

AMCO 355 SDS

Section 1 Identification

Product: AMCO 355
Other Means of Identification: Clear, slightly amber alkaline liquid with a faint characteristic odor
Recommended Use & Restrictions on Use: Cooling water treatment. Not for use in drinking water.
Source: Amco, Inc.
P.O.Box 754
Chagrin Falls, OH 44022
Emergency Phone: Chemtrec (800) 424-9300
Office Phone: (440) 247-7533

Section 2 Hazard(s) Identification

Emergency Overview: Corrosive. Clear, slightly amber liquid with a faint characteristic odor. Product is corrosive to eyes, skin, respiratory system, gastrointestinal system, and some metals. Avoid use of water directly on spills. May react violently with acid. Product is not flammable, but contact with metal may generate flammable hydrogen gas.

Classification Product is hazardous by OSHA criteria.
29 CFR 1910.1200:

Corrosive to skin	category 1, subcategory 1B
Serious eye damage	category 1
STOT-SE, respiratory system	category 1
STOT-SE, gastrointestinal system	category 1
Corrosive to metal	category 1

Signal Word: DANGER
Hazard Statement(s): Causes severe skin burns and eye damage
Causes damage to respiratory system if inhaled
Causes damage to digestive system if swallowed
May be corrosive to metals

Pictogram(s):
Corrosion
Health Hazard
STOT-SE



Precautionary Statements: Do not get in eyes, on skin, or on clothing.
Wear eye protection and protective industrial rubber gloves. When conditions warrant use, add face shield, apron, and/or rubber boots.
Do not breathe dusts or mists.
Wash gloves and contaminated surfaces thoroughly after handling.
Keep only in original container.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for 15 minutes. Immediately, call a doctor.
If on skin (or hair): Immediately, take off all contaminated clothing. Rinse skin with water. Use safety shower if available. Immediately, call a doctor.
Wash contaminated clothing before reuse.
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a doctor.
If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately, call a poison control center or doctor.

No other, more specific treatment identified.

Keep only in original container.

Store locked up.

Dispose of contents or container in accordance with local state and federal regulations.

Hazards Not Otherwise Classified: Contact with many metals (see Section 10) may generate explosive hydrogen gas.

Ingredients with Unknown Toxicity: None

Potential Environmental Effects: Significant contamination of small bodies of surface water or localized areas at the point of a spill may elevate pH levels above tolerable levels for aquatic organisms. Product contains phosphorus. Phosphorus and the associated phosphate can fertilize algal growth and accelerate eutrophication in aquatic ecosystems.

Section 3 Composition/Information on Ingredients

Hazardous Ingredient(s)	Common Name	CAS#	% by Wt
Sodium hydroxide	Caustic soda	1310-73-2	1-5

The exact percent by weight of the ingredients in this formulation is proprietary.

Section 4 First-Aid Measures

Eyes: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for 15 minutes. Immediately, call a doctor.

Skin: If on skin (or hair): Immediately, take off all contaminated clothing. Rinse skin with water. Use safety shower if available. Immediately, call a doctor.

Inhalation: If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a doctor.

Ingestion: If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately, call a poison control center or doctor.

Acute Symptoms: Irritation or burns to eyes, skin, or mucous membranes. Injury may result in permanent damage to eyesight or permanent scars on skin.

Delayed Effects: None known.

Immediate or Special Treatment Requirements:

After contact with product, immediately flush eyes and/or skin with water for 15 minutes. If safety shower or eye wash is plumbed to cold water, it may be necessary to move victim to a locker room shower or elsewhere to obtain a lukewarm water source before the 15 minute flush is complete. After the 15 minute flush, seek medical treatment.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Product is not flammable. Use media appropriate for surrounding fire.

Specific Hazards: Product is corrosive to eyes, skin, and respiratory system. Closed containers may rupture (due to buildup of pressure) when exposed to extreme heat. If evaporated to dryness, some product residuals may burn. Contact with some metals may generate explosive hydrogen gas. Thermal decomposition under fire conditions may produce corrosive aerosols, metal oxide fumes, oxides of phosphorus, phosphine, oxides of carbon, and oxides of sulfur.

Special PPE & Precautions: Wear self-contained breathing apparatus and full turn-out gear. Approach fire from upwind direction. If possible, move containers away from fire. Cool fire exposed containers with

water spray. If containers rupture or leak, product may evolve irritating or toxic gas under extreme heat.

