

# SAFETY DATA SHEET



**Product Name: ACCO Raydrox 50-L**

Release Date: 5/28/2020

Product Number: 101-6190, 102-61015, 102-61275, 102-61330

## Section 1. Identification

Product Identifier:	ACCO Raydrox 50-L
Other means of identification:	Sodium hydroxide solution
CAS Number:	1310-73-2
Recommended Use:	Swimming Pool Product
Recommended Restrictions:	Not listed.
Supplier/Distributor Information:	ACCO Unlimited Corporation 5105 NW Johnston Dr. Johnston, IA 50131 (800) 548-2226

**EMERGENCY PHONE NUMBER: 800-424-9300 CHEMTREC**

## Section 2. Hazard(s) Identification

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

Classification of the substance or mixture.....Corrosive to metals - Category 1  
Acute toxicity - Category 4 - Oral  
Skin corrosion - Category 1A  
Serious eye damage - Category 1

GHS Label elements  
Hazard Pictograms



Signal Word.....Danger

Hazard Statements.....May be corrosive to metals.  
Harmful if swallowed.  
Causes severe skin burns and eye damage.

Precautionary Statements:

Prevention..... Keep only in original container.  
Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear protective gloves/ protective clothing/eye protection/face protection.

Response..... IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Storage.....Store locked up. Store in corrosive resistant container with a resistant inner liner.

Disposal.....Dispose of contents/container to an approved waste disposal plant.

Other hazards.....No data available.

### Section 3. Composition/information on ingredients

This product is a mixture.

Component	CASRN	Concentration
Sodium hydroxide	1310-73-2	>= 30.0 - <= 54.0 %
Water	7732-18-5	>= 46.0 - <= 70.0 %

### Section 4. First aid measures

Description of first aid measures:

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Immediate continued and thorough washing in flowing water for at least 30 minutes is imperative while removing contaminated clothing. Prompt medical consultation is essential. Wash clothing before reuse. Properly dispose of leather items such as shoes, belts, and watchbands. Suitable emergency safety shower facility should be immediately available.

Eye contact: Wash eyes with plenty of water for 15 minutes at least. Do not forget to remove contact lenses. Washing with water is the only acceptable method of removal of caustic soda (lye) from the eyes and skin. You may have 10 seconds or less to avoid serious permanent injury. Suitable emergency eye wash facility should be immediately available.

Ingestion: Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed:

Notes to physician: Eye irrigation may be necessary for an extended period of time to remove as much caustic as possible. Duration of irrigation and treatment is at the discretion of medical personnel. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury.

Suggest endotracheal/esophageal control if lavage is done. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

## **Section 5. Fire-fighting measures**

Suitable extinguishing media: This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire.

Unsuitable extinguishing media: Do not use water.

Special hazards arising from the substance or mixture:

Hazardous combustion products: Not applicable.

Unusual Fire and Explosion Hazards: Product reacts with water. Reaction may produce heat and/or gases. This reaction may be violent. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters:

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Water is not recommended, but may be applied in large quantities as a fine spray when other extinguishing agents are not available. This material does not burn. Fight fire for other material that is burning.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

## **Section 6. Accidental release measures**

Personal precautions, protective equipment and emergency procedures:

Evacuate area. Only trained and properly protected personnel must be involved in clean-up operations. Refer to section 7, Handling, for additional precautionary measures. Keep upwind of spill. Ventilate area of leak or spill. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up:

Contain spilled material if possible. Small spills: Dilute with water. Large spills: Dike area to contain spill. Collect in suitable and properly labeled containers. Attempt to neutralize by adding materials such as Acetic acid See Section 13, Disposal Considerations, for additional information.

## Section 7. Handling and storage

Precautions for safe handling:

Do not get in eyes, on skin, on clothing. Do not swallow. Avoid breathing mist. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. ALWAYS add caustic soda solution to water with constant agitation. NEVER add water to the caustic soda solution. The water should be lukewarm (27-38°C or 80-100°F). NEVER start with hot or cold water. The addition of caustic soda to liquid will cause a rise in temperature. If caustic soda becomes concentrated in one area, is added too rapidly, or is added to hot or cold liquid, a rapid temperature increase can result in DANGEROUS mists, boiling or spattering which may cause an immediate VIOLENT ERUPTION. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage:

Keep container closed. Do not store in: Zinc. Aluminum. Brass. Tin. See Section 10 for more specific information.

Storage stability: Storage temperature: > 16 °C (> 61 °F)

## Section 8. Exposure controls/personal protection

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Sodium hydroxide	ACGIH	C	2 mg/m <sup>3</sup>
	OSHA Z-1	TWA	2 mg/m <sup>3</sup>
	OSHA P0	C	2 mg/m <sup>3</sup>

Exposure controls:

Engineering controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Individual protection measures:

Eye/face protection: Use chemical goggles.

Skin protection: Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Viton. Avoid gloves made of: Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process.

In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Particulate filter.

