



10/17/2007

### Kit Components

Product code	Description
<b>1632140</b>	<b>ReadyPrep™ 2D Cleanup Kit (5 Rx)</b>

Components:

4307589	Precipitation Agent 1
4307590	Precipitation Agent 2
4307587	Wash Reagent 1
4307591	Wash Reagent 2
4307588	Wash 2 Additive

**Material Safety Data Sheet**

Printing date 10/17/2007

Reviewed on 10/08/2007

**1 Identification of substance:**

- **Product details:**
- **Trade name:** Precipitation Agent 1
- **Catalog or product number:** 4307589, 10005505
- **Application of the substance / the preparation** Laboratory chemicals
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547 (510)741-1000
- **Information department:** Technical services, customer support.
- **Emergency information:**  
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 Composition/Information on components:**

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

· **Listing of dangerous and non-hazardous components:**

CAS: 7732-18-5 EINECS: 231-791-2 RTECS: ZC 0110000	water		50-100%
	Component 1	Xi; R 36/38	20-35%
CAS: 76-03-9 EINECS: 200-927-2 RTECS: AJ7875000	trichloroacetic acid	C, N; R 35-50/53	5-10%
	Component 2		2.5-5%

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

**3 Hazards identification**

- **Emergency overview:**  
Corrosive.  
May cause irreversible eye damage.  
C Corrosive  
N Dangerous for the environment
- **Information pertaining to particular dangers for man 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.  
R 34 Causes burns.  
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- **Classification system**  
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

**4 First aid measures**

- **General information** Immediately remove any clothing soiled by the product.
- **After inhalation** In case of unconsciousness place patient stably in side position for transportation.

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**Trade name: Precipitation Agent 1**

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- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing** Drink copious amounts of water and provide fresh air. Immediately call a doctor.

**5 Fire fighting measures**

- **Suitable extinguishing agents** CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

**6 Accidental release measures**

- **Person-related safety precautions:** Wear protective equipment (See section 8). Keep unprotected persons away.
- **Measures for environmental protection:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

**7 Handling and storage**

- **Handling**
- **Information for safe handling:**  
No special measures required.  
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **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:** Keep receptacle tightly sealed.

**8 Exposure controls and personal protection**

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

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

**76-03-9 trichloroacetic acid**

REL ()	7 mg/m <sup>3</sup> , 1 ppm
TLV ()	6.7 mg/m <sup>3</sup> , 1 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **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.

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**Trade name: Precipitation Agent 1**

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- Avoid contact with the eyes and skin.
- **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:**

· **General Information**

<b>Form:</b>	liquid
<b>Color:</b>	Whitish
<b>Odor:</b>	Recognizable

· **Change in condition**

**Melting point/Melting range:** undetermined  
**Boiling point/Boiling range:** 100°C

· **Flash point:** Not applicable

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

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

· **Vapor pressure at 20°C:** 23 hPa

· **Density at 20°C:** 1.35585 g/cm<sup>3</sup>

· **Solubility in / Miscibility with**

**Water:** Fully miscible

· **pH-value at 20°C:** 1

· **Solvent content:**

· **Organic solvents:** 0.0 %

· **Water:** 55.3 %

· **Solids content:** 55.0 %

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions:** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

**11 Toxicological information**

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.

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**Trade name: Precipitation Agent 1**

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- **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:  
Corrosive  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Target organs:** Skin.

**12 Ecological information:**

- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **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.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms  
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.

**13 Disposal considerations**

- **Product:**
- **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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**14 Transport information**

- **DOT regulations:**
- **Hazard class:** 8
- **Identification number:** UN2564
- **Packing group:** III
- **Proper shipping name (technical name):** TRICHLOROACETIC ACID SOLUTION
- **Label** 8
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** 8 Corrosive substances
- **Danger code (Kemler):** 80
- **UN-Number:** 3265
- **Packing group:** III
- **Label** 8
- **Description of goods:** 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (TRICHLOROACETIC ACID)

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**Trade name: Precipitation Agent 1**

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· **Maritime transport IMDG:**  
 · **IMDG Class:** 8  
 · **UN Number:** 3265  
 · **Label** 8  
 · **Packing group:** III  
 · **EMS Number:** F-A,S-B  
 · **Marine pollutant:** No  
 · **Proper shipping name:** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (trichloroacetic acid)

· **Air transport ICAO-TI and IATA-DGR:**  
 · **ICAO/IATA Class:** 8  
 · **UN/ID Number:** 2564  
 · **Label** 8  
 · **Packing group:** III  
 · **Proper shipping name:** TRICHLOROACETIC ACID SOLUTION

**15 Regulations**

· **SARA (Superfund Amendants 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):**

All ingredients are listed.

