



SAFETY DATA SHEET

Issue Date 03-Jul-2018

Revision Date 25-Jun-2018

Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name Deox Aluminum & Stainless Steel Cleaner

Other means of identification

Product Code NL453

Synonyms None

Details of the supplier of the safety data sheet

Company Name Nyco Products Company
5332 Dansher Road
Countryside, IL 60525
(708) 579-8100
nycoproducts.com

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

Label elements

Emergency Overview

Danger

Hazard statements

Harmful if swallowed

Toxic in contact with skin

Causes severe skin burns and eye damage



Appearance Clear Pink Red**Physical state** Liquid**Odor** Mild Acidic**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Wear protective gloves/protective clothing/eye protection/face protection
 Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Specific Treatment (See Section 4 on the SDS)
 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 or doctor/physician
 Call a POISON CENTER or doctor/physician if you feel unwell
 Wash contaminated clothing before reuse
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a POISON CENTER or doctor/physician
 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
 Drink plenty of water
 Immediately call a POISON CENTER or doctor/physician

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Disposal should be in accordance with applicable regional, national and local laws and regulations

Hazards not otherwise classified (HNOC)**Other Information**

- Toxic to aquatic life with long lasting effects
- Toxic to aquatic life

Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Phosphoric Acid	7664-38-2	15-40	*
2-butoxyethanol	111-76-2	1-5	*
Nonylphenol Ethoxylate	9016-45-9	1-5	*
Hydrofluoric Acid	7664-39-3	.1-1	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**First aid measures****General advice**

Immediate medical attention is required. **NOTE:** The effect of Hydrofluoric Acid (HF), i.e. the onset of pain, particularly in dilute solutions, may not be felt for up to 24 hours. It is important that workers have immediate access to the antidote (calcium gluconate) both on and off the worksite in order to apply it as soon as possible.

Skin Contact

Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediately apply calcium gluconate gel 2.5 % and massage into the affected area using rubber gloves; continue to massage while repeatedly applying gel until 15 minutes after pain is relieved. Alternately, immerse the burned area in a solution of 0.2% iced aqueous Hyamine 1622 or 0.13% iced aqueous Zephiran Chloride. If finger/fingernails are touched, even if there is no pain, dip them in a bath of 5% calcium gluconate for 15 to 20 minutes. Consult a physician immediately in all cases of skin contact no matter how minor. For minor skin contact, avoid spreading material on unaffected skin. For severe burns, immediate medical attention is

required.

Eye contact	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Rinse the eyes with a calcium gluconate 1% solution for 10 minutes. In the case of difficulty opening the lids, administer an analgesic eyewash. Do not use oily drops, ointment, or HF skin burn treatments. Consult an ophthalmologist or eye specialist and physician immediately in all cases. Take to a hospital immediately. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
Inhalation	Remove to fresh air. Call a physician or poison control center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Remove the subject from the contaminated area as soon as possible. Transport subject lying down, with the head higher than the body, to a quiet, uncontaminated and well ventilated location. Administer oxygen (2.5% calcium gluconate if available, can be oxygen nebulized with trained personnel) or cardiopulmonary resuscitation if necessary and as soon as possible. If patient is unconscious, give artificial respiration. Note: Mouth to mouth resuscitation is not recommended. Keep warm (blanket). Consult physician in all cases. Take to a hospital.
Ingestion	Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Call a physician or poison control center immediately. When directed by physician, give orally either 1% aqueous calcium gluconate solution, milk or calcium/magnesium containing anti-acid. Such solutions can be beneficial but also may be problematic if they induce vomiting.
Self-protection of the first aider	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. <i>Note: Mouth to mouth resuscitation is not recommended..</i> Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms and effects, both acute and delayed

Symptoms Any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions Do not allow into any storm sewer drains, lakes, streams, ponds, estuaries, oceans or other surface water bodies. Should not be released into the environment. Dispose of according to all local city, state and federal rules and regulations.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Prevent product from entering drains. Dam up. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems. Always add acid to water.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Keep/store only in original container. Do not reuse container.

