pH Reconditioning Solution 1
Safety Datasheet
Hydrogen Chloride 0.1m

Section 1 Product Description

Product Name	pH Reconditioning Kit Bottle 3
Recommended Use	Equipment Calibration
Synonyms	None known
Distributor	Atlas Scientific 43-15 11th Street, Long Island City, NY 11101 718-387-2075
Chemical Information	800-227-1150 (8am-5pm M-F)
Chemtrec	800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200

Not a dangerous substance according to GHS classification criteria. No known OSHA hazards.

GHS Classification

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Water	7732-18-5	99.64
Hydrogen Chloride	7647-01-0	0.364

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact	After contact with skin, wash immediately with plenty of water.
Ingestion	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media	Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards	Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products	Phosphorus compounds, Potassium Oxide, Sodium Oxides

Section 6 Spill or Leak Procedures

Steps to Take in Case Material are Released or Spilled	No health affects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS
Environmental Precautions	Avoid breathing material. Avoid contact with skin and eyes. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7 Handling and Storage

Handling	Avoid contact with skin and eyes.

Storage	Keep container tightly closed in a cool, well-ventilated place.
Storage Code	Green - general chemical storage

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	**(TWA)**	**(STEL)**	**(TWA)**	**(STEL)**
Hydrogen Chloride	N/A	N/A	N/A	N/A

Control Parameters	
Engineering Measures	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.
Personal Protective Equipment (PPE)	Lab coat, apron, eye wash, safety shower.
Respiratory Protection	No respiratory protection required under normal conditions of use.
Respirator Type(s)	None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection. Eye Protection Wear chemical splash goggles when handling this product. Have an eye wash station available.
Skin Protection	Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
Gloves	No information available

Section 9 Physical Data

Formula See Section 3
Molecular Weight No data available
Appearance Colorless Depends upon product selection. The color additives do not affect product hazards. Liquid
Odor None
Odor Threshold No data available
pH Reconditioning Kit Bottle 3
Melting Point Estimated 0°C
Boiling Point 100°C
Flash Point No data available
Flammable Limits in Air No data available

Vapor Pressure No data available
Evaporation Rate (BuAc=1) No data available
Vapor Density (Air=1) No data available

Specific Gravity Approx. 1
Solubility in Water Soluble
Log Pow (calculated) No data available
Autoignition Temperature No data available
Decomposition Temperature No data available
Viscosity No data available
Percent Volatile by Volume No data available

Section 10 Reactivity Data

Reactivity	Not generally reactive under normal conditions.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	None known.
Incompatible Materials	Water-reactive materials
Hazardous Decomposition Products	Sodium Oxides, Potassium Oxide, Phosphorus compounds
Hazardous Polymerization	Will not occur

Section 11 Toxicity Data

Routes of Entry Ingestion, skin and eye contact.
Symptoms (Acute) No data available
Delayed Effects No data available

Acute Toxicity

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		
Hydrogen Chloride	7647-01-0	Oral LD50 Rat 3200 mg/kg	Dermal LD50 Rabbit > 4640 mg/kg	

Carcinogenicity

Chemical Name	CAS Number	IARC	NTP	OSHA
Hydrogen Chloride	7647-01-0	Not listed	Not listed	Not listed

Chronic Effects
Mutagenicity No evidence of a mutagenic effect.
Teratogenicity No evidence of a teratogenic effect (birth defect).
Sensitization No evidence of a sensitization effect.
Reproductive No evidence of negative reproductive effects.
Target Organ Effects
Acute Respiratory system, Cardiovascular system, Musculoskeletal system
Chronic No information available

Section 12 Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: This material is expected to have high mobility in soil. It absorbs weakly to most soil types.
Persistence: Dissolved into water
Bioaccumulation: Bioconcentration is not expected to occur.
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available
Hydrogen Chloride	7647-01-0	

Section 13 Disposal Information

Disposal Methods Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s) Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name
Not regulated for transport by US DOT.

Air - IATA Proper Shipping Name
Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status **All components in this product are on the TSCA Inventory.**

Chemical Name	CAS Name	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Hydrogen Chloride	7647-01-0	No	No	No	No	No

Section 16 Additional Information

Revised 04/23/2021 **Replaces** 09/16/2015 **Printed** 04/23/2021

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Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency for Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
IDLH	Immediately dangerous to life and health

pH Reconditioning Solution 2
Safety Datasheet
Sodium Hydroxide 0.1m

Section 1 Product Description

Product Name	pH Reconditioning Kit Bottle 2
Recommended Use	Equipment Calibration
Synonyms	None known
Distributor	Atlas Scientific 43-15 11th Street, Long Island City, NY 11101 718-387-2075
Chemical Information	800-227-1150 (8am-5pm M-F)
Chemtrec	800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200

Not a dangerous substance according to GHS classification criteria. No known OSHA hazards.

GHS Classification

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Water	7732-18-5	99.6
Sodium Hydroxide	1310-73-2	0.4

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact	After contact with skin, wash immediately with plenty of water.
Ingestion	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media	Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards	Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products	Phosphorus compounds, Potassium Oxide, Sodium Oxides

Section 6 Spill or Leak Procedures

Steps to Take in Case Material are Released or Spilled	No health affects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS
Environmental Precautions	Avoid breathing material. Avoid contact with skin and eyes. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7 Handling and Storage

Handling	Avoid contact with skin and eyes.

Storage	Keep container tightly closed in a cool, well-ventilated place.
Storage Code	Green - general chemical storage

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	**(TWA)**	**(STEL)**	**(TWA)**	**(STEL)**
Sodium Hydroxide	N/A	N/A	N/A	N/A

Control Parameters	
Engineering Measures	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.
Personal Protective Equipment (PPE)	Lab coat, apron, eye wash, safety shower.
Respiratory Protection	No respiratory protection required under normal conditions of use.
Respirator Type(s)	None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection. Eye Protection Wear chemical splash goggles when handling this product. Have an eye wash station available.
Skin Protection	Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
Gloves	No information available

Section 9 Physical Data

Formula See Section 3
Molecular Weight No data available
Appearance Colorless Depends upon product selection. The color additives do not affect product hazards. Liquid
Odor None
Odor Threshold No data available
pH Reconditioning Kit Bottle 2
Melting Point Estimated 0°C
Boiling Point 100°C
Flash Point No data available
Flammable Limits in Air No data available

Vapor Pressure No data available
Evaporation Rate (BuAc=1) No data available
Vapor Density (Air=1) No data available

Specific Gravity Approx. 1
Solubility in Water Soluble
Log Pow (calculated) No data available
Autoignition Temperature No data available
Decomposition Temperature No data available
Viscosity No data available
Percent Volatile by Volume No data available

Section 10 Reactivity Data

Reactivity	Not generally reactive under normal conditions.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	None known.
Incompatible Materials	Water-reactive materials
Hazardous Decomposition Products	Sodium Oxides, Potassium Oxide, Phosphorus compounds
Hazardous Polymerization	Will not occur

Section 11 Toxicity Data

Routes of Entry Ingestion, skin and eye contact.
Symptoms (Acute) No data available
Delayed Effects No data available

Acute Toxicity

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		
Sodium Hydroxide	1310-73-2	Oral LD50 Rat 3200 mg/kg	Dermal LD50 Rabbit > 4640 mg/kg	

Carcinogenicity

Chemical Name	CAS Number	IARC	NTP	OSHA
Sodium Hydroxide	1310-73-2	Not listed	Not listed	Not listed

Chronic Effects
Mutagenicity No evidence of a mutagenic effect.
Teratogenicity No evidence of a teratogenic effect (birth defect).
Sensitization No evidence of a sensitization effect.
Reproductive No evidence of negative reproductive effects.
Target Organ Effects
Acute Respiratory system, Cardiovascular system, Musculoskeletal system
Chronic No information available

Section 12 Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: This material is expected to have high mobility in soil. It absorbs weakly to most soil types.
Persistence: Dissolved into water
Bioaccumulation: Bioconcentration is not expected to occur.
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available
Sodium Hydroxide	1310-73-2	

Section 13 Disposal Information

Disposal Methods Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s) Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name
Not regulated for transport by US DOT.

