



SAFETY DATA SHEET

**NOKORODE® AQUA FLUX™**

Water washable flux

SECTION 1 – PRODUCT AND COMPANY INFORMATION

Product Name

Nokorode® Aqua Flux™

Product Codes

74044, 74046, 74047, 74060

Chemical Family

Organic/Inorganic

Use

Soldering flux

Manufacturer's Name

The RectorSeal Corporation  
2601 Spenwick Drive  
Houston, Texas 77055 USA

Date of Validation

January 23, 2015

Date of Preparation

August 1, 2012

HMIS Codes

Health	1
Flammability	1
Reactivity	0
PPI	B

Emergency Telephone No.

Chemtrec 24 Hours  
(800)-424-9300 USA  
(703)-527-3887 International

Technical Service Telephone No.

(800)-231-3345 or (713)-263-8001

SECTION 2 – HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**

**OSHA Hazards**

Irritant

**GHS CLASSIFICATION**

**Physical Hazards**

None

**Health Hazards**

Acute Toxicity:

Oral: Not Classified

Dermal: Not Classified

Inhalation: Not Classified

Skin Corrosion/Irritation: Not Classified

Serious Eye Damage/Eye Irritation: Not Classified

Respiratory or Skin Sensitization: Not Classified

Germ Cell Mutagenicity: Not Classified  
Carcinogenicity: Not Classified  
Reproductive Toxicology: Not Classified  
Target Organ Systemic Toxicity - Single Exposure: Not Classified  
Target Organ Systemic Toxicity - Repeated Exposure: Not Classified

Aspiration Toxicity: Not Classified

## ENVIRONMENTAL HAZARDS

Hazardous to the Aquatic Environment: Not Classified  
Acute aquatic toxicity: Not Classified  
Chronic aquatic toxicity: Not Classified  
Bioaccumulation potential: Not Classified  
Rapid degradability: Not Classified

## GHS Label elements, including precautionary statements



GHS07: Exclamation Mark/Irritant

Signal Word: **Warning**

Hazard Statements:

H302 - Harmful if swallowed.  
H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.

Precautionary Statements:

P102 - Keep out of reach of children.  
P262 - Do not get in eyes, on skin, or on clothing.  
P264 - Wash hands thoroughly after handling.  
P281 Use personal protective equipment as required.

## Summary Of Acute Hazards

Irritation to respiratory system from fumes evolved during soldering. Eye contact may cause intense irritation and injury.

## Route Of Exposure, Signs And Symptoms

### INHALATION

Irritation to respiratory system from fumes evolved during soldering.

### EYE CONTACT

Contact may cause intense irritation and injury.

### SKIN CONTACT

May cause skin irritation.

### INGESTION

Nausea, vomiting, irritation to digestive system.

## SUMMARY OF CHRONIC HAZARDS

Short term effects to liver and kidneys can occur. Chemical irritation from continued skin contact can occur. Continuous industrial use in small unventilated areas may result in sufficient inhalation of solder and flux fumes to cause lung damage and irritation of respiratory tract.

## MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver, or kidneys may have increased susceptibility to excessive exposure.

## SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

**Ingredient:** Ammonium Chloride

Percentage By Weight: < 10

CAS Number: 12125-02-9

EC#: 235-186-4

**Ingredient:** Ethanolamine hydrochloride

Percentage By Weight: < 10

CAS#: 2002-24-6

EC#: 217-900-6

**Ingredient:** Paraffinic Oil

Percentage By Weight: < 10

CAS#: 64742-01-4

EC#: 265-101-6

**Ingredient:** Petroleum Derivatives

Percentage By Weight: < 10

CAS Number: 12794-56-8

EC#: 246-771-9

**Ingredient:** Polyethylene-polypropylene glycol

Percentage By Weight: < 10

CAS#: 9003-11-6

EC#: N/D

**Ingredient:** Glycerine

Percentage By Weight: < 10

CAS#: 56-81-5

EC#: 200-289-5

**Ingredient:** Polyethylene glycol octylphenyl ether

Percentage By Weight: < 10

CAS#: 9036-19-5

EC#: N/D

## SECTION 4 – FIRST AID MEASURES

- If inhaled: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
- If on skin: Immediately wash with soap and water. Remove and wash any contaminated clothing.
- If in eyes: Immediately flush with large amounts of water for at least 15 minutes. Get medical attention if irritation persists.
- If swallowed: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

## SECTION 5 – FIRE FIGHTING MEASURES

### Extinguishing Media

Foam, dry chemical, carbon dioxide or water fog.

