

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/12/2015

Reviewed on 01/12/2015

1 Identification

- **Product identifier**
- **Trade name:** Wash Reagent 2
- **Catalog or product number:** 4307591, 10005487
- **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.
Carc. 2 H351 Suspected of causing cancer.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.
Acute Tox. 4 H312 Harmful in contact with skin.
STOT SE 3 H336 May cause drowsiness or dizziness.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Flammable.
Xn; Harmful
R22-40-48/20/22: Harmful if swallowed. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
F; Highly flammable
R11: Highly flammable.
R67: Vapours may cause drowsiness and dizziness.
- **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.
Has a narcotizing effect.
- **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.

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



GHS02 GHS05 GHS07 GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labeling:**
acetone
hydrogen chloride
trichloromethane
propan-2-ol
- **Hazard statements**
H225 Highly flammable liquid and vapor.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H351 Suspected of causing cancer.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
- **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
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
- **Emergency overview:**
- **Routes of exposure:** Ingestion
- **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.

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· Listing of dangerous and non-hazardous components:

67-64-1	acetone	Xi R36 F R11 R66-67	50-100%
67-63-0	propan-2-ol	Xi R36 F R11 R67	2.5-5%
	Component 7	Xn R22 R10	2.5-5%
67-66-3	trichloromethane	Xn R22-40-48/20/22 Xi R38 Carc. Cat. 3	2.5-5%
	hydrogen chloride	C R34 Xi R37	2.5-5%

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

4 First-aid measures

· Description of first aid measures

· General information

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; 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. Then consult a doctor.

· After swallowing Immediately call a 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, sand, extinguishing powder. Do not use water.

· For safety reasons unsuitable extinguishing agents

Water.

Water with full jet.

· 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 (See section 8). Keep unprotected persons away.

Wear protective clothing.

· Environmental precautions:

Prevent seepage into sewage system, workpits and cellars.

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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).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

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

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 item 7.

Control parameters

Components with limit values that require monitoring at the workplace:

67-64-1 acetone

PEL () 2400 mg/m³, 1000 ppm

REL () 590 mg/m³, 250 ppm

TLV () Short-term value: (1782) NIC-1187 mg/m³, (750) NIC-500 ppm
Long-term value: (1188) NIC-475 mg/m³, (500) NIC-200 ppm
BEI

67-63-0 propan-2-ol

PEL () 980 mg/m³, 400 ppm

REL () Short-term value: 1225 mg/m³, 500 ppm
Long-term value: 980 mg/m³, 400 ppm

TLV () Short-term value: 984 mg/m³, 400 ppm
Long-term value: 492 mg/m³, 200 ppm
BEI

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67-66-3 trichloromethane

PEL () Short-term value: C 240 mg/m³, C 50 ppm
 REL () Short-term value: 9.78* mg/m³, 2* ppm
 *60-min; See Pocket Guide App. A
 TLV () 49 mg/m³, 10 ppm

Ingredients with biological limit values:

67-64-1 acetone

BEI () 50 mg/L
 Medium: urine
 Time: end of shift
 Parameter: Acetone (nonspecific)

67-63-0 propan-2-ol

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

Keep away from foodstuffs, beverages and feed.
 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
 Tightly sealed goggles.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form: Liquid
Color: Colorless
Odor: Recognizable
Odour threshold: Not determined.

pH-value at 20 °C: 5.5

Change in condition

Melting point/Melting range: undetermined
Boiling point/Boiling range: 55 °C

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· Flash point:	< 0 °C
· Flammability (solid, gaseous)	Not applicable.
· Ignition temperature:	340 °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:	2.6 Vol %
Upper:	13.0 Vol %
· Vapor pressure at 20 °C:	233 hPa
· Density at 20 °C:	0.82281 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:	90.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **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

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11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values for hazardous components per OSHA criteria:**

67-64-1 acetone

Oral	LD50	5800 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rbt)

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)

Component 7

Oral	LD50	1300 mg/kg (rat)
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67-66-3 trichloromethane

Oral	LD50	908 mg/kg (rat)
Dermal	LD50	75 mg/kg (rat)

- **Primary irritant effect:**

· **on the skin:**

No irritant effect.

Strong caustic effect on skin and mucous membranes.

· **on the eye:** No irritant effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

- **Carcinogenic categories**

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

67-63-0	propan-2-ol	3
67-66-3	trichloromethane	2B
	hydrogen chloride	3

· **NTP (National Toxicology Program)**

67-66-3	trichloromethane	R
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· **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.

· **Bioaccumulative potential:** No further relevant information available.

· **Mobility in soil:** No further relevant information available.

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- **Additional ecological information:**
- **General notes:**
Water danger class 3 (Internal calculation) (Self-assessment): extremely hazardous for water.
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely 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.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Hand over to hazardous waste disposers.
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.

14 Transport information

· UN-Number	
· DOT, ADR, IMDG, IATA	UN1993
· UN proper shipping name	
· DOT, IMDG, IATA	FLAMMABLE LIQUID, N.O.S. (ACETONE, CHLOROFORM)
· ADR	1993 FLAMMABLE LIQUID, N.O.S. (vapor pressure at 50 °C at most 110 kPa) (ACETONE, CHLOROFORM)
· Transport hazard class(es)	
· DOT, ADR, IMDG, IATA	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, ADR, IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	33
· EMS Number:	F-E,S-E
· Segregation groups	Liquid halogenated hydrocarbons
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

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· **UN "Model Regulation":** UN1993, FLAMMABLE LIQUID, N.O.S., 3, II

15 Regulatory information

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

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

67-66-3	trichloromethane
	hydrogen chloride

· **Section 313 (40CFR372.65):**

67-63-0	propan-2-ol
67-66-3	trichloromethane
	hydrogen chloride

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

All ingredients are listed.

· **California Proposition 65:**

· **Chemicals known to cause cancer:**

67-66-3	trichloromethane
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· **Developmental Toxicity**

67-66-3	trichloromethane
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· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

67-64-1	acetone	I
67-66-3	trichloromethane	NL

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

67-64-1	acetone	A4
67-63-0	propan-2-ol	A4
67-66-3	trichloromethane	A3

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

67-66-3	trichloromethane	4
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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

67-66-3	trichloromethane
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· **National regulations**

· **Technical instructions (air):**

Class	Share in %
I	2.5-5
III	2.5-5
NK	50-100

· **Water hazard class:** Water danger class 3 (Self-assessment): extremely hazardous for water.

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· **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** 01/12/2015 / -

· **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

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

Acute Tox. 4: Acute toxicity, Hazard Category 4

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

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

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

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

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