· **Carcinogeny categories**

· **EPA (Environmental Protection Agency)**

76-03-9 trichloroacetic acid

C

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

76-03-9 trichloroacetic acid

3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

76-03-9 trichloroacetic acid

A3

· **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.

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

None of the ingredients is listed.

· **Markings according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

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**Trade name: Precipitation Agent 1**

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**· Code letter and hazard designation of product:***C Corrosive**N Dangerous for the environment***· Hazard-determining components of labelling:***trichloroacetic acid***· Risk phrases:***34 Causes burns.**51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment***· Safety phrases:***26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.**36/37/39 Wear suitable protective clothing, gloves and eye/face protection.**45 In case of accident or if you feel unwell, seek medical advice immediately.**57 Use appropriate container to avoid environmental contamination.**60 This material and its container must be disposed of as hazardous waste.***· National regulations****· Water hazard class:** *Water hazard class 2 (Self-assessment): hazardous for water.***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 MSDS:** *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***· \* Data compared to the previous version altered.**

**Material Safety Data Sheet**

Printing date 10/17/2007

Reviewed on 10/08/2007

**1 Identification of substance:**

- **Product details:**
- **Trade name:** Precipitation Agent 2
- **Catalog or product number:** 4307590, 10005485
- **Application of the substance / the preparation** Laboratory chemicals
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547 (510)741-1000
- **Information department:** Technical services, customer support.
- **Emergency information:**  
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 Composition/Information on components:**

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

· **Listing of dangerous and non-hazardous components:**

CAS: 7732-18-5 EINECS: 231-791-2 RTECS: ZC 0110000	water		50-100%
	Component 1	Xi; R 36/38	2.5-5%
	Component 2		2.5-5%
	Component 3	Xi; R 36	2.5-5%
	Component 10		2.5-5%
	Component 5	Xn; R 22	2.5-5%

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

**3 Hazards identification**

- **Emergency overview:** not applicable
- **Information pertaining to particular dangers for man and environment**  
The product does not have 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.

**4 First aid measures**

- **General information** No special measures required.
- **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.



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**Trade name: Precipitation Agent 2**

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**5 Fire fighting measures**

- **Suitable extinguishing agents** CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

**6 Accidental release measures**

- **Person-related safety precautions:** Not required
- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

**7 Handling and storage**

- **Handling**
- **Information for safe handling:**  
No special measures required.  
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **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.

**8 Exposure controls and personal protection**

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **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:**

· **General Information**

<b>Form:</b>	liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Odorless

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**Trade name: Precipitation Agent 2**

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- **Change in condition**  
*Melting point/Melting range: undetermined*  
*Boiling point/Boiling range: 1461°C*
- **Flash point:** *Not applicable*
- **Auto igniting:** *Product is not selfigniting.*
- **Danger of explosion:** *Product does not present an explosion hazard.*
- **Vapor pressure at 20°C:** *23 hPa*
- **Density:** *Not determined*
- **Solubility in / Miscibility with Water:** *Fully miscible*
- **Solvent content:**
- **Organic solvents:** *0.0 %*
- **Water:** *75.0 %*
- **Solids content:** *100.0 %*

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Dangerous reactions** *No dangerous reactions known*
- **Dangerous products of decomposition:** *No dangerous decomposition products known*

**11 Toxicological information**

- **Acute toxicity:**
- **LD/LC50 values for hazardous components per OSHA criteria:**

<b>Component 3</b>		
Oral	LD50	4000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** *No irritant effect.*
- **on the eye:** *No irritant effect.*
- **Sensitization:** *No sensitizing effects known.*
- **Additional toxicological information:**  
*The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:*  
*When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.*
- **Target organs:** *Not applicable.*

**12 Ecological information:**

- **General notes:**  
*Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.*

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**Material Safety Data Sheet**

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Reviewed on 10/08/2007

**Trade name: Precipitation Agent 2**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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**13 Disposal considerations**

- **Product:**
- **Recommendation** Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**14 Transport information**

- **DOT regulations:**
- **Hazard class:** -
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Transport/Additional information:** Not dangerous according to the above specifications.

