



08/17/2015

Kit Components

Product code	Description
1762520	ProteOn™ Maintenance and Post Exp Clean Kit

Components:

1764116	ProteOn Maintenance Solution 2, 70% Isopropyl Alcohol
1764119	ProteOn Post Exp Clean Solution 2, 20 mM Hydrochloric Acid
1764115	ProteOn™ Maintenance & Post Expt Clean Solution 1, 2% Contrad 70

Safety Data Sheet

acc. to OSHA HCS



Printing date 08/17/2015

Reviewed on 08/12/2015

1 Identification

- **Product identifier**
- **Trade name:** ProteOn Maintenance Solution 2, 70% Isopropyl Alcohol
- **Catalog or product number:** 1764116, 10022904, 10022905
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547 (510)741-1000
- **Information department:**
Technical services, customer support
lsg_techserv_us@bio-rad.com
- **Emergency telephone number:**
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.
510-741-1000

2 Hazard(s) identification

- **Classification of the substance or mixture**
Flam. Liq. 2 H225 Highly flammable liquid and vapor.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.
 - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** not applicable
 - **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
 - **Classification system:**
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
 - **Label elements**
 - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
 - **Hazard pictograms**
- 

- GHS02 GHS07
- **Signal word** Danger
 - **Hazard-determining components of labeling:**
propan-2-ol

(Contd. on page 2)

US

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/17/2015

Reviewed on 08/12/2015

Trade name: ProteOn Maintenance Solution 2, 70% Isopropyl Alcohol

(Contd. of page 1)

Hazard statements

- H225 Highly flammable liquid and vapor.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.

Precautionary statements

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information: Contact with acids may cause release of toxic gases

Other hazards

Results of PBT and vPvB assessment

- PBT:** Not applicable.
- vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture of the substances listed below with non-hazardous additions.

Listing of dangerous and non-hazardous components:

67-63-0	propan-2-ol	Xi R36 F R11 R67	50-100%
7732-18-5	water		35-50%

Additional information For the wording of the listed risk phrases refer to section 15.

4 First-aid measures

Description of first aid measures

- After inhalation** Supply fresh air; consult doctor in case of complaints.
- After skin contact** Generally the product does not irritate the skin.
- After eye contact** Rinse opened eye for several minutes under running water.
- After swallowing** Induce vomiting and call for medical help.
- Information for doctor**
- Most important symptoms and effects, both acute and delayed** No further relevant information available.
- Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture No further relevant information available.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/17/2015

Reviewed on 08/12/2015

Trade name: ProteOn Maintenance Solution 2, 70% Isopropyl Alcohol

(Contd. of page 2)

- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

67-63-0 propan-2-ol

PEL	Long-term value: 980 mg/m ³ , 400 ppm
REL	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV	Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm BEI

· **Ingredients with biological limit values:**

67-63-0 propan-2-ol

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/17/2015

Reviewed on 08/12/2015

Trade name: ProteOn Maintenance Solution 2, 70% Isopropyl Alcohol

(Contd. of page 3)

BEI 40 mg/L
Medium: urine
Time: end of shift at end of workweek
Parameter: Acetone (background, nonspecific)

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures** Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid
Color: Colorless
Odor: Alcohol-like
Odour threshold: Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: undetermined
Boiling point/Boiling range: 82 °C

· **Flash point:** ≤ 21 °C

· **Flammability (solid, gaseous)** Not applicable.

· **Ignition temperature:** 425 °C

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower: 2.0 Vol %
Upper: 12.0 Vol %

· **Vapor pressure at 20 °C:** 43 hPa

· **Density at 20 °C:** 0.84947 g/cm³
· **Relative density** Not determined.
· **Vapour density** Not determined.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/17/2015

Reviewed on 08/12/2015

Trade name: ProteOn Maintenance Solution 2, 70% Isopropyl Alcohol

(Contd. of page 4)

- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** Fully miscible
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - dynamic:** Not determined.
 - kinematic:** Not determined.
- **Solvent content:**
 - Organic solvents:** 64.7 %
 - Water:** 35.3 %
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values for hazardous components per OSHA criteria:**

67-63-0 propan-2-ol

Oral	LD50	4570 mg/kg (rat)
Dermal	LD50	13400 mg/kg (rab)
Inhalative	LC50/4 h	30 mg/l (rat)

- **Primary irritant effect:**
 - on the eye:** Irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

· **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

67-63-0 | propan-2-ol

3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/17/2015

Reviewed on 08/12/2015

Trade name: ProteOn Maintenance Solution 2, 70% Isopropyl Alcohol

(Contd. of page 5)

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1219
- **UN proper shipping name**
- **DOT, IATA** ISOPROPANOL MIXTURE
- **ADR** 1219 ISOPROPANOL mixture
- **IMDG** ISOPROPANOL mixture
- **Transport hazard class(es)**
- **DOT, ADR, IMDG, IATA**
- **Class** 3 Flammable liquids
- **Label** 3
- **Packing group**
- **DOT, ADR, IMDG, IATA** II

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/17/2015

Reviewed on 08/12/2015

Trade name: ProteOn Maintenance Solution 2, 70% Isopropyl Alcohol

(Contd. of page 6)

· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	33
· EMS Number:	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	Void Void
· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN1219, Isopropanol solution, 3, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

None of the ingredients is listed.