**Special Fire Fighting Procedures:** Wear self-contained full face piece breathing apparatus and other protective clothing. Hazardous decomposition products possible (see Section 10). May release ZnO and HCl fumes.

**Unusual Fire And Explosion Hazards:** Heat may build up pressure and rupture closed containers.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

**Steps To Be Taken In Case Material Is Released Or Spilled:** Wipe up spills to prevent footing hazard. Avoid flushing into sewers, drains, waterways and soil. Wear protective clothing during clean up.

## SECTION 7 – HANDLING AND STORAGE

**Precautions To Be Taken In Handling And Storing:** Keep container closed and upright when not in use. Store flux at ambient conditions. Wash thoroughly after handling to remove all residue.

**Other Precautions:** Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers.

## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredient	Units
<b>Ammonium Chloride</b>	
ACGIH TLV:	10 mg/m <sup>3</sup>
OSHA PEL:	10 mg/m <sup>3</sup>

## Ethanolamine hydrochloride

ACGIH TLV: N/D  
OSHA PEL: N/D

## Paraffinic Oil

ACGIH TLV: N/D  
OSHA PEL: N/D

## Petroleum Deriviatives

ACGIH TLV: N/D  
OSHA PEL: N/D

## Polyethylene-polypropylene glycol

ACGIH TLV: N/D  
OSHA PEL: N/D

## Glycerine

ACGIH TLV: N/D  
OSHA PEL: N/D

## Polyethylene glycol octylphenyl ether

ACGIH TLV: N/D  
OSHA PEL: N/D

**Respiratory Protection (Specify Type):** In confined poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air purifying or supplied air respirators during soldering operations until fumes have dissipated.

**Ventilation – Local Exhaust:** Acceptable

**Special:** N/A

**Mechanical (General):** Acceptable.

**Other:** N/A

**Protective Gloves:** Wear rubber gloves.

**Eye Protection:** Safety glasses (ANSI Z-87.1 or equivalent)

**Other Protective Clothing Or Equipment:** Coveralls recommended.

**Work/Hygienic Practices:** Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling point:	N/A
Specific gravity (H <sub>2</sub> O = 1):	0.98
Vapor pressure (mmHg):	< 0.01 @ 68°F (20°C)
Melting point:	120° – 150°F (52° – 66°C)
Vapor Density (Air = 1):	N/A
Evaporation rate (Ethyl Acetate = 1):	N/A
Appearance/Odor:	Tan/Petroleum odor
Solubility in water:	Insoluble

Volatile Organic Compounds (VOC) Content (theoretical percentage by weight):	0% or (0 g/L)
Flash point:	> 400°F (204°C) SETA CC
Lower explosion limit:	N/D
Upper explosion limit:	N/D