**15 Regulations**

· **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):**

All ingredients are listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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Trade name: *Precipitation Agent 2*

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· **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.

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

None of the ingredients is listed.

· **Markings according to EU guidelines:**

Observe the general safety regulations when handling chemicals

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

· **Safety phrases:**

60 This material and its container must be disposed of as hazardous waste.

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

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

**Material Safety Data Sheet**

Printing date 10/17/2007

Reviewed on 10/08/2007

**1 Identification of substance:**

- **Product details:**
- **Trade name:** Wash Reagent 1
- **Catalog or product number:** 4307587, 10005486
- **Application of the substance / the preparation** Laboratory chemicals
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547 (510)741-1000
- **Information department:** Technical services, customer support.
- **Emergency information:**  
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 Composition/Information on components:**

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

· **Listing of dangerous and non-hazardous components:**

CAS: 7732-18-5 EINECS: 231-791-2 RTECS: ZC 0110000	water		50-100%
	Component 1	Xi; R 36/38	2.5-5%
	Component 2		2.5-5%
	Component 3	Xi; R 36	2.5-5%
	Component 10		2.5-5%
	Component 5	Xn; R 22	2.5-5%

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

**3 Hazards identification**

- **Emergency overview:** not applicable
- **Information pertaining to particular dangers for man and environment**  
The product does not have 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.

**4 First aid measures**

- **General information** No special measures required.
- **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.

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**Trade name: Wash Reagent 1**

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**5 Fire fighting measures**

- **Suitable extinguishing agents** CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

**6 Accidental release measures**

- **Person-related safety precautions:** Not required
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

**7 Handling and storage**

- **Handling**
- **Information for safe handling:**  
No special measures required.  
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **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.

**8 Exposure controls and personal protection**

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **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:**

· **General Information**

<b>Form:</b>	liquid
<b>Color:</b>	Clear
<b>Odor:</b>	Odorless

· **Change in condition**

**Melting point/Melting range:** undetermined

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**Trade name: Wash Reagent 1**

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<b>Boiling point/Boiling range:</b>	100°C
· <b>Flash point:</b>	Not applicable
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Vapor pressure at 20°C:</b>	23 hPa
· <b>Density:</b>	Not determined
· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix
· <b>pH-value at 20°C:</b>	6.5
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	0.0 %
· <b>Water:</b>	75.0 %
· <b>Solids content:</b>	25.0 %

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

**11 Toxicological information**

· **Acute toxicity:**

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

**Component 3**

Oral	LD50	4000 mg/kg (rat)
------	------	------------------

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritant effect.

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

· **Additional toxicological information:**

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Target organs:** Not applicable.

**12 Ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

(Contd. on page 4)

**Material Safety Data Sheet**

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Reviewed on 10/08/2007

**Trade name: Wash Reagent 1**

(Contd. of page 3)

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**13 Disposal considerations**

- **Product:**
- **Recommendation** Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

- **DOT regulations:**
- **Hazard class:** -
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Transport/Additional information:** Not dangerous according to the above specifications.

**15 Regulations**

- **SARA (Superfund Amendants 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):**  
All ingredients are listed.
- **Carcinogenity categories**
- **EPA (Environmental Protection Agency)**  
None of the ingredients is listed.
- **IARC (International Agency for Research on Cancer)**  
None of the ingredients is listed.
- **NTP (National Toxicology Program)**  
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.