Air - IATA Proper Shipping Name
Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status **All components in this product are on the TSCA Inventory.**

Chemical Name	CAS Name	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Sodium Hydroxide	1310-73-2	No	No	No	No	No

Section 16 Additional Information

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Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency for Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
IDLH	Immediately dangerous to life and health

pH Reconditioning Solution 3
Safety Datasheet
Ammonium Bifluoride, 20%(W/v)

Section 1 Product Description

Product Name	pH Reconditioning Kit Bottle 1
Recommended Use	Equipment Calibration
Synonyms	None known
Distributor	Atlas Scientific 43-15 11th Street, Long Island City, NY 11101 718-387-2075
Chemical Information	800-227-1150 (8am-5pm M-F)
Chemtrec	800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200

Not a dangerous substance according to GHS classification criteria. No known OSHA hazards.

GHS Classification

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Water	7732-18-5	80
Ammonium Bifluoride	1341-49-7	20

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact	After contact with skin, wash immediately with plenty of water.
Ingestion	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media	Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards	Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products	Phosphorus compounds, Potassium Oxide, Sodium Oxides

Section 6 Spill or Leak Procedures

Steps to Take in Case Material are Released or Spilled	No health affects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS
Environmental Precautions	Avoid breathing material. Avoid contact with skin and eyes. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7 Handling and Storage

Handling	Avoid contact with skin and eyes.

Storage	Keep container tightly closed in a cool, well-ventilated place.
Storage Code	Green - general chemical storage

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	**(TWA)**	**(STEL)**	**(TWA)**	**(STEL)**
Ammonium Bifluoride	N/A	N/A	N/A	N/A

Control Parameters	
Engineering Measures	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.
Personal Protective Equipment (PPE)	Lab coat, apron, eye wash, safety shower.
Respiratory Protection	No respiratory protection required under normal conditions of use.
Respirator Type(s)	None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection. Eye Protection Wear chemical splash goggles when handling this product. Have an eye wash station available.
Skin Protection	Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
Gloves	No information available

Section 9 Physical Data

Formula See Section 3
Molecular Weight No data available
Appearance Colorless Depends upon product selection. The color additives do not affect product hazards. Liquid
Odor None
Odor Threshold No data available
pH Reconditioning Kit Bottle 1
Melting Point Estimated 0°C
Boiling Point 100°C
Flash Point No data available
Flammable Limits in Air No data available

Vapor Pressure No data available
Evaporation Rate (BuAc=1) No data available
Vapor Density (Air=1) No data available

Specific Gravity Approx. 1
Solubility in Water Soluble
Log Pow (calculated) No data available
Autoignition Temperature No data available
Decomposition Temperature No data available
Viscosity No data available
Percent Volatile by Volume No data available

Section 10 Reactivity Data

Reactivity	Not generally reactive under normal conditions.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	None known.
Incompatible Materials	Water-reactive materials
Hazardous Decomposition Products	Sodium Oxides, Potassium Oxide, Phosphorus compounds
Hazardous Polymerization	Will not occur

Section 11 Toxicity Data

Routes of Entry Ingestion, skin and eye contact.
Symptoms (Acute) No data available
Delayed Effects No data available

Acute Toxicity

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		
Ammonium Bifluoride	1341-49-7	Oral LD50 Rat 3200 mg/kg	Dermal LD50 Rabbit > 4640 mg/kg	

Carcinogenicity

Chemical Name	CAS Number	IARC	NTP	OSHA
Ammonium Bifluoride	1341-49-7	Not listed	Not listed	Not listed

Chronic Effects
Mutagenicity No evidence of a mutagenic effect.
Teratogenicity No evidence of a teratogenic effect (birth defect).
Sensitization No evidence of a sensitization effect.
Reproductive No evidence of negative reproductive effects.
Target Organ Effects
Acute Respiratory system, Cardiovascular system, Musculoskeletal system
Chronic No information available

Section 12 Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: This material is expected to have high mobility in soil. It absorbs weakly to most soil types.
Persistence: Dissolved into water
Bioaccumulation: Bioconcentration is not expected to occur.
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available
Ammonium Bifluoride	1341-49-7	

Section 13 Disposal Information

Disposal Methods Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s) Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name
Not regulated for transport by US DOT.

Air - IATA Proper Shipping Name
Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status **All components in this product are on the TSCA Inventory.**

Chemical Name	CAS Name	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Ammonium Bifluoride	1341-49-7	No	No	No	No	No

Section 16 Additional Information

Revised 04/23/2021 **Replaces** 09/16/2015 **Printed** 04/23/2021

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Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency for Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
IDLH	Immediately dangerous to life and health