

**Kit Components**

Product code	Description
<b>4301-0010</b>	<b>Vanadis Extract® Bind and Wash kit</b> <b>For research use only. Not for use in diagnostic procedures.</b>

## Components:

4301-0010-P1	Binding Buffer
4301-0010-P2	Wash Solution

## Safety Data Sheet according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

### 1 Identification

- **Product identifier**
- **Trade name:** Binding Buffer
- **Article number:** 4301-0010-P1
- **Application of the substance / the mixture**  
In vitro diagnostics  
Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Revvity Inc.  
Wallac Oy  
P.O. Box 10  
FI-20101 Turku  
Finland  
+358 2 2678 111
- **Information department:**  
Product safety department.  
MSDS\_Turku@revvity.com
- **Emergency telephone number:**  
CHEMTREC (within U.S.) 800 424-9300  
CHEMTREC (from outside U.S.) +1-703-572-3887

### 2 Hazard identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids - Category 2

H225 Highly flammable liquid and vapour.



GHS05 Corrosion

Skin Corrosion - Category 1C

H314 Causes severe skin burns and eye damage.

Serious Eye Damage - Category 1

H318 Causes serious eye damage.



GHS07

Acute Toxicity (Inhalation) - Category 4

H332 Harmful if inhaled.

Specific Target Organ Toxicity - Single Exposure - Category 3

H336 May cause drowsiness or dizziness.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

Trade name: **Binding Buffer**

(Contd. of page 1)

· **Hazard pictograms**

GHS02   GHS05   GHS07

· **Signal word** *Danger*· **Hazard-determining components of labeling:**

guanidinium thiocyanate  
propan-2-ol

· **Hazard statements**

Highly flammable liquid and vapour.

Harmful if inhaled.

Causes severe skin burns and eye damage.

May cause drowsiness or dizziness.

· **Precautionary statements**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Use non-sparking tools.

Take actions to prevent static discharges.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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/doctor.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**· **NFPA ratings (scale 0 - 4)**

Health = 3

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = \*3

Fire = 3

Reactivity = 0

### 3 Composition/Information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

(Contd. on page 3)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

Trade name: **Binding Buffer**

(Contd. of page 2)

· <b>Dangerous components:</b>		
593-84-0	guanidinium thiocyanate	≥20-≤50% w/w *
67-63-0	propan-2-ol	20-50% w/w *

\* Actual concentration ranges are withheld as a trade secret.

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **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:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Prevent seepage into sewage system, workpits and cellars.  
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).  
Use neutralizing agent.  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.
- **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.

CA

(Contd. on page 4)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

Trade name: **Binding Buffer**

(Contd. of page 3)

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **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 section 7.
- **Control parameters**

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

67-63-0 propan-2-ol

EL	STEL: 400 ppm TWA: 200 ppm
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EV	STEL: 400 ppm TWA: 200 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:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/  
the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the

(Contd. on page 5)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

Trade name: **Binding Buffer**

(Contd. of page 4)

application.

- **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:**



Tightly sealed goggles

### 9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

**Form:** Fluid

**Color:** According to product specification

- **Odor:** Characteristic

- **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 82 °C

- **Flash point:** 13 °C

- **Flammability (solid, gaseous):** Highly flammable.

- **Auto igniting:** 425 °C

- **Decomposition temperature:** Not determined.

- **Ignition temperature:** Product is not selfigniting.

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

- **Explosion limits:**

**Lower:** 2 Vol %

**Upper:** 12 Vol %

- **Vapor pressure at 20 °C:** 43 hPa

- **Density:** Not determined.

- **Relative density** Not determined.

- **Vapor 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:** 32.3 %

**Solids content:** 0.0 %

(Contd. on page 6)

CA

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

Trade name: **Binding Buffer**

(Contd. of page 5)

· **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:** *No irritant effect.*
- **on the eye:** *Strong irritant with the danger of severe eye injury.*
- **Sensitization:** *No sensitizing effects known.*
- **Additional toxicological information:**  
*The product shows the following dangers according to internally approved calculation methods for preparations:*  
*Harmful*  
*Irritant*
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

67-63-0	propan-2-ol	3
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- **NTP (National Toxicology Program)**
- 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 2 (Self-assessment): hazardous for water*  
*Do not allow product to reach ground water, water course or sewage system.*  
*Must not reach bodies of water or drainage ditch undiluted or unneutralized.*  
*Danger to drinking water if even small quantities leak into the ground.*
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*
- **Other adverse effects** *No further relevant information available.*

CA

(Contd. on page 7)

# Safety Data Sheet

according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024





Trade name: **Binding Buffer**

(Contd. of page 6)

## 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:** Hand over to hazardous waste disposers.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

- |   |   |
|---|---|
| <b>· UN-Number</b>  | UN2924  |
| <b>· DOT/TDG, ADR, IMDG, IATA</b>   | UN2924  |
| <b>· UN proper shipping name</b>  | Flammable liquids, corrosive, n.o.s. (Isopropanol, guanidinium thiocyanate)                     |
| <b>· DOT/TDG</b>  | 2924 Flammable liquids, corrosive, n.o.s. (Isopropanol, guanidinium thiocyanate)                |
| <b>· ADR</b>  | 2924 Flammable liquids, corrosive, n.o.s. (Isopropanol, guanidinium thiocyanate)                |
| <b>· IMDG, IATA</b>   | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ISOPROPRANOL (ISOPROPYL ALCOHOL), guanidinium thiocyanate) |
| <b>· Transport hazard class(es)</b>   |   |
| <b>· DOT/TDG (Transport dangerous goods):</b>                                       |   |
|  |   |
| <b>· Class</b>  | 3 Flammable liquids   |
| <b>· Label</b>  | 3, 8  |
| <b>· ADR</b>  |   |
|  |   |
| <b>· Class</b>  | 3 Flammable liquids   |
| <b>· Label</b>  | 3+8   |
| <b>· IMDG</b>   |   |
|  |   |
| <b>· Class</b>  | 3 Flammable liquids   |
| <b>· Label</b>  | 3/8   |
| <b>· IATA</b>   |   |
|  |   |
| <b>· Class</b>  | 3 Flammable liquids   |
| <b>· Label</b>  | 3 (8)   |

(Contd. on page 8)

CA



# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

Trade name: **Binding Buffer**

(Contd. of page 7)

· <b>Packing group</b> · <b>DOT/TDG, ADR, IMDG, IATA</b>	II
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b> · <b>Hazard identification number (Kemler code):</b> · <b>EMS Number:</b> · <b>Stowage Category</b> · <b>Stowage Code</b>	Warning: Flammable liquids 336 F-E,S-D B SW2 Clear of living quarters.
· <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b> · <b>DOT/TDG</b> · <b>Quantity limitations</b>	On passenger aircraft/rail: 1 L On cargo aircraft only: 60 L
· <b>ADR</b> · <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	IL Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ISOPROPANOL (ISOPROPYL ALCOHOL), GUANIDINIUM THIOCYANATE), 3 (8), II

### 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

67-63-0 | propan-2-ol

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

All components have the value ACTIVE.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Non-Domestic Substances List (NDSL)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

67-63-0 | propan-2-ol

(Contd. on page 9)

CA

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

Trade name: **Binding Buffer**

(Contd. of page 8)

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02 GHS05 GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**

guanidinium thiocyanate

propan-2-ol

- **Hazard statements**

Highly flammable liquid and vapour.

Harmful if inhaled.

Causes severe skin burns and eye damage.

May cause drowsiness or dizziness.

- **Precautionary statements**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Use non-sparking tools.

Take actions to prevent static discharges.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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/doctor.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **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:** Product safety department.

· **Contact:** MSDS\_Turku@revvity.com

· **Date of the latest revision of the safety data sheet** 02/29/2024

- **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

(Contd. on page 10)

**Safety Data Sheet**  
according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

**Trade name: Binding Buffer**

*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*

(Contd. of page 9)

CA

## Safety Data Sheet according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

### 1 Identification

- **Product identifier**
- **Trade name:** Wash Solution
- **Article number:** 4301-0010-P2
- **Application of the substance / the mixture**  
Laboratory chemicals  
In vitro diagnostics
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Revvity Inc.  
Wallac Oy  
P.O. Box 10  
FI-20101 Turku  
Finland  
+358 2 2678 111
- **Information department:**  
Product safety department.  
MSDS\_Turku@revvity.com
- **Emergency telephone number:**  
CHEMTREC (within U.S.) 800 424-9300  
CHEMTREC (from outside U.S.) +1-703-572-3887

### 2 Hazard identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids - Category 2 H225 Highly flammable liquid and vapour.

- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02

- **Signal word** *Danger*
- **Hazard statements**  
*Highly flammable liquid and vapour.*
- **Precautionary statements**  
*Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*  
*Keep container tightly closed.*  
*Ground and bond container and receiving equipment.*  
*Use explosion-proof [electrical/ventilating/lighting] equipment.*  
*Use non-sparking tools.*  
*Take actions to prevent static discharges.*  
*Wear protective gloves/protective clothing/eye protection/face protection.*

(Contd. on page 2)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

**Trade name: Wash Solution**

(Contd. of page 1)

*IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*

*In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.*

*Store in a well-ventilated place. Keep cool.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = 0
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

### 3 Composition/Information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

64-17-5	ethanol	50-75% w/w *
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\* Actual concentration ranges are withheld as a trade secret.

· **Other ingredients**

7732-18-5	water	20-50% w/w
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### 4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately rinse with water.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** If symptoms persist consult doctor.

· **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:**

CO<sub>2</sub>, 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.

· **Advice for firefighters**

· **Protective equipment:** No special measures required.

### 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

(Contd. on page 3)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

Trade name: Wash Solution

(Contd. of page 2)

- **Environmental precautions:**  
Prevent seepage into sewage system, workpits and cellars.  
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).  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.
- **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 precautions are necessary if used correctly.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **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 section 7.

- **Control parameters**

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

64-17-5 ethanol

EL STEL: 1000 ppm

EV TWA: 1,900 mg/m<sup>3</sup>, 1,000 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:**

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

- **Breathing equipment:** Not required.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

(Contd. on page 4)

-CA

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

Trade name: Wash Solution

(Contd. of page 3)

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **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:**



Tightly sealed goggles

### 9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	According to product specification
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	78 °C

- **Flash point:** 13 °C

- **Flammability (solid, gaseous):** Highly flammable.

- **Auto igniting:** 425 °C

- **Decomposition temperature:** Not determined.

- **Ignition temperature:** Product is not selfigniting.

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

- **Explosion limits:**

<b>Lower:</b>	3.5 Vol %
<b>Upper:</b>	15 Vol %

- **Vapor pressure at 20 °C:** 59 hPa

- **Vapor pressure at 50 °C:** 280 hPa

<b>Density at 20 °C:</b>	0.85 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.

- **Solubility in / Miscibility with**

**Water:** Fully miscible.

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

- **Viscosity:**

<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.

(Contd. on page 5)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

Trade name: Wash Solution

(Contd. of page 4)

· <b>Solvent content:</b>	
<b>Organic solvents:</b>	70.0 %
<b>Water:</b>	30.0 %
· <b>Solids content:</b> 0.0 %	
· <b>Other information</b> 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:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>
---

None of the ingredients is listed.
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· <b>NTP (National Toxicology Program)</b>
--

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 (Self-assessment): slightly hazardous for water
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

CA

(Contd. on page 6)



# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024



Trade name: Wash Solution

(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:** Hand over to hazardous waste disposers.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- |   |   |
|---|---|
| <b>· UN-Number</b>  |   |
| <b>· DOT/TDG, ADR, IMDG, IATA</b>   | UN1170  |
| <b>· UN proper shipping name</b>  | Ethanol solutions   |
| <b>· DOT/TDG</b>  | 1170 Ethanol solutions  |
| <b>· ADR</b>  | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)   |
| <b>· IMDG</b>   | ETHANOL SOLUTION  |
| <b>· IATA</b>   |   |
| <b>· Transport hazard class(es)</b>   |   |
| <b>· DOT/TDG (Transport dangerous goods):</b>                                     |   |
|   |  |
| <b>· Class</b>  | 3 Flammable liquids   |
| <b>· Label</b>  | 3   |
|   |   |
| <b>· ADR, IMDG, IATA</b>  |   |
|   |  |
| <b>· Class</b>  | 3 Flammable liquids   |
| <b>· Label</b>  | 3   |
| <b>· Packing group</b>  |   |
| <b>· DOT/TDG, ADR, IMDG, IATA</b>   | II  |
| <b>· Environmental hazards:</b>   | Not applicable.   |
| <b>· Special precautions for user</b>   | Warning: Flammable liquids  |
| <b>· Hazard identification number (Kemler code):</b>                              | 33  |
| <b>· EMS Number:</b>  | F-E,S-D   |
| <b>· Stowage Category</b>   | A   |
| <b>· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b> | Not applicable.   |
| <b>· Transport/Additional information:</b>  |   |
| <b>· DOT/TDG</b>  |   |
| <b>· Quantity limitations</b>   | On passenger aircraft/rail: 5 L<br>On cargo aircraft only: 60 L                     |

(Contd. on page 7)

-CA

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

**Trade name: Wash Solution**

(Contd. of page 6)

· <b>ADR</b>	
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

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

All components have the value ACTIVE.

- **Canadian substance listings:**

- **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

- **Canadian Non-Domestic Substances List (NDSL)**

None of the ingredients is listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

64-17-5 | ethanol

- **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02

- **Signal word Danger**

- **Hazard statements**

Highly flammable liquid and vapour.

- **Precautionary statements**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Use non-sparking tools.

Take actions to prevent static discharges.

Wear protective gloves/protective clothing/eye protection/face protection.

(Contd. on page 8)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 02/29/2024

Reviewed on 02/29/2024

**Trade name: Wash Solution**

(Contd. of page 7)

*IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*

*In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.*

*Store in a well-ventilated place. Keep cool.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **National regulations:**
- **Additional classification according to Decree on Hazardous Materials:**  
Carcinogenic hazardous material group III (dangerous).
- **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:** Product safety department.
- **Contact:** MSDS\_Turku@revvity.com
- **Date of the latest revision of the safety data sheet** 02/29/2024

- **Abbreviations and acronyms:**

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*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)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

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