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## Material Safety Data Sheet

Printing date 10/17/2007

Reviewed on 10/08/2007

Trade name: Wash Reagent 1

(Contd. of page 4)

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Markings according to EU guidelines:**

Observe the general safety regulations when handling chemicals

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

· **Safety phrases:**

60 This material and its container must be disposed of as hazardous waste.

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

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

## Material Safety Data Sheet

Printing date 10/17/2007

Reviewed on 10/08/2007

**1 Identification of substance:**· **Product details:**· **Trade name:** Wash Reagent 2· **Catalog or product number:** 4307591, 10005487· **Application of the substance / the preparation** Laboratory chemicals· **Manufacturer/Supplier:**

Bio-Rad Laboratories, Life Science Group

2000 Alfred Nobel Drive

Hercules, California 94547

(510)741-1000

· **Information department:** Technical services, customer support.· **Emergency information:**

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 Composition/Information on components:**· **Chemical characterization**· **Description:** Mixture of the substances listed below with non-hazardous additions.· **Listing of dangerous and non-hazardous components:**

CAS: 67-64-1 EINECS: 200-662-2 RTECS: AL 3150000	acetone	Xi, F; R 11-36-66-67	50-100%
CAS: 67-63-0 EINECS: 200-661-7 RTECS: NT 8050000	propan-2-ol	Xi, F; R 11-36-67	2.5-5%
	Component 7	Xn; R 10-22	2.5-5%
CAS: 67-66-3 EINECS: 200-663-8 RTECS: FS 9100000	trichloromethane	Carc. Cat. 3; Xn, Xi; R 22-38-40-48/20/22	2.5-5%
RTECS: MW 9620000	hydrogen chloride	C, Xi; R 34-37	2.5-5%

· **Additional information** For the wording of the listed risk phrases refer to section 15.**3 Hazards identification**· **Emergency overview:**

Flammable.

Xn Harmful

F Highly flammable

· **Routes of exposure:** Ingestion· **Information pertaining to particular dangers for man 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.

R 11 Highly flammable.

R 22 Harmful if swallowed.

R 40 Limited evidence of a carcinogenic effect.

R 48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

R 67 Vapours may cause drowsiness and dizziness

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## Material Safety Data Sheet

Printing date 10/17/2007

Reviewed on 10/08/2007

Trade name: Wash Reagent 2

(Contd. of page 1)

- **Classification system**

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

#### 4 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.

#### 5 Fire fighting measures

- **Suitable extinguishing agents** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents**  
Water.  
Water with full jet.
- **Protective equipment:** No special measures required.

#### 6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment (See section 8). Keep unprotected persons away.
- **Measures for environmental protection:**  
Prevent seepage into sewage system, workpits and cellars.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
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

#### 7 Handling and storage

- **Handling**
- **Information 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.
- **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.

USA

(Contd. on page 3)

**Material Safety Data Sheet**

Printing date 10/17/2007

Reviewed on 10/08/2007

**Trade name: Wash Reagent 2**

(Contd. of page 2)

**8 Exposure controls and personal protection**

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

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

**67-64-1 acetone**

PEL () 2400 mg/m<sup>3</sup>, 1000 ppm  
 REL () 590 mg/m<sup>3</sup>, 250 ppm  
 TLV () Short-term value: 1782 mg/m<sup>3</sup>, 750 ppm  
 Long-term value: 1188 mg/m<sup>3</sup>, 500 ppm  
 BEI

**67-63-0 propan-2-ol**

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

**Component 7**

PEL () 360 mg/m<sup>3</sup>, 100 ppm  
 REL () Short-term value: 450 mg/m<sup>3</sup>, 125 ppm  
 Long-term value: 360 mg/m<sup>3</sup>, 100 ppm  
 TLV () Short-term value: 452 mg/m<sup>3</sup>, 125 ppm  
 Long-term value: 361 mg/m<sup>3</sup>, 100 ppm

**67-66-3 trichloromethane**

PEL () Short-term value: C 240 mg/m<sup>3</sup>, C 50 ppm  
 REL () Short-term value: 9.78\* mg/m<sup>3</sup>, 2\* ppm  
 \*60-min  
 TLV () 49 mg/m<sup>3</sup>, 10 ppm

**hydrogen chloride**

PEL () Short-term value: C 7 mg/m<sup>3</sup>, C 5 ppm  
 REL () Short-term value: C 7 mg/m<sup>3</sup>, C 5 ppm  
 TLV () Short-term value: C 7.5 mg/m<sup>3</sup>, C 5 ppm  
 NIC-C 2; C 2.98; NIC-A4

· **Additional information:** The lists that were valid during the creation were used as basis.