## SECTION 10 – STABILITY AND REACTIVITY

**Stability:** Stable

**Conditions To Avoid:** None

**Incompatibility (Materials To Avoid):** None known.

**Hazardous Decomposition Products:** Toxic fumes of zinc, chlorine, and HCL may be evolved during soldering.

**Hazardous Polymerization:** Will not occur.

## SECTION 11 – TOXICOLOGY INFORMATION

### Chronic Health Hazards

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

### Toxicology Data

#### Ingredient Name

##### Ammonium Chloride

Oral-Rat LD50:	1650 mg/kg
Inhalation-Rat LC50:	N/D

##### Ethanolamine Hydrochloride

Oral-Rat LD50:	N/D
Inhalation-Rat LC50:	N/D

##### Paraffinic Oil

Oral-Rat LD50:	N/D
Inhalation-Rat LC50:	N/D

##### Petrolatum Deriviatives

Oral-Rat LD50:	N/D
Inhalation-Rat LC50:	N/D

##### Polyethylene-polypropylene glycol

Oral-Rat LD50:	N/D
Inhalation-Rat LC50:	N/D

##### Glycerine

Oral-Rat LD50:	12600 mg/kg
Inhalation-Rat LC50:	>570 mg/m <sup>3</sup> /1H

##### Polyethylene glycol octylphenyl ether

Oral-Rat LD50:	4190 mg/kg
Inhalation-Rat LC50:	N/D

## SECTION 12 – ECOLOGICAL INFORMATION

### Ecological Data

Ingredient Name:	<b>Ammonium Chloride</b>
Food Chain Concentration Potential	None
Waterfowl Toxicity	N/A
BOD	None
Aquatic Toxicity	6 ppm/96 hr/sunfish TLm
Ingredient Name:	<b>Ethanolamine Hydrochloride</b>
Food Chain Concentration Potential	None
Waterfowl Toxicity	N/D
BOD	N/D
Aquatic Toxicity	N/D
Ingredient Name:	<b>Paraffinic Oil</b>
Food Chain Concentration Potential	None
Waterfowl Toxicity	N/D
BOD	N/D
Aquatic Toxicity	N/D
Ingredient Name:	<b>Petrolatum Derivative</b>
Food Chain Concentration Potential	None
Waterfowl Toxicity	N/D
BOD	N/D
Aquatic Toxicity	N/D
Ingredient Name:	<b>Polyethylene-polypropylene glycol</b>
Food Chain Concentration Potential	None
Waterfowl Toxicity	N/D
BOD	N/D
Aquatic Toxicity	N/D
Ingredient Name:	<b>Glycerine</b>
Food Chain Concentration Potential	None
Waterfowl Toxicity	N/D
BOD	N/D
Aquatic Toxicity	N/D

Ingredient Name:	<b>Polyethylene glycol octylphenyl ether</b>
Food Chain Concentration Potential	None
Waterfowl Toxicity	N/D
BOD	N/D
Aquatic Toxicity	N/D

## SECTION 13 – DISPOSAL CONSIDERATIONS

**Waste Classification:** Non-regulated solid waste

**Disposal Method:** Approved landfill

Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

## SECTION 14 – TRANSPORTATION INFORMATION

DOT:	Non-regulated
Ocean (IMDG):	Non-regulated
Air (IATA):	Non-regulated
WHMIS (Canada):	Non-regulated

## SECTION 15 – REGULATORY INFORMATION

### Regulatory Data

Ingredient Name:	<b>Ammonium Chloride</b>
SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	N/A
RCRA Code	N/A

Ingredient Name:	<b>Ethanolamine Hydrochloride</b>
SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	N/A
RCRA Code	N/A



Ingredient Name: **Paraffinic Oil**

SARA 313 No  
TSCA Inventory Yes  
CERCLA RQ N/A  
RCRA Code N/A

Ingredient Name: **Petrolatum Derivatives**

SARA 313 Yes  
TSCA Inventory Yes  
CERCLA RQ N/A  
RCRA Code N/A

Ingredient Name: **Polyethylene-polypropylene glycol**

SARA 313 No  
TSCA Inventory Yes  
CERCLA RQ N/A  
RCRA Code N/A

Ingredient Name: **Glycerine**

SARA 313 No  
TSCA Inventory Yes  
CERCLA RQ N/A  
RCRA Code N/A

Ingredient Name: **Polyethylene glycol octylphenyl ether**

SARA 313 No  
TSCA Inventory Yes  
CERCLA RQ N/A  
RCRA Code N/A

## California Proposition 65

This product contains a chemical known to the state of California to cause cancer and/or birth defects or reproductive harm.

## SECTION 16 – OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made.

Consult RectorSeal for further information: (713) 263-8001