

## Kit components

Product HaloLink Resin, 2ml

Product code G1911

<b>Substance number</b>	<b>Description</b>	<b>Amount</b>	<b>Symbols</b>
G191	HaloLink™ Resin	2	Xi



**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 01/31/2011

Reviewed on 01/31/2011

**1 Identification of the substance/mixture and of the company/undertaking**

**Product identifier**

**Trade name:** HaloLink™ Resin

**Article number:** G191

**Relevant identified uses of the substance or mixture and uses advised against**  
**Application of the substance / the preparation** Laboratory chemicals

**Details of the supplier of the safety data sheet**  
**Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.  
1-800-356-9526 or (608)-274-4330

**Information department:** MSDS author: Regulatory.Affairs@promega.com

**Emergency telephone number:**

For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at 1-800-424-9300  
For call originating outside the United States dial 001-703-527-3887

**2 Composition/information on ingredients**

**Chemical characterization:** Mixtures

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

**Dangerous components:**

62610-50-8	Sepharose CL-6B	20-25%
64-17-5	ethanol	10-15%

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

**3 Hazards identification**

**Classification of the substance or mixture**

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



**Irritant**

Irritating to eyes.

Flammable.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**Label elements**

**Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

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The product has been classified and marked in accordance with directives on hazardous materials.

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

*Xi Irritant*

**Risk phrases:**

*Flammable.*

*Irritating to eyes.*

**Safety phrases:**

*Keep container tightly closed.*

*Keep away from sources of ignition - No smoking.*

*Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).*

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

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

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

**Classification system:**

**NFPA ratings (scale 0 - 4)**

*Health = 1*

*Fire = 2*

*Reactivity = 0*

**HMIS-ratings (scale 0 - 4)**

*Health = 1*

*Fire = 2*

*Reactivity = 0*

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):**

*Irritant*

*Combustible*

**Primary route(s) of entry:**

*Dermal*

*Oral*

**Target Organ(s):**

*May cause Liver damage (Hepatotoxin)*

*May affect Nervous system (Neurotoxin)*

**Other hazards** *Keep away from sources of ignition.*

**Results of PBT and vPvB assessment**

**PBT:** *Not applicable.*

**vPvB:** *Not applicable.*

## 4 First aid measures

**Description of first aid measures**

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

**After skin contact:** *Generally the product does not irritate the skin.*

**After eye contact:**

*Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.*

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

**Information for doctor:**

**Most important symptoms and effects, both acute and delayed**

*Headache*

*Dizziness*

*Dizziness*

*Nausea*

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**Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## \* 5 Firefighting measures

### **Extinguishing media**

#### **Suitable extinguishing agents:**

CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

Use fire fighting measures that suit the environment.

#### **For safety reasons unsuitable extinguishing agents:**

Water

Water with full jet

**Special hazards arising from the substance or mixture** None known

**Advice for firefighters** No special advice

## \* 6 Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.

Keep away from ignition sources

Wear protective clothing.

**Environmental precautions:** 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).

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 13 for disposal information.

## \* 7 Handling and storage

### **Handling:**

#### **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Use only in well ventilated areas.

#### **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:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** Keep receptacle tightly sealed.

**Specific end use(s)** No further relevant information available.

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## 8 Exposure controls/personal protection

### Control parameters

#### Components with limit values that require monitoring at the workplace:

##### 64-17-5 ethanol

PEL	1900 mg/m <sup>3</sup> , 1000 ppm
REL	1900 mg/m <sup>3</sup> , 1000 ppm
TLV	Short-term value: 1880 mg/m <sup>3</sup> , 1000 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.
- Do not eat or drink while working.

#### 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  
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.

**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>	Colorless
<b>Odor:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value:** Not determined.

#### Change in condition

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.

**Flash point:** 21 - 55°C (70 - 131 °F)

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

**Ignition temperature:** 425°C (797 °F)

**Decomposition temperature:** Not determined.

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<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	3.5 Vol %
<b>Upper:</b>	15.0 Vol %
<b>Vapor pressure at 20°C (68 °F):</b>	59 hPa (44 mm Hg)
<b>Density:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
<b>Segregation coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Solvent content:</b>	
<b>Organic solvents:</b>	15.0 %
<b>Water:</b>	60.0 %
<b>VOC content:</b>	15.0 %
<b>Other information</b>	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.

## 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

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## 12 Ecological information

### Toxicity

**Aquatic toxicity:** Not harmful to the aquatic environment

**Persistence and degradability:** Not available

**Behavior in environmental systems:**

**Bioaccumulative potential:** Not known

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

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:**

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

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

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

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

## 13 Disposal considerations

### Waste treatment methods

#### Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

#### Uncleaned packagings:

**Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

Contact Promega Safety Department for additional transportation information

### DOT regulations:

<b>Hazard class:</b>	3
<b>Identification number:</b>	UN1170
<b>Packing group:</b>	III
<b>Proper shipping name (technical name):</b>	ETHANOL SOLUTION
<b>Label:</b>	3

### Land transport ADR/RID (cross-border):

<b>ADR/RID class:</b>	3 Flammable liquids
<b>UN-Number:</b>	1170
<b>Packaging group:</b>	III
<b>Label:</b>	3
<b>UN proper shipping name:</b>	1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

### Maritime transport IMDG:

<b>IMDG Class:</b>	3
<b>UN Number:</b>	1170
<b>Packaging group:</b>	III

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**Marine pollutant:** No  
**Propper shipping name:** ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

**Air transport ICAO-TI and IATA-DGR:**  
**ICAO/IATA Class:** 3  
**UN/ID Number:** 1170  
**Packaging group:** III  
**Propper shipping name:** ETHANOL SOLUTION

**Special precautions for user** Warning: Flammable liquids  
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

## \* 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 are listed.

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

None of the ingredients are listed.

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

64-17-5 ethanol

7732-18-5 water, pure

**Proposition 65**

**Chemicals known to cause cancer:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

64-17-5 ethanol

**Carcinogeny categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

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

None of the ingredients are listed.

**NTP (National Toxicology Program)**

None of the ingredients are listed.

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

64-17-5 ethanol

A3

**MAK (German Maximum Workplace Concentration)**

64-17-5 ethanol

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

None of the ingredients are listed.

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### OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

#### Product related hazard informations:

Observe the general safety regulations when handling chemicals.

The product has been classified and marked in accordance with directives on hazardous materials.

#### Hazard symbols:

Xi Irritant

#### Risk phrases:

Flammable.

Irritating to eyes.

#### Safety phrases:

Keep container tightly closed.

Keep away from sources of ignition - No smoking.

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

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

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

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

#### National regulations:

Class	Share in %
Wasser	60.0
NK	15.0

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

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

## 16 Other information

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

#### Department issuing MSDS:

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

\* Data compared to the previous version altered.