· **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.

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Printing date 10/17/2007

Reviewed on 10/08/2007

Trade name: Wash Reagent 2

(Contd. of page 3)

**9 Physical and chemical properties:**

· **General Information**

**Form:** liquid  
**Color:** Clear  
**Odor:** Recognizable

· **Change in condition**

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

· **Flash point:** < 0°C

· **Ignition temperature:** 340°C

· **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<sup>3</sup>

· **Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix

· **pH-value at 20°C:** 5.5

· **Solvent content:**

· **Organic solvents:** 90.0 %

**10 Stability and reactivity**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Dangerous reactions** No dangerous reactions known

· **Dangerous products of decomposition:** No dangerous decomposition products known

**11 Toxicological information**

· **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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**Material Safety Data Sheet**

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Reviewed on 10/08/2007

**Trade name: Wash Reagent 2**

(Contd. of page 4)

**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.
- **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

**12 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.

**13 Disposal considerations**

**Product:**

**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**

**DOT regulations:**

- **Hazard class:** 3
- **Identification number:** UN1993
- **Packing group:** II
- **Proper shipping name (technical name):** FLAMMABLE LIQUID, N.O.S. (ACETONE, CHLOROFORM)
- **Label:** 3

**Land transport ADR/RID (cross-border)**

- **ADR/RID class:** 3 Flammable liquids
- **Danger code (Kemler):** 33
- **UN-Number:** 1993
- **Packing group:** II
- **Label:** 3
- **Description of goods:** 1993 FLAMMABLE LIQUID, N.O.S. (vapor pressure at 50°C at most 110 kPa) (ACETONE, CHLOROFORM)

**Maritime transport IMDG:**

- **IMDG Class:** 3
- **UN Number:** 1993

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**Material Safety Data Sheet**

Printing date 10/17/2007

Reviewed on 10/08/2007

**Trade name: Wash Reagent 2**

(Contd. of page 5)

· **Label** 3  
 · **Packing group:** II  
 · **EMS Number:** F-E,S-E  
 · **Marine pollutant:** No  
 · **Proper shipping name:** FLAMMABLE LIQUID, N.O.S. (ACETONE, CHLOROFORM)

· **Air transport ICAO-TI and IATA-DGR:**  
 · **ICAO/IATA Class:** 3  
 · **UN/ID Number:** 1993  
 · **Label** 3  
 · **Packing group:** II  
 · **Proper shipping name:** FLAMMABLE LIQUID, N.O.S. (ACETONE, CHLOROFORM)

**15 Regulations**

· **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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· **Carcinogenity categories**

· **EPA (Environmental Protection Agency)**

67-64-1	acetone	D
67-66-3	trichloromethane	B2

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

67-64-1	acetone	A4
67-66-3	trichloromethane	A3

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

67-66-3	trichloromethane	4
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(Contd. on page 7)

**Material Safety Data Sheet**

Printing date 10/17/2007

Reviewed on 10/08/2007

**Trade name: Wash Reagent 2**

(Contd. of page 6)

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

67-66-3 trichloromethane

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

None of the ingredients is listed.

· **Markings according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· **Code letter and hazard designation of product:**

Xn Harmful

F Highly flammable

· **Hazard-determining components of labelling:**

trichloromethane

· **Risk phrases:**

11 Highly flammable.

22 Harmful if swallowed.

40 Limited evidence of a carcinogenic effect.

48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

67 Vapours may cause drowsiness and dizziness

· **Safety phrases:**

25 Avoid contact with eyes.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37 Wear suitable protective clothing and gloves.

43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

45 In case of accident or if you feel unwell, seek medical advice immediately.

60 This material and its container must be disposed of as hazardous waste.

· **National regulations**

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.

**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 MSDS:** 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

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



**Material Safety Data Sheet**

Printing date 10/17/2007

Reviewed on 04/24/2007

**1 Identification of substance:**

- **Product details:**
- **Trade name:** Wash 2 Additive
- **Catalog or product number:** 4307588, 10005488
- **Application of the substance / the preparation** Laboratory chemicals
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547 (510)741-1000
- **Information department:** Technical services, customer support.
- **Emergency information:**  
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 Composition/Information on components:**

- **Chemical characterization:**
- **CAS No. Description:**  
7732-18-5 water
- **Identification number(s):**
- **EINECS Number:** 231-791-2
- **Additional information:** For the wording of the listed risk phrases refer to section 16.
- **Chemical characterization**

· **Listing of dangerous and non-hazardous components:**

Component 9	2.5-5%
-------------	--------

**3 Hazards identification**

- **Emergency overview:** not applicable
- **Information pertaining to particular dangers for man and environment** not applicable
- **Classification system**  
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

**4 First aid measures**

- **General information** No special measures required.
- **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.

**5 Fire fighting measures**

- **Suitable extinguishing agents** CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

(Contd. on page 2)

**Material Safety Data Sheet**

Printing date 10/17/2007

Reviewed on 04/24/2007

**Trade name: Wash 2 Additive**

(Contd. of page 1)

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

**6 Accidental release measures**

- **Person-related safety precautions:** Not required
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

**7 Handling and storage**

- **Handling**
- **Information for safe handling:**  
No special measures required.  
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **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.

**8 Exposure controls and personal protection**

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **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:**

· **General Information**

<b>Form:</b>	liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Odorless

· **Change in condition**

**Melting point/Melting range:** 0°C  
**Boiling point/Boiling range:** 100°C

· **Flash point:** Not applicable

(Contd. on page 3)

**Material Safety Data Sheet**

Printing date 10/17/2007

Reviewed on 04/24/2007

**Trade name: Wash 2 Additive**

(Contd. of page 2)

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

· **Vapor pressure at 20°C:** 23 hPa

· **Density at 20°C:** 1 g/cm<sup>3</sup>

· **Solubility in / Miscibility with Water:** Not miscible or difficult to mix

· **pH-value at 20°C:** 5.5

· **Organic solvents:** 0.0 %

· **Water:** 95.0 %

· **Solids content:** 5.0 %

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

**11 Toxicological information**

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
 When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.  
 The substance is not subject to classification according to the latest version of the EU lists.
- **Target organs:** Not applicable.

**12 Ecological information:**

- **General notes:** Generally not hazardous for water.

**13 Disposal considerations**

- **Product:**
- **Recommendation** Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**Material Safety Data Sheet**

Printing date 10/17/2007

Reviewed on 04/24/2007

Trade name: Wash 2 Additive

(Contd. of page 3)

**14 Transport information**

· DOT regulations:

· Hazard class: -

· Land transport ADR/RID (cross-border)

· ADR/RID class: -

· Maritime transport IMDG:

· IMDG Class: -

· Marine pollutant: No

· Air transport ICAO-TI and IATA-DGR:

· ICAO/IATA Class: -

· Transport/Additional information: Not dangerous according to the above specifications.

**15 Regulations**

· SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)

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

Substance not listed.

· Section 313 (40CFR372.65):

Substance is not listed.

· TSCA (Toxic Substances Control Act):

Substance is listed.

· Cancerogenity categories

· EPA (Environmental Protection Agency)

Substance is not listed.

· IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)

Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

· MAK (German Maximum Workplace Concentration)

Substance is not listed.

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

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

· Markings according to EU guidelines:

Observe the general safety regulations when handling chemicals

The substance is not subject to classification according to EU lists and other sources of literature known to us.

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

· Safety phrases:

60 This material and its container must be disposed of as hazardous waste.

(Contd. on page 5)

**Material Safety Data Sheet**

Printing date 10/17/2007

Reviewed on 04/24/2007

**Trade name: Wash 2 Additive**

(Contd. of page 4)

- **National regulations**
- **Water hazard class:** Generally not hazardous for water.

**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 MSDS:** 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
- **\* Data compared to the previous version altered.**