MATERIAL SAFETY DATA SHEET

1. Product And Company Identification

Product Name: Combitherm Liquid Oven Cleaner
Product Number: N285

Chemical Formula: Mixture of potassium hydroxide and additives in water.
Chemical Type: Mixture
Product Use: **Oven Cleaner**

Supplier: Alto-Shaam
Address: W164 N9221 Water Street
Menomonee Falls, WI 53051
Telephone Number: 800-558-8744

2. Composition, Information on Ingredients

Component	CAS No.	Amount
Potassium Hydroxide	1310-58-3	5-10%

(See Section 8 for Exposure Limits)

3. Hazards Identification

Emergency Overview: DANGER – CORROSIVE
CAUSES EYE BURNS. CAUSES SKIN BURNS. MAY BE HARMFUL OR FATAL IF SWALLOWED.

Potential Short Term Health Effects:

Eye: Causes chemical burns. May cause blindness.
Skin: Causes chemical burns.
Ingestion: Harmful or fatal if swallowed. May cause chemical burns to mouth, throat and stomach.
Inhalation: Harmful if inhaled. May cause respiratory tract irritation or chemical burns.

Chronic Effects: Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.

Most likely Routes of Entry: Eye, Skin contact, Inhalation, Ingestion

Signs and Symptoms: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
The product causes burns of eyes, skin and mucous membranes.

4. First Aid Measures

Inhalation: If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately.

Skin Contact: Immediately flush with cool water for 20 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical attention if irritation persists.

Eye Contact: Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 20 minutes. Obtain medical attention immediately.

Ingestion: Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

Note to Physician: Symptoms may be delayed.

General Advice: Avoid contact with eyes and skin. Wear impervious gloves and chemical splash goggles. Immediate medical attention is required. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Firefighting Measures

Flammable Properties: Not flammable by WHMIS/OSHA criteria.
Not flammable, but reacts with most metals to form flammable hydrogen gas.

Extinguishing Media: Treat for surrounding material.

Special Fire Fighting Procedures: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire.

Unusual Fire and Explosion Hazards: Contact with reactive metals may result in the generation of flammable gas.

Hazardous Combustion Products: May include, but not limited to: carbon monoxide with carbohydrates; hydrogen with aluminum, tin and zinc.

6: Accidental Release Measures

Personal precautions: Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Environmental precautions: Prevent entry into waterways, sewers, basements or confined areas. Do not discharge into lakes, streams, ponds or public waters.

Methods for containment: Stop leak if you can do so without risk.

Methods for cleaning up: Should not be released into the environment. Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use. Large Spills: Wet down with water and dike for later disposal. After removal flush contaminated area thoroughly with water.

7. Handling and Storage

Handling: Do not get in eyes, on skin or on clothing. Use good industrial hygiene practices in handling this material. Keep container tightly closed. Use only with adequate ventilation. Prevent material from contacting strong acids. Wash thoroughly after handling. Avoid breathing vapors or mists of this product.

Storage: Keep out of the reach of children. Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

CHEMICAL	EXPOSURE LIMIT
Potassium Hydroxide	**ACGIH-TWA**: 2 mg /m^3 ceiling.
Water and Non-hazardous Ingredients	None Established

Engineering Controls: Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.

Respiratory Protection: NIOSH/MSHA approved respirators may be necessary if airborne concentrations are expected to exceed exposure limits.

Gloves: Wear impervious protective gloves.

Eye Protection: Use chemical splash goggles

Other Protective Equipment/Clothing: Wear protective gear as needed - apron, suit, boots. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Hygienic Practices: Do not eat, drink, or smoke in areas where this material is used. Avoid breathing vapors. Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and wash before reuse.

9. Physical and Chemical Properties

Appearance: Clear Carmel Liquid	Boiling Point: est. 210°F
Odor: None	Melting Point: N/A
pH: > 13.0	Spec. Gravity (H_20 = 1.00): 1.065
Water Solubility: Complete	Vapor Pressure (mm Hg): N/A
Viscosity @ 25°C: Water Thin	VOC Content: <1.0%

10. Stability and Reactivity

Stability: Stable under recommended storage conditions.
Conditions to Avoid: Do not mix with other chemicals.
Incompatibility: Strong acids, materials not resistant to alkalies, active metals (zinc, aluminum, magnesium, etc.)
Hazardous Decomposition Products: May include, but not limited to: carbon monoxide with carbohydrates; hydrogen with aluminum, tin and zinc.
Hazardous Polymerization: Does Not Occur

11. Toxicological Information

Acute Hazards:

Eye: Causes chemical burns. May cause blindness.
Skin: Causes chemical burns.
Ingestion: Harmful or fatal if swallowed. May cause chemical burns to mouth, throat and stomach.
Inhalation: Harmful if inhaled. May cause respiratory tract irritation or chemical burns.

Medical Conditions Aggravated By Exposure: Pre-existing skin disorders or eye problems, or respiratory defects.

Chronic Hazards:

Carcinogen: Non-Hazardous
Teratogenicity: Non-Hazardous
Mutagenicity: Non-Hazardous
Reproductive Effects: Non-Hazardous

Acute Toxicity Values:

Potassium Hydroxide	LC50: 2 g/kg rabbit LD50: 365 mg/kg rat	

12. Ecological Information

Ecotoxicity: No data is available on the product itself. Because of the high pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Ecotoxicity – Freshwater Fish – Acute Toxicity Data		
Potassium Hydroxide	1310-58-3	96 Hr LC50 Gambusia affinis: 80 ppm; 24 Hr LC50 Trout: 50 ppm; 24 Hr LC50 Bluegills: 56 ppm; 24 Hr LC50 Lepomis Pallidus: 28 ppm

Biodegradability: No data is available on the product itself. It is expected that this product would not be biodegradable.

13. Disposal Considerations

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

14. Transport Information

United States Department of Transportation (DOT)
Proper Shipping Name: Corrosive liquids, n.o.s. (contains Potassium Hydroxide)
UN Number: UN1760
Hazard Class: 8
Packaging Group: II

Transportation of Dangerous Goods (TDG – Canada)
Proper Shipping Name: Corrosive liquids, n.o.s. (contains Potassium Hydroxide)
UN Number: UN1760
Hazard Class: 8
Packaging Group: II

15. Regulatory Information

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical: Yes

US Federal Regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA Hazard Category (311/312): Immediate Health Hazard

SARA 313: This product does not contain any substance subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372.

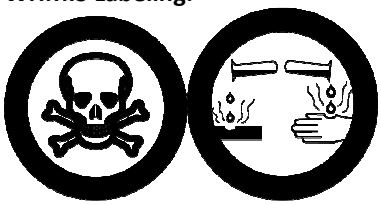
California Proposition 65: This product does not contain any substance known to the State of California to cause cancer and/or reproductive harm (birth defects).

WHMIS: Class D1B, Class E

WHMIS – Canada – Ingredient Disclosure List:

Potassium Hydroxide	1310-58-3	1%

WHMIS Labeling:



Inventory Status

Country	Inventory Name	On Inventory (Yes/No)*
United States	Toxic Substances Control Act (TSCA) Inventory	Yes
Canada	Domestic Substance List (DSL)	Yes
Canada	Non-Domestic Substance List (NDSL)	No

* A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country

16. Other Information

NFPA Rating (NFPA 704):	Health: 4	Fire: 0	Instability: 0
HMIS Rating:	Health: 4	Fire: 0	Physical Hazard: 0

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