· **Section 313 (40CFR372.65):**

67-63-0 | propan-2-ol

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

67-63-0 | propan-2-ol

A4

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/17/2015

Reviewed on 08/12/2015

Trade name: ProteOn Maintenance Solution 2, 70% Isopropyl Alcohol

(Contd. of page 7)

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
NK	50-100

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environmental Health and Safety.

· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· **Date of preparation / last revision** 08/17/2015 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· *** Data compared to the previous version altered.**

Safety Data Sheet

acc. to OSHA HCS


Printing date 08/17/2015

Reviewed on 08/17/2015

1 Identification

- **Product identifier**
- **Trade name:** ProteOn Post Exp Clean Solution 2, 20 mM Hydrochloric Acid
- **Catalog or product number:** 1764119, 10021444
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547 (510)741-1000
- **Information department:**
Technical services, customer support
lsg_techserv_us@bio-rad.com
- **Emergency telephone number:**
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.
510-741-1000

2 Hazard(s) identification

- **Classification of the substance or mixture**
Skin Corr. 1A H314 Causes severe skin burns and eye damage.
 - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** not applicable
 - **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
 - **Classification system:**
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
 - **Label elements**
 - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
 - **Hazard pictograms**
- 

GHS05
- **Signal word** Danger
 - **Hazard-determining components of labeling:**
hydrochloric acid
 - **Hazard statements**
H314 Causes severe skin burns and eye damage.

(Contd. on page 2)

US

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/17/2015

Reviewed on 08/17/2015

Trade name: ProteOn Post Exp Clean Solution 2, 20 mM Hydrochloric Acid

(Contd. of page 1)

Precautionary statements

- P260 Do not breathe dusts or mists.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- 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/doctor.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information: Contact with acids may cause release of toxic gases

Other hazards

Results of PBT and vPvB assessment

- PBT:** Not applicable.
- vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description:

7732-18-5 water

Identification number(s):

EC number: 231-791-2

Chemical characterization: Mixtures

Description: Mixture of the substances listed below with non-hazardous additions.

Listing of dangerous and non-hazardous components:

7732-18-5	water	50-100%
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Additional information For the wording of the listed risk phrases refer to section 15.

4 First-aid measures

Description of first aid measures

- After inhalation** Supply fresh air; consult doctor in case of complaints.
- After eye contact** Rinse opened eye for several minutes under running water.
- After swallowing** Induce vomiting and call for medical help.
- Information for doctor**
- Most important symptoms and effects, both acute and delayed** No further relevant information available.
- Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture No further relevant information available.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/17/2015

Reviewed on 08/17/2015

Trade name: ProteOn Post Exp Clean Solution 2, 20 mM Hydrochloric Acid

(Contd. of page 2)

- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

7647-01-0 hydrochloric acid

PEL	Ceiling limit value: 7 mg/m ³ , 5 ppm
REL	Ceiling limit value: 7 mg/m ³ , 5 ppm
TLV	Ceiling limit value: 2.98 mg/m ³ , 2 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures** Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/17/2015

Reviewed on 08/17/2015

Trade name: ProteOn Post Exp Clean Solution 2, 20 mM Hydrochloric Acid

(Contd. of page 3)

 · **Eye protection:** Safety glasses

9 Physical and chemical properties

 · **Information on basic physical and chemical properties**

 · **General Information**

 · **Appearance:**

· Form:	Liquid
· Color:	Colorless
· Odor:	Odorless
· Odour threshold:	Not determined.

 · **pH-value at 20 °C:** 1.7

 · **Change in condition**

· Melting point/Melting range:	0 °C
· Boiling point/Boiling range:	undetermined

 · **Flash point:** Not applicable

 · **Flammability (solid, gaseous)** Not applicable.

 · **Ignition temperature:**

 · **Decomposition temperature:** Not determined.

 · **Auto igniting:** Product is not selfigniting.

 · **Danger of explosion:** Product does not present an explosion hazard.

 · **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

 · **Vapor pressure at 20 °C:** 23 hPa

· Density at 20 °C:	1.00009 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

 · **Solubility in / Miscibility with**

 · **Water:** Fully miscible

 · **Partition coefficient (n-octanol/water):** Not determined.

 · **Viscosity:**

· dynamic:	Not determined.
· kinematic:	Not determined.

 · **Solvent content:**

· Organic solvents:	0.0 %
· Water:	99.9 %

 · **Other information** No further relevant information available.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/17/2015

Reviewed on 08/17/2015

Trade name: ProteOn Post Exp Clean Solution 2, 20 mM Hydrochloric Acid

(Contd. of page 4)

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

7647-01-0 hydrochloric acid

3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Generally not hazardous for water.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

US

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/17/2015

Reviewed on 08/17/2015

Trade name: **ProteOn Post Exp Clean Solution 2, 20 mM Hydrochloric Acid**

(Contd. of page 5)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Void |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

7647-01-0 hydrochloric acid

· **Section 313 (40CFR372.65):**

7647-01-0 hydrochloric acid

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/17/2015

Reviewed on 08/17/2015

Trade name: ProteOn Post Exp Clean Solution 2, 20 mM Hydrochloric Acid

(Contd. of page 6)

· **TLV (Threshold Limit Value established by ACGIH)**

7647-01-0 hydrochloric acid

A4

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **National regulations**

· **Water hazard class:** Generally not hazardous for water.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environmental Health and Safety.

· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· **Date of preparation / last revision** 08/17/2015 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

· *** Data compared to the previous version altered.**

Safety Data Sheet

acc. to OSHA HCS


Printing date 08/17/2015

Reviewed on 08/17/2015

1 Identification

- **Product identifier**
- **Trade name:** ProteOn™ Maintenance & Post Expt Clean Solution 1, 2% Contrad 70
- **Catalog or product number:** 1764115, 1764118, 10021449, 10021714, 10021712, 10022850
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547 (510)741-1000
- **Information department:**
Technical services, customer support
lsg_techserv_us@bio-rad.com
- **Emergency telephone number:**
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.
510-741-1000

2 Hazard(s) identification

- **Classification of the substance or mixture**
Skin Corr. 1A H314 Causes severe skin burns and eye damage.
 - **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** not applicable
 - **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
 - **Classification system:**
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
 - **Label elements**
 - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
 - **Hazard pictograms**
- 

GHS05
- **Signal word** Danger
 - **Hazard-determining components of labeling:**
Proprietary Reagent KT2
potassium hydroxide
 - **Hazard statements**
H314 Causes severe skin burns and eye damage.

(Contd. on page 2)

Safety Data Sheet
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Trade name: ProteOn™ Maintenance & Post Expt Clean Solution 1, 2% Contrad 70

(Contd. of page 1)

Precautionary statements

- P260 Do not breathe dusts or mists.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- 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/doctor.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information: Contact with acids may cause release of toxic gases

Other hazards

Results of PBT and vPvB assessment

- PBT:** Not applicable.
- vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description:

7732-18-5 water

Identification number(s):

EC number: 231-791-2

Chemical characterization: Mixtures

Description: Mixture of the substances listed below with non-hazardous additions.

Listing of dangerous and non-hazardous components:

7732-18-5	water	50-100%
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Additional information For the wording of the listed risk phrases refer to section 15.

4 First-aid measures

Description of first aid measures

- After inhalation** Supply fresh air; consult doctor in case of complaints.
- After eye contact** Rinse opened eye for several minutes under running water.
- After swallowing** Induce vomiting and call for medical help.
- Information for doctor**
- Most important symptoms and effects, both acute and delayed** No further relevant information available.
- Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture No further relevant information available.

(Contd. on page 3)

Safety Data Sheet
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(Contd. of page 2)

- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

1310-58-3 potassium hydroxide

REL	Ceiling limit value: 2 mg/m ³
TLV	Ceiling limit value: 2 mg/m ³

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures** Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 4)

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(Contd. of page 3)

· **Eye protection:** Safety glasses

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Liquid
· Color:	Colorless
· Odor:	Odorless
· Odour threshold:	Not determined.

· **pH-value at 20 °C:** 12

· **Change in condition**

· Melting point/Melting range:	0 °C
· Boiling point/Boiling range:	undetermined

· **Flash point:** Not applicable

· **Flammability (solid, gaseous)** Not applicable.

· **Ignition temperature:**

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

· **Vapor pressure at 20 °C:** 23 hPa

· **Density:** Not determined

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

· **Water:** Fully miscible

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· dynamic:	Not determined.
· kinematic:	Not determined.

· **Solvent content:**

· Organic solvents:	0.0 %
· Water:	99.8 %

· **Solids content:** 0.2 %

(Contd. on page 5)

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(Contd. of page 4)

· **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

Proprietary Reagent CP 12

3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Generally not hazardous for water.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 6)

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(Contd. of page 5)

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** Void
- **UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Void
- **Transport hazard class(es)**
- **DOT, ADR, ADN, IMDG, IATA**
- **Class** Void
- **Packing group**
- **DOT, ADR, IMDG, IATA** Void
- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** Void

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

None of the ingredients is listed.

· **Section 313 (40CFR372.65):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

Proprietary Reagent KT2

Proprietary Reagent S

(Contd. on page 7)

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(Contd. of page 6)

	Proprietary Reagent CP 12
	Proprietary Reagent
7732-18-5	water

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **National regulations**

· **Water hazard class:** Generally not hazardous for water.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environmental Health and Safety.

· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

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