



Superlox X-40 (AFCO 5285)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision Date: 02/14/2023

Version: 1.2

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: Superlox X-40

Product Code: AFCO 5285

Intended Use of the Product

Use of the Substance/Mixture: Acid cleaner for CIP cleaning in food processing plants. For professional use only.

Name, Address, and Telephone of the Responsible Party

Company

AFCO
550 Development Avenue
Chambersburg, PA 17201
T: 800-345-1329
www.afcocare.com

Emergency Telephone Number

Emergency Number : 1-800-424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Met. Corr. 1 H290

Skin Corr. 1A H314

Eye Dam. 1 H318

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)

:



GHS05

Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H290 - May be corrosive to metals
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage

Precautionary Statements (GHS-US)

: P234 - Keep only in original container.
P260 - Do not breathe vapors, mist, spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
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.
P310 - Immediately call a POISON CENTER or doctor/physician.
P321 - Specific treatment (see section 4).
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material damage.
P405 - Store locked up.
P406 - Store in corrosive resistant container with a resistant inner liner.
P501 - Dispose of contents/container according to local, regional, national, territorial,

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provincial, and international regulations.

Other Hazards

Other Hazards Not Contributing to the Classification: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. When heated to decomposition, emits toxic fumes. Contact with metals may evolve flammable hydrogen gas. Contains an oxidizing material which may accelerate fire.

Unknown Acute Toxicity (GHS-US): Not available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Water	(CAS No) 7732-18-5	50-70	Not classified
Nitric acid	(CAS No) 7697-37-2	30-50	Ox. Liq. 3, H272 Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318

The exact percentage of composition are withheld as a trade secret [29 CFR § [1910.1200 App E](#)].

Full text of H-phrases: see section 16.

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Get immediate medical advice/attention. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention immediately.

Ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes serious eye damage. Corrosive to eyes and skin.

Inhalation: May cause irritation to respiratory tract.

Skin Contact: Causes severe skin burns.

Eye Contact: Causes serious eye damage.

Ingestion: Ingestion is likely to be harmful or have adverse effects. Contact may cause immediate severe irritation progressing quickly to chemical burns.

Chronic Symptoms: Not available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Water spray, fog, carbon dioxide, foam, dry chemical.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Thermal decomposition generates: Corrosive vapors. When heated to decomposition, emits toxic fumes. Toxic gas. Corrosive to metals. Explosive hydrogen gas. Contains an oxidizing material which may accelerate fire.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

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Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Toxic fumes are released. Nitrogen oxides. Corrosive vapors.

Other information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not allow product to spread into the environment. Do NOT breathe (vapors, mist, spray). Do not get in eyes, on skin, or on clothing.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Cautiously neutralize spilled liquid.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Cautiously neutralize spilled liquid. Contact competent authorities after a spill.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: When heated to decomposition, emits toxic fumes. Corrosive vapors are released. Contact with metals may evolve flammable hydrogen gas. Contains an oxidizing material which may accelerate fire.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from extremely high or low temperatures, direct sunlight, heat, ignition sources, organic materials, combustible materials, incompatible materials.

Incompatible Materials: Strong bases. Metals. Organic materials. Combustible materials.

Special Rules on Packaging: Keep only in original container.

Specific End Use(s)

Acid cleaner for CIP cleaning in food processing plants. For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Nitric acid (7697-37-2)		
Mexico	OEL TWA (mg/m ³)	5 mg/m ³
Mexico	OEL TWA (ppm)	2 ppm
Mexico	OEL STEL (mg/m ³)	10 mg/m ³
Mexico	OEL STEL (ppm)	4 ppm
USA ACGIH	ACGIH TWA (ppm)	2 ppm
USA ACGIH	ACGIH STEL (ppm)	4 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	2 ppm

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USA NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	2 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	10 mg/m ³
USA NIOSH	NIOSH REL (STEL) (ppm)	4 ppm
USA IDLH	US IDLH (ppm)	25 ppm
Ontario	OEL STEL (ppm)	4 ppm
Ontario	OEL TWA (ppm)	2 ppm
Québec	VECD (mg/m ³)	10 mg/m ³
Québec	VECD (ppm)	4 ppm
Québec	VEMP (mg/m ³)	5.2 mg/m ³
Québec	VEMP (ppm)	2 ppm

Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed. Ensure adequate ventilation, especially in confined areas. Alarm detectors should be used when toxic gases may be released. If user operations generate fumes, vapors, gas, or spray use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or regulatory limits.

Personal Protective Equipment: Protective goggles. Protective clothing. Gloves. Face shield.



Materials for Protective Clothing: Chemically resistant materials and fabrics. Corrosionproof clothing.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or face shield.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: A respirator is not needed under normal and intended conditions of product use. Whenever worker exposure may exceed established regulatory exposure limits, use a NIOSH-approved respirator.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear, colorless
Odor	: Strong, acidic
Odor Threshold	: Not available
pH	: <1
Relative Evaporation Rate (butylacetate=1)	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: 108.9°C (228.02°F)
Flash Point	: None
Auto-ignition Temperature	: None
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20°C	: Not available
Specific Gravity	: 1.29
Solubility	: Complete

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Partition coefficient: n-octanol/water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Thermal decomposition generates: Corrosive vapors. When heated to decomposition, emits toxic fumes. Toxic gas. Corrosive to metals. Explosive hydrogen gas. Contains an oxidizing material which may accelerate fire.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Heat. Prolonged contact with metals. Combustible materials. Incompatible materials.

Incompatible Materials: Strong bases. Metals. combustible materials. Organic materials.

Hazardous Decomposition Products: Carbon oxides (CO, CO₂). Thermal decomposition generates: Toxic gases. Corrosive vapors. Nitrogen oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified.

LD50 and LC50 Data: Not available.

Skin Corrosion/Irritation: Causes severe skin burns. (pH: <1)

Serious Eye Damage/Irritation: Causes serious eye damage. (pH: <1)

Respiratory or Skin Sensitization: Not classified.

Germ Cell Mutagenicity: Not classified.

Teratogenicity: Not available.

Carcinogenicity: Not classified.

Specific Target Organ Toxicity (Repeated Exposure): Not classified.

Reproductive Toxicity: Not classified.

Specific Target Organ Toxicity (Single Exposure): Not classified.

Aspiration Hazard: Not classified.

Symptoms/Injuries After Inhalation: May cause irritation to respiratory tract.

Symptoms/Injuries After Skin Contact: Causes severe skin burns.

Symptoms/Injuries After Eye Contact: Causes serious eye damage.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. Contact may cause immediate severe irritation progressing quickly to chemical burns.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Water (7732-18-5)	
LD50 Oral Rat	>90000 mg/kg
Nitric acid (7697-37-2)	
LC50 Inhalation Rat (mg/l)	0.13 mg/l (Exposure time: 4 h)
LC50 Inhalation Rat (ppm)	67 ppm/4h

SECTION 12: ECOLOGICAL INFORMATION

Toxicity - Not classified.

Persistence and Degradability: Not available.

Bioaccumulative Potential

Superlox X-40 (AFCO 5285)	
Bioaccumulative Potential	Not established.
Nitric acid (7697-37-2)	
Log Pow	-2.3 (at 25°C)

Mobility in Soil Not available.

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Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Nitric Acid)
Hazard Class : 8
Identification Number : UN3264
Label Codes : 8
Packing Group : III
ERG Number : 154



14.2 In Accordance with IMDG

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Nitric Acid)
Hazard Class : 8
Identification Number : UN3264
Packing Group : III
Label Codes : 8
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B



14.3 In Accordance with IATA

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Nitric Acid)
Packing Group : III
Identification Number : UN3264
Hazard Class : 8
Label Codes : 8
ERG Code (IATA) : 8L



14.4 In Accordance with TDG

Proper Shipping Name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Nitric Acid)
Packing Group : III
Hazard Class : 8
Identification Number : UN3264
Label Codes : 8



SECTION 15: REGULATORY INFORMATION

US Federal Regulations

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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard.
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
Nitric acid (7697-37-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
Listed on SARA Section 302 (Specific toxic chemical listings).	
Listed on SARA Section 313 (Specific toxic chemical listings).	
SARA Section 302 Threshold Planning Quantity (TPQ)	1000
SARA Section 313 - Emission Reporting	1.0%

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US State Regulations

Nitric acid (7697-37-2)

U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute
U.S. - California - SCAQMD - Toxic Air Contaminants With Proposed Risk Values
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
U.S. - New Jersey - Environmental Hazardous Substances List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)
U.S. - New York - Occupational Exposure Limits - TWAs
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
U.S. - North Carolina - Control of Toxic Air Pollutants
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

Canadian Regulations

Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Nitric acid (7697-37-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

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

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 02/14/2023

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

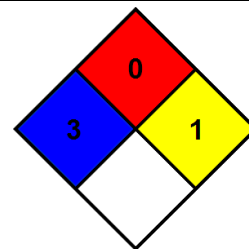
GHS Full Text Phrases:

Eye Dam. 1	Serious eye damage/eye irritation Category 1
Met. Corr. 1	Corrosive to metals Category 1
Ox. Liq. 3	Oxidizing liquids Category 3
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H272	May intensify fire; oxidizer
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

NFPA Health Hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA Fire Hazard : 0 - Materials that will not burn.

NFPA Reactivity : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



HMIS III Rating

Health : 3 Serious Hazard - Major injury is likely unless prompt action is taken, and medical treatment is given.

Flammability : 0 - Minimal Hazard.

Physical : 1 - Slight Hazard.

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Party Responsible for the Preparation of This Document

AFCO
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Chambersburg, PA 17201
T: 800-345-1329

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS SDS 2015 (U.S., Can., Mex.)