Section 6 Accidental Release Measures

Personal Precautions, PPE, & Emergency Procedures:	Wear chemical splash goggles and protective industrial rubber gloves. When conditions warrant use, add face shield, apron, and/or rubber boots. Product may be slippery underfoot. If spill escapes to sanitary sewer, notify local public works authorities. If spill escapes to the environment, notify state and federal EPA and, if appropriate, the Coast Guard. The CERCLA RQ for sodium hydroxide is 1,000 lbs. Product contains 1-5% sodium hydroxide.
Containment & Clean-Up:	Contain and collect spills with commercial absorbents. Unused product or spill cleanup residues may be RCRA hazardous waste by the characteristic of corrosivity (D002). Consult local authorities for appropriate waste disposal options in your location.

Section 7 Handling and Storage

Precautions for Safe Handling:	Open container slowly until pressure is relieved. Avoid spillage. Clean up small spills and drips promptly. Protect product from contamination. Avoid contact between this product and other chemicals, especially acids. Avoid contact with metals during handling. Do not transfer into metal containers. Contact with many metals (see Section 10) may generate explosive hydrogen gas. The recommended disposal for rinse waters from empty units is discharge to the treated system.
Conditions for Safe Storage:	Store product in closed container in well ventilated, secure area. Protect containers against physical damage. Protect label. Empty containers retain product residues and all label hazards are still present until container is thoroughly cleaned.

Section 8 Exposure Controls/Personal Protection

Exposure limits for the formulated product are not established. Exposure limits for hazardous ingredients are:

Ingredient	Source & Parameter	Exposure Limit
sodium hydroxide	ACGIH Ceiling	2 mg/m ³
	NIOSH IDLH	10 mg/m ³

NOTE: OSHA - Occupational Safety and Health Administration; ACGIH - American Conference of Governmental Industrial Hygienists; NIOSH - National Institute for Occupational Safety and Health; PEL - Permissible Exposure Limit; TWA - Time Weighted Average; TLV - Threshold Limit Value; REL - Recommended Exposure Limit; STEL - Short Term Exposure Limit; IDLH - Immediately Dangerous to Life or Health.

Engineering Controls:	General exhaust ventilation is adequate. Employ work practices and product transfer practices that avoid spills, drips, or contact with any incompatible material.
Individual Protection/PPE:	Wear chemical splash goggles and protective industrial rubber gloves. When conditions warrant use, add face shield, apron, and/or rubber boots.

Section 9 Physical and Chemical Properties

Appearance (physical state, color, etc.):	Clear, slightly amber liquid
Odor:	Faint characteristic odor
Odor threshold:	Not known
pH:	>12.5
Melting point/freezing point:	<32° F
Initial boiling point and boiling range:	>212° F
Flash point:	None, not flammable
Evaporation rate:	Similar to water
Flammability (solid, gas):	Not flammable
Upper/lower flammability or explosive limits:	None, not flammable
Vapor pressure:	Not known, similar to water

Vapor density:	Not known, similar to water
Relative density:	Specific gravity, 1.11
Solubility(ies):	Completely miscible in water
Partition coefficient: n-octanol/water:	Not known
Auto-ignition temperature:	None, not flammable
Decomposition temperature:	Not known, > 212° F
Viscosity:	Not known

Section 10 Stability and Reactivity

Reactivity:	Product may react violently with acid or exothermically with water. Product will also react with other incompatible materials.
Chemical stability:	Stable at ambient temperatures and pressures.
Possibility of Hazardous Reactions:	May react violently with acid. Contact with water will release large amounts of heat. Due to reactions, corrosive liquid may boil and splatter. Contact with acid may also release toxic oxides of sulfur and possibly other problematic gases. Reactions with aluminum, zinc, copper, and other metals may evolve flammable hydrogen gas. Polymerization will not occur.
Conditions to Avoid:	Contact with acid, water, or other incompatible materials.
Incompatible Materials:	Acid, water, halogenated compounds. Also avoid contact with most metals, including aluminum, zinc, copper, brass, bronze, lead, and tin.
Hazardous Decomposition Products:	Phosphine, oxides of phosphorus, metal oxides, oxides of carbon, oxides of sulfur

Section 11 Toxicological Information

Likely Routes of Exposure:	Eye or skin contact.
Symptoms Related to Physical, Chemical, and Toxicological Characteristics:	Product is corrosive to eyes, skin, mucous membranes, and other tissues. Contact will irritate or burn eyes and skin. Permanent damage to eyesight is possible. Permanent scars are possible. Product is not toxic in the typical sense of the term, but serious or life threatening damage to critical respiratory or gastrointestinal systems is possible following overexposure. Inhalation of product in mist or aerosol form may do serious damage to respiratory system by burning lung tissues. Similar damage to the gastrointestinal system is possible following ingestion. Consequently, product is classified as a specific target organ toxicity – single exposure (STOT-SE) hazard for inhalation (respiratory system) or ingestion (digestive system).
Delayed Effects:	None known.
Immediate Effects:	Irritation or burns to eyes, skin, or other tissues.
Chronic Effects:	None known.
Numerical Measures of Toxicity:	No toxicology available on the formulated product. Toxicology data for product ingredients:
Sodium hydroxide	Oral rabbit LD50, 400 mg/kg Dermal rabbit LD50, 1,350 mg/kg Inhalation LC50, none located, NIOSH IDLH – 10 mg/m3
Carcinogenicity:	None of the product ingredients are listed as carcinogens by IARC, NTP, or OSHA.

Section 12 Ecological Information

Ecotoxicity:	Significant contamination of small bodies of surface water or localized areas at the point of a spill may elevate pH levels above tolerable levels for aquatic organisms.
Persistence and Degradability:	Environmental fate of product is not known. Sodium hydroxide is an inorganic chemical which does not biodegrade.
Bioaccumulative Potential:	Product ingredients do not bioaccumulate.
Mobility in Soil:	Not known.

Other Adverse Effects: Product contains phosphorus. If product enters surface water, phosphorus compounds can fertilize algal growth and accelerate eutrophication in aquatic ecosystems.

Section 13 Disposal Considerations

Product is consumed during recommended use. Flush container residues to the treated system. If product is not consumed in use, material is RCRA hazardous waste due to the corrosivity characteristic (D002). Dispose of contents or container in accordance with local, state, and federal regulations.

Section 14 Transport Information

UN Number: UN3266
UN Proper Shipping Name: Corrosive liquid, basic, inorganic, n.o.s. (sodium hydroxide)
Transport Hazard class(es): 8
Packing Group: PG II
Environmental Hazards: Does not contain ingredient(s) listed as marine pollutant.
Transport in Bulk: Product container meets or exceeds DOT requirements. Product is shipped to end user. Material is a Packing Group II corrosive base. No extraordinary measures are required for shipment in bulk tanks including totes.
Special Precautions: Column 7 entries in the DOT hazardous materials table for this product are B2, IB2, T11, TP2, & TP27. If needed, see associated designations at 49 CFR172.102.

Section 15 Regulatory Information

US EPA EPCRA
SARA Section 312: Immediate hazard
US EPA EPCRA
SARA Section 313: Not listed
US EPA CERCLA: Contains sodium hydroxide, 1-5%. CERCLA RQ is 1,000 lbs. for sodium hydroxide.
US EPA TSCA: All ingredients listed or exempt

Section 16 Other Information

NFPA Hazard Ranking		Reactivity	Special
Health	Fire		
3	1	0	Corr

HMIS Hazard Ranking		Reactivity	PPE
Health	Fire		
3	0	0	n & p or X (defined below)

n – splash goggles
p – gloves
X – consult supervisor

References

1. Manufacturers' SDS on file for raw materials used in this product.
2. 29 CFR 1910.1200. Current OSHA eCFR edition as of the December 2014.
3. ANSI Z400.1/Z129.1-2010. Hazard Evaluation and Safety Data Sheet and Labeling Preparation. American National Standards Institute, Inc., New York, NY. 2010.
4. The Globally Harmonized system of Classification and Labeling of Chemicals. (Purple Book) United Nations. 2009.
5. ACGIH. Threshold Limit Values and Biological Exposures Indices. 2014.
6. 49 CFR 172.101, Hazardous Materials Table. Current DOT eCFR edition as of the November 2014.
7. EPA List of Lists. EPA 550-B-10-001. July 2011.

Date of Preparation
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