear chemical safety goggles with a face-shield to protect against eye and skin contact when appropriate. Provide an emergency eye wash fountain and a quick drench shower in the immediate work area.

**Skin and Body Protection:** Wear protective clothing to minimize skin contact. Wear chemical resistant clothing and rubber boots when potential for contact with materials exist. Always place pants legs over boots. Contaminated clothing should be removed, then discarded or laundered. Discard contaminated leather goods.

**Hand Protection:** Wear appropriate chemical resistant gloves. Consult a glove supplier for assistance in selecting an appropriate chemical resistant glove.

**Respiratory Protection:** A NIOSH approved respirator with N95 dust/mist cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. If eye irritation occurs, a full face style mask should be used. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

**Protective material types:** Butyl rubber, Natural rubber, Nitrile, Polyvinyl chloride (PVC), Tyvek®

**9. PHYSICAL AND CHEMICAL PROPERTIES****APPEARANCE:**

LIQUID/BLUE-GREEN

**ODOUR:**

SLIGHT

**ODOUR THRESHOLD:**

NO DATA AVAILABLE

**pH:**

13

**MELTING POINT:**

NO DATA AVAILABLE

**FREEZING POINT:**

-85 TO 39°F (-65 TO 4°C)

**INITIAL BOILING POINT/RANGE:**

216 TO 289°F (102 TO 143°C)

**FLASH POINT:**

NOT FLAMMABLE

**EVAPORATION RATE:**

NO DATA AVAILABLE

**FLAMMABILITY (SOLID, GAS):**

NOT FLAMMABLE

**UPPER FLAMMABILITY OR EXPLOSIVE LIMITS:**

NOT APPLICABLE

**LOWWER FLAMMABILITY OR EXPOSIVE LIMITS:**

NOT APPLICABLE

**VAPOUR PRESSURE:**

20 mmHg @ 77°F (25°C) 20% SOLUTION

**VAPOUR DENSITY:**

NO DATA AVAILABLE

**RELATIVE DENSITY:**1.09 (H<sub>2</sub>O = 1)**SOLUBILITY (water):**

100%

**PARTITION COEFFICIENT (n-octanol/water):**

NOT APPLICABLE

**AUTO-IGNITION TEMPERATURE:**

NOT APPLICABLE

**DECOMPOSITION TEMPERATURE:**

NO DATA AVAILABLE

**VISCOSITY:**

NO DATA AVAILABLE

**10. STABILITY AND REACTIVITY****REACTIVITY:**

Soluble in water, releasing heat sufficient to ignite combustibles. Reacts with metals, and form hydrogen gas.

**CHEMICAL STABILITY:**

Stable at normal temperatures and pressures.

**POSSIBILITY OF HAZARDOUS REACTIONS:**

Mixing with acid or incompatible materials may cause splattering and release of large amounts of heat. Will react with some metals forming flammable hydrogen gas. Carbon monoxide gas may form upon contact with reducing sugars, food and beverage products in enclosed spaces.

**CONDITIONS TO AVOID:**

None known.

**INCOMPATIBLE MATERIALS:**

Acids and halogenated compounds. Prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

None known

**11. TOXICOLOGICAL INFORMATION****LIKELY ROUTES OF EXPOSURE:**

EYE CONTACT - Causes serious eye irritation, corrosive.

SKIN CONTACT – Severe irritation, corrosive.

**DELAYED AND IMMEDIATE EFFECTS; SHORT AND LONG TERM:**

This material may cause severe burns and permanent damage to any tissue with which it comes into contact. It causes serious burns and extensive tissue destruction resulting in liquefaction, necrosis and or perforation. Signs and symptoms of exposure vary, and are dependent on route of exposure, degree and duration of exposure.

**COMPONENT INFORMATION:**

Chemical Name	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation	Species
Potassium hydroxide	1310-58-3	365 mg/kg	1350 mg/kg		Rat



**12. ECOLOGICAL INFORMATION****ECOTOXICITY:**

Acute Toxicity	Parameter	Value	Duration	Species	Test Design
Fresh water fish	LC50	80 mg/l	96 hr	Mosquito Fish	static bioassay
Fresh water fish	LC50	179 mg/l	96 hr	Fathead Minnow	static bioassay
Invertebrate	EC50	60 mg/l	48 hr	Daphnia magna	static bioassay
Algae	EC50	61 mg/l	96 hr	Selenastrum capicornutum	static bioassay

**PERSISTENCE AND DEGRADABILITY:**

**Persistence:** This Material is alkaline and may raise the pH of surface waters with low buffering capacity. This material is believed to exist in the disassociated state in the environment.

**Degradability:** This material will disassociate into ionic form in the aquatic environment. Natural carbon dioxide will slowly neutralize this material.

**BIOACCUMULATIVE POTENTIAL:**

This material will not bio accumulate. This material is not expected to bio concentrate in organisms.

**MOBILITY IN SOIL:**

No data available.

**OTHER ADVERSE EFFECTS:**

This material has exhibited moderate toxicity to aquatic organisms. This material has exhibited slight toxicity to terrestrial organism.

**13. DISPOSAL CONSIDERATIONS**

Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Disposal should be in accordance with regional, national and local laws and regulations.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION****DOT PROPER SHIPPING NAME:**

NA 1760 Compounds, cleaning liquid. (Potassium hydroxide)

**UN NUMBER:**

UN 1814

**CLASS:**

8

**PACKING GROUP:**

II

**PLACARD:**

RQ 1000 lbs.

**15. REGULATORY INFORMATION****US FEDERAL REGULATIONS:****SARA 313**

This product contains no known chemicals regulated under SARA 313.

**OSHA REGULATORY STATUS:** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**16. OTHER INFORMATION****HMS RATINGS:**

HEALTH	2
FLAMMABILITY	0
PHYSICAL	0

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**Disclaimer:**

This Safety Data Sheet was prepared in accordance with 29 CFR 1910.1200. Information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication, it is the user's responsibility to determine the safety, toxicity and suitability for their own use of the product described herein. Since actual use by others is beyond our control, no guarantee expressed or implied is made by Oliver Chemical Company, Inc. as to the effects of such use, the results to be obtained or the safety and toxicity of the product nor does Oliver Chemical Company, Inc. assume any liability arising out of use by others of the product referred herein nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.