## Section 9. Physical and chemical properties

### Appearance

Physical state	Liquid above freezing point
Color	Colorless
Odor	Odorless
Odor Threshold	No test data available
pH	14 <i>Literature</i>
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	<i>ASTM D1120</i>
Flash point	<i>Literature</i> None
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not expected to form explosive dust-air mixtures.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	23.67 mmHg at 25 °C (77 °F) <i>Literature</i>
Relative Vapor Density (air = 1)	Not applicable
Relative Density (water = 1)	1.353 - 1.528 at 20 °C (68 °F) <i>Literature</i>
Water solubility	completely miscible
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	Not applicable
Decomposition temperature	No test data available
Kinematic Viscosity	<i>No information available.</i>
Explosive properties	No
Oxidizing properties	No
Liquid Density	1.5 g/cm <sup>3</sup> at 20 °C (68 °F) <i>Literature</i>
Softening point	No data available
Molecular weight	No test data available
Pour point	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

## Section 10. Stability and reactivity

Reactivity: No data available.

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Avoid moisture. Product absorbs carbon dioxide from the air.

Incompatible materials: Heat is generated when mixed with water. Spattering and boiling can occur. Caustic soda solution reacts readily with various reducing sugars (i.e. fructose, galactose, maltose, dry whey solids) to produce CO.

Take precautions including monitoring the tank atmosphere for CO to ensure safety of personnel before vessel entry. Avoid contact with: Acids. Glycols. Halogenated organics. Organic nitro compounds. Flammable hydrogen may be generated from contact with metals such as: Zinc. Aluminum. Tin. Brass.

Hazardous decomposition products: Does not decompose.

## Section 11. Toxicological information

Toxicological information appears in this section when such data is available.

Acute toxicity:

Acute oral toxicity: Moderate toxicity if swallowed. Swallowing may result in burns of the mouth and throat. Swallowing may result in gastrointestinal irritation or ulceration. Single dose oral LD50 has not been determined.

Acute dermal toxicity: Prolonged skin contact is unlikely to result in absorption of harmful amounts. The dermal LD50 has not been determined.

Acute inhalation toxicity: Mist may cause severe irritation of upper respiratory tract (nose and throat). As product: The LC50 has not been determined.

Skin corrosion/irritation: Due to the pH of the material, it is assumed that exposure will cause skin burns. Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage.

Serious eye damage/eye irritation: Due to the pH of the material, it is assumed that exposure may cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Mist may cause eye irritation.

Sensitization: For skin sensitization: No relevant data found.

For respiratory sensitization: No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure): Material is corrosive. Material is not classified as a respiratory irritant; however, upper respiratory tract irritation or corrosivity may be expected.

Specific Target Organ Systemic Toxicity (Repeated Exposure): Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

Carcinogenicity: No relevant data found.

Teratogenicity: No relevant data found.

Reproductive toxicity: No relevant data found.

Mutagenicity: For the major component(s): In vitro genetic toxicity studies were negative.

Aspiration Hazard: Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

COMPONENTS INFLUENCING TOXICOLOGY:

Sodium hydroxide:

Acute oral toxicity: LD50, Rabbit, 336 mg/kg Estimated.

Acute dermal toxicity: The dermal LD50 has not been determined.

Acute inhalation toxicity: The LC50 has not been determined.

## Section 12. Ecological information

Ecotoxicological information appears in this section when such data is available.

Toxicity - Sodium hydroxide:

Acute toxicity to fish: May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.

Persistence and degradability - Sodium hydroxide:

Biodegradability: Biodegradability is not applicable to inorganic substances.

Bioaccumulative potential - Sodium hydroxide:

Bioaccumulation: No bioconcentration is expected because of the relatively high water solubility.

Mobility in soil - Sodium hydroxide:

Potential for mobility in soil is very high (Koc between 0 and 50). Partition coefficient (Koc): 14 Estimated.

## Section 13. Disposal considerations

Disposal methods: AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.

## Section 14. Transport information

### DOT

<b>Proper shipping name</b>	Sodium hydroxide solution
<b>UN number</b>	UN 1824
<b>Class</b>	8
<b>Packing group</b>	II
<b>Reportable Quantity</b>	Sodium hydroxide

### Classification for SEA transport (IMO-IMDG):

<b>Proper shipping name</b>	SODIUM HYDROXIDE SOLUTION
<b>UN number</b>	UN 1824
<b>Class</b>	8
<b>Packing group</b>	II
<b>Marine pollutant</b>	No
<b>Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code</b>	Consult IMO regulations before transporting ocean bulk

### Classification for AIR transport (IATA/ICAO):

<b>Proper shipping name</b>	Sodium hydroxide solution
<b>UN number</b>	UN 1824
<b>Class</b>	8
<b>Packing group</b>	II

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## Section 15. Regulatory information

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312:

Corrosive to metals  
Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania Worker and Community Right-To-Know Act:

The following chemicals are listed because of the additional requirements of Pennsylvania law:

<b>Components</b>	<b>CASRN</b>
Sodium hydroxide	1310-73-2

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

United States TSCA Inventory (TSCA):

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

## Section 16. Other information

NFPA

Health Hazard: 3

Fire Hazard: 0

Reactivity: 1

HMIS

Health Hazard: 3

Fire Hazard: 0

Physical hazards: 2

Personal Protection: J

Revision Date: 4/8/2019

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## LEGEND

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
C	Ceiling limit
OSHA P0	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
TWA	8-hour time weighted average

### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA -Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA -Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative