



Safety Data Sheet
acc. to OSHA HCS

Printing date 12/21/2018

Reviewed on 07/12/2016

1 Identification

- **Product identifier**
- **Trade name:** RNA Pre-Wash Buffer
- **Article number:** R1020-2-12, R1020-2-25, R1020-2-50, R1020-2-100
- **Application of the substance / the mixture** Laboratory Reagent
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Zymo Research Corp.
17062 Murphy Ave.
Irvine, CA 92614
USA
Phone: 1-949-679-1190 or 1-888-882-9682
sds@zymoresearch.com
- **Information department:** Product safety department
- **Emergency telephone number:**
During normal business hours (8 am to 5 pm Pacific Standard Time): +1 (949) 679 1190

2 Hazard(s) identification

- **Classification of the substance or mixture**



Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 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).
- **Hazard pictograms** GHS07
- **Signal word** Warning
- **Hazard-determining components of labeling:**
propan-2-ol
- **Hazard statements**
Causes serious eye irritation.
May cause drowsiness or dizziness.
- **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear eye protection / face protection.
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.
Call a poison center/doctor if you feel unwell.

(Contd. on page 2)



Safety Data Sheet acc. to OSHA HCS

Printing date 12/21/2018

Reviewed on 07/12/2016

Trade name: RNA Pre-Wash Buffer

(Contd. of page 1)

If eye irritation persists: Get medical advice/attention. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

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



- HMIS-ratings (scale 0 - 4)



- 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 nonhazardous additions.

Dangerous components:

Table with 2 columns: CAS number, Component name, and Percentage. Rows include ethanol (25%) and propan-2-ol (25%).

4 First-aid measures

- Description of first aid measures: After inhalation, After skin contact, After eye contact, After swallowing, Information for doctor, Most important symptoms and effects, both acute and delayed, Indication of any immediate medical attention and special treatment needed.



Safety Data Sheet
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Printing date 12/21/2018

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Trade name: RNA Pre-Wash Buffer

(Contd. of page 2)

5 Fire-fighting measures

- Extinguishing media
Suitable extinguishing agents:
Advice for firefighters
Protective equipment: Wear protective clothing.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
Environmental precautions:
Methods and material for containment and cleaning up:
Reference to other sections
Protective Action Criteria for Chemicals

PAC-1:

Table with 3 columns: CAS number, chemical name, and concentration (ppm). Rows include ethanol (1,800 ppm) and propan-2-ol (400 ppm).

PAC-2:

Table with 3 columns: CAS number, chemical name, and concentration (ppm). Rows include ethanol (3300* ppm) and propan-2-ol (2000* ppm).

PAC-3:

Table with 3 columns: CAS number, chemical name, and concentration (ppm). Rows include ethanol (15000* ppm) and propan-2-ol (12000** ppm).

7 Handling and storage

- Handling:
Precautions for safe handling
Information about protection against explosions and fires:
Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles:
Information about storage in one common storage facility:

(Contd. on page 4)



Safety Data Sheet
acc. to OSHA HCS

Printing date 12/21/2018

Reviewed on 07/12/2016

Trade name: RNA Pre-Wash Buffer

(Contd. of page 3)

- Further information about storage conditions: Keep receptacle tightly sealed.
Specific end use(s) Laboratory reagent

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:

CAS: 64-17-5 ethanol

Table with 2 columns: PEL, REL, TLV and their corresponding values for ethanol.

CAS: 67-63-0 propan-2-ol

Table with 2 columns: PEL, REL, TLV and their corresponding values for propan-2-ol.

Ingredients with biological limit values:

CAS: 67-63-0 propan-2-ol

Table with 2 columns: BEI and its corresponding details for propan-2-ol.

- 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

(Contd. on page 5)



Safety Data Sheet
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Printing date 12/21/2018

Reviewed on 07/12/2016

Trade name: RNA Pre-Wash Buffer

(Contd. of page 4)

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 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:

Table with 2 columns: Property (Form, Color, Odor, Odor threshold) and Value (Liquid, Clear, Odorless, Not determined).

pH-value: Not determined.

Change in condition

Table with 2 columns: Property (Melting point/Melting range, Boiling point/Boiling range) and Value (Undetermined, Undetermined).

Flash point: Not applicable.

Flammability (solid, gaseous): Not applicable.

Ignition temperature: 425 °C (797 °F)

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

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

Explosion limits:

Table with 2 columns: Property (Lower, Upper) and Value (2 Vol %, 15 Vol %).

Vapor pressure at 20 °C (68 °F): 59 hPa (44.3 mm Hg)

(Contd. on page 6)



Safety Data Sheet
acc. to OSHA HCS

Printing date 12/21/2018

Reviewed on 07/12/2016

Trade name: RNA Pre-Wash Buffer

(Contd. of page 5)

Table with 2 columns: Property and Value. Rows include Density, Relative density, Vapor density, Evaporation rate, Solubility in / Miscibility with Water, Partition coefficient (n-octanol/water), Viscosity (Dynamic, Kinematic), Solvent content (Organic solvents, VOC content), Solids content, and Other information.

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: Irritating effect.
Sensitization: No sensitizing effects known.
Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
Carcinogenic categories

IARC (International Agency for Research on Cancer)

CAS: 67-63-0 propan-2-ol

3

(Contd. on page 7)



Safety Data Sheet
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Printing date 12/21/2018

Reviewed on 07/12/2016

Trade name: RNA Pre-Wash Buffer

(Contd. of page 6)

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: Not hazardous for water.
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:
Dispose of contents in accordance with local/regional/national, and international recommendations.
Uncleaned packagings:
Recommendation:
Dispose of container in accordance with local/regional/national and international recommendations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- UN-Number
DOT, ADN, IMDG, IATA not regulated
UN proper shipping name
DOT, ADN, IMDG, IATA not regulated
Transport hazard class(es)
DOT, ADN, IMDG, IATA
Class not regulated

(Contd. on page 8)



Safety Data Sheet
acc. to OSHA HCS

Printing date 12/21/2018

Reviewed on 07/12/2016

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(Contd. of page 7)

Table with 2 columns: Hazard/Regulation and Status. Rows include Packing group, DOT/IMDG/IATA, Environmental hazards, Special precautions for user, Transport in bulk, and UN Model Regulation.

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):
CAS: 67-63-0 | propan-2-ol

TSCA (Toxic Substances Control Act):
All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

Carcinogenic categories

EPA (Environmental Protection Agency)
None of the ingredients is listed.

Table with 3 columns: CAS, Chemical Name, and Hazard Code. Rows for ethanol (A3) and propan-2-ol (A4).

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

- GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms: GHS07

(Contd. on page 9)



Safety Data Sheet
acc. to OSHA HCS

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(Contd. of page 8)

- **Signal word** Warning
- **Hazard-determining components of labeling:**
propan-2-ol
- **Hazard statements**
Causes serious eye irritation.
May cause drowsiness or dizziness.
- **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear eye protection / face protection.
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.
Call a poison center/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
Store in a well-ventilated place. Keep container tightly closed.
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:**
Zymo Research Corp.
Safety Department
17062 Murphy Ave.
Irvine, CA 92614
USA
Phone: 1-949-679-1190 or 1-888-882-9682
- **Contact:** sds@zymoresearch.com
- **Date of preparation / last revision** 12/21/2018 / -
- **Abbreviations and acronyms:**
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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic

(Contd. on page 10)



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

Page 10/10

Safety Data Sheet
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Printing date 12/21/2018

Reviewed on 07/12/2016

Trade name: RNA Pre-Wash Buffer

(Contd. of page 9)

vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

US