Incompatible materials Incompatible with strong acids and bases. Incompatible with oxidizing agents. Metals. Strong bases. Strong reducing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phosphoric Acid 7664-38-2	STEL: 3 mg/m ³ TWA: 1 mg/m ³	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³ (vacated) STEL: 3 mg/m ³	IDLH: 1000 mg/m ³ TWA: 1 mg/m ³ STEL: 3 mg/m ³
2-butoxyethanol 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m ³ (vacated) S* S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m ³
Hydrofluoric Acid 7664-39-3	TWA: 0.5 ppm F TWA: 2.5 mg/m ³ F S* Ceiling: 2 ppm F	TWA: 3 ppm F TWA: 2.5 mg/m ³ F (vacated) TWA: 3 ppm F (vacated) TWA: 2.5 mg/m ³ (vacated) STEL: 6 ppm F	IDLH: 30 ppm IDLH: 250 mg/m ³ F Ceiling: 6 ppm 15 min Ceiling: 5 mg/m ³ 15 min TWA: 3 ppm TWA: 2.5 mg/m ³

NIOSH IDLH *Immediately Dangerous to Life or Health*

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers, Eyewash stations & Ventilation systems.

Individual protection measures, such as personal protective equipment

- Eye/face protection** Tight sealing safety goggles. Face protection shield.
- Skin and body protection** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Wear protective gloves and protective clothing.
- Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene When using do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection. Keep working clothes separately.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance Clear Pink Red
Color Pink Red
Odor Mild Acidic
Odor threshold No Information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	<1	
Specific Gravity	1.30	
Viscosity	< 25 cP @ 25°C	
Melting point/freezing point	No Information available	
Flash point	None	
Boiling point / boiling range	Es. 210 ° F	
Evaporation rate	No Information available	
Flammability (solid, gas)	No data available	
Flammability Limits in Air		
Upper flammability limit:	No Information available	
Lower flammability limit:	No Information available	
Vapor pressure	No Information available	
Vapor density	No Information available	
Water solubility	Complete	
Partition coefficient	No Information available	
Autoignition temperature	No Information available	
Decomposition temperature	No Information available	

Other Information

Density Lbs/Gal 10.83
VOC Content (%) 3

10. STABILITY AND REACTIVITY

Reactivity
 No data available

Chemical stability
 Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Exposure to air or moisture over prolonged periods. Extremes of temperature and direct sunlight.

Incompatible materials

Incompatible with strong acids and bases. Incompatible with oxidizing agents. Metals. Strong bases. Strong reducing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	The primary effects and toxicity of this material are due to it corrosive nature.
Inhalation	Avoid breathing vapors or mists. Breathing of vapor can cause respiratory irritation and inflammation. Breathing of mist or liquid can cause burns to the respiratory tract.
Eye contact	Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness.
Skin Contact	Toxic in contact with skin. Contact is irritating and may cause an unusual, skin rash that appears similar to ballooning of the skin. If skin is moist, formation of hydrofluoric acid can cause serious burns. These burns do not appear serious at first, but may cause severe damage if not treated immediately.
Ingestion	Harmful if swallowed. Ingestion causes acute irritation and burns to the mucous membranes of the mouth, trachea, esophagus and stomach.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Phosphoric Acid 7664-38-2	= 1530 mg/kg (Rat)	= 2740 mg/kg (Rabbit)	> 850 mg/m ³ (Rat) 1 h
2-butoxyethanol 111-76-2	= 470 mg/kg (Rat)	= 99 mg/kg (Rabbit)	= 486 ppm (Rat) 4 h = 450 ppm (Rat) 4 h
Nonylphenol Ethoxylate 9016-45-9	= 2590 mg/kg (Rat) = 1310 mg/kg (Rat)	= 1780 µL/kg (Rabbit) = 2 mL/kg (Rabbit)	-
Hydrofluoric Acid 7664-39-3	-	-	= 0.79 mg/L (Rat) 1 h

Information on toxicological effects

Symptoms No Information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Corrosivity Causes burns. Extremely corrosive and destructive to tissue. Risk of serious damage to eyes.

Sensitization No Information available.

Germ cell mutagenicity No Information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
2-butoxyethanol 111-76-2	A3	Group 3	-	-

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 3 -Not classifiable as a human carcinogen

Reproductive toxicity No Information available.

STOT - single exposure No Information available.

STOT - repeated exposure No Information available.

Chronic toxicity Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure.

Target organ effects

Possible risk of irreversible effects. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.
Blood, Central nervous system, EYES, hematopoietic system, Kidney, Liver, Respiratory system, Skin.

Aspiration hazard

No Information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	662.00
ATEmix (dermal)	724.00
ATEmix (inhalation-dust/mist)	7.00

12. ECOLOGICAL INFORMATION

Ecotoxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Phosphoric Acid 7664-38-2	-	3 - 3.5: 96 h Gambusia affinis mg/L LC50	4.6: 12 h Daphnia magna mg/L EC50
2-butoxyethanol 111-76-2	-	1490: 96 h Lepomis macrochirus mg/L LC50 static 2950: 96 h Lepomis macrochirus mg/L LC50	1698 - 1940: 24 h Daphnia magna mg/L EC50 1000: 48 h Daphnia magna mg/L EC50
Nonylphenol Ethoxylate 9016-45-9	-	5: 96 h Fish mg/L LC50	-
Hydrofluoric Acid 7664-39-3	-	660: 48 h Leuciscus idus mg/L LC50	270: 48 h Daphnia species mg/L EC50

Persistence and degradability

No Information available.

Bioaccumulation

Bioaccumulative potential.

Chemical Name	Partition coefficient
2-butoxyethanol 111-76-2	0.81
Hydrofluoric Acid 7664-39-3	-1.4

Other adverse effects

No Information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Hydrofluoric Acid 7664-39-3	U134	-	-	U134

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Phosphoric Acid 7664-38-2	Corrosive

14. TRANSPORT INFORMATION

The basic description below is specific to the container size. This information is provided for at a glance DOT information. Please refer to the container and/or shipping papers for the appropriate shipping description before tendering this material for shipment. For additional information, please contact the distributor listed in section 1 of this SDS.

DOT

UN/ID No. UN2922
Proper shipping name Corrosive liquids, toxic, n.o.s.
Hazard Class 8
Subsidiary class 6.1
Packing Group II
Special Provisions B3, IB2, T7, TP2
Description UN2922, Corrosive liquids, toxic, n.o.s. (contains Hydrofluoric Acid and Phosphoric Acid), 8, 6.1, II
Emergency Response Guide Number 154

TDG

UN/ID No. UN2922
Proper shipping name Corrosive liquids, toxic, n.o.s.
Hazard Class 8
Subsidiary class 6.1
Packing Group II
Description UN2922, Corrosive liquids, toxic, n.o.s. (contains Hydrofluoric Acid and Phosphoric Acid), 8, 6.1, II

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL/NDSL Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
2-butoxyethanol - 111-76-2	1.0

SARA 311/312 Hazard Categories

Acute health hazard Yes
Chronic Health Hazard Yes
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Phosphoric Acid 7664-38-2	5000 lb	-	-	X
Hydrofluoric Acid 7664-39-3	100 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Phosphoric Acid 7664-38-2	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Hydrofluoric Acid 7664-39-3	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

US State Regulations

California Proposition 65

This product has been evaluated and does not require warning labeling under California Proposition 65.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Phosphoric Acid 7664-38-2	X	X	X
2-butoxyethanol 111-76-2	X	X	X
Hydrofluoric Acid 7664-39-3	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

NFPA	Health hazards 3	Flammability 0	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 3	Flammability 0	Physical hazards 0	Personal protection D

Issue Date 03-Jul-2018
Revision Date 25-Jun-2018

Revision Note
No Information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet