



**AURION SE-EM Silver Enhancement Reagents**  
**Safety Data Sheet: SEM-05-4/3**

---

**Section 1: Product and Company Identification**

**1.1 Product identifiers**

Product Name: R-Gent SE-EM  
Product Numbers: 500.033 and 500.044  
Brand: Aurion  
Reach Number: N/A as the substance, its uses or the annual tonnage are exempt from registration

**1.2 Identified uses of substance or mixture**

Identified uses: Laboratory chemicals

**1.3 Company information**

Manufacturer: Aurion ImmunoGold Reagents & Accessories  
Binnenhaven 5, 6709 PD Wageningen,, The Netherlands  
Phone: +31-317-415094, Fax: +31-317-415955, Email: info@aurion.nl  
Chamber of Commerce 09068171 Arnhem. The Netherlands

**1.3 Emergency phone number**

Emergency Phone # 112 or 911

Date prepared: November 22, 2023

SDS number: SEM-05-4/3 GB

---

**Section 2: Composition / Ingredients**

**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No. 1272/2008

Eye damage category 1:	H318	Causes serious eye damage
Skin sensitization category 1:	H317	May cause an allergic skin reaction
Mutagenicity category 2:	H341	Suspected of causing genetic effects
Carcinogenicity category 2:	H351	Suspected of causing cancer

**2.2. Label elements**

R-Gent SE-EM, Initiator: Labelling according to Regulation (EC) No. 1272/2008

The product is classified and labelled according to the CLP regulation



GHS05   GHS07   GHS08

Signal word:	Danger	
Hazard statements:	H318	Causes serious eye damage
	H317	May cause an allergic skin reaction
	H341	Suspected of causing genetic effects
	H351	Suspected of causing cancer
	H400	Very harmful to aquatic life
Precautionary statements:	P305/351/338	IN CONTACT WITH 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 / physician
	P362/P364	Take off contaminated clothing and wash it before re-use
	P405	Store it locked-up

**2.3. Other hazards**

Results of PBT and vPvB assessment: N/A

---

**Section 3: Composition / Ingredients**
**3.2 Mixtures**

Mixture of substances listed below with nonhazardous additions

Dangerous components:			
CAS	123-31-9	Hydroquinone	Muta 2, H341 / Carc 2, H351 / Eye Dam 1, H318
EINECS	204-617-8		Acute Tox 4, H302 / Skin Sens 1 H317 / Aquatic Acute H400
			≤2.5%

For the wording of the listed hazard phrases refer to section 16

---

**Section 4: Description of first Aid Measures**
**4.1 Description of first aid measures**

General information: Remove any clothing soiled by this product

Eye Contact: Rinse opened eye for several minutes under running water, then consult a doctor

Skin Contact: Immediately wash with water and soap and rinse thoroughly

Ingestion: If symptoms persist consult doctor

Inhalation: Move to fresh air. If breathing becomes difficult, consult a physician.

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

No further relevant information available

**4.3. Indication of any immediate medical attention and special treatment needed**

No further relevant information available

---

**Section 5: Fire Fighting Measures**
**5.1 Extinguishing media**

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions

**5.2. Specific hazards arising from the substance or mixture**

No further relevant information available

**5.3. Advice for fire fighters**

Protective equipment: no special measures required

---

**Section 6: Accidental Release Measures**
**6.1 Personal precautions, protective equipment and emergency procedures**

Not required

**6.2 Environmental precautions**

Inform respective authorities in case of seepage into water course or sewage system

Do not allow to enter sewers/ surface or ground water

**6.3 Methods and materials 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.

**6.4 Reference to other sections**

For disposal see section 13

**Section 7: Handling and Storage**
**7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.  
 Information about fire - and explosion protection: No special measures required.

**7.2 Conditions for safe storage, including any incompatibilities**

Minimum / Maximum Storage Temperatures Kit: 0 - 4°C. Avoid freezing.  
 Minimum / Maximum Storage Temperatures Initiator: -20 - 4°C  
 Storage: Store in a refrigerator, Initiator may be stored in a freezer

**7.3 Specific end use(s)**

No further relevant information available

**Section 8: Exposure Controls / Personal Protection**

Additional information about design of technical facilities: No further data. See section 7.

**8.1 Control parameters**

Ingredients with limit values that require monitoring at the workplace

CAS	123-31-9	Hydroquinone	WEL Long term value: 0.5mg/m <sup>3</sup>
-----	----------	--------------	---

Additional information: The lists valid during the making were used as a basis

**8.2 Exposure controls**
**Personal protective equipment:**

General protective and hygienic measures: Keep away from food, beverages and nurture. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.



Protective Gloves: Chemical-resistant gloves that meet Regulation (EU) 2016/425 and standard EN 374

Eye Protection: When preparing the Developer equipment for eye protection (standard EN 166) is recommended

Body protection: Impermeable clothing, lab coat

Respiratory protection: N/A

**Section 9: Physical and Chemical Properties**
**9.1 Information on basic physical and chemical properties**

Appearance: Liquid No further relevant information available

**9.2 Other safety information**

No further relevant information available

**Section 10: Stability and Reactivity**
**10.1 Reactivity**

No further relevant information available

**10.2 Chemical stability**

Stable under recommended storage conditions

**10.3 Possibility of hazardous reactions**

No dangerous reactions known

**10.4 Conditions to avoid**

No further relevant information available

**10.5 Incompatible materials**

No further relevant information available

**10.6 Hazardous decomposition products**

Hazardous decomposition products: No dangerous decomposition products known

---

**Section 11: Toxicological Information****11.1 Information on toxicological effects****Acute toxicity:**

LD/LC50 values relevant for classification

123-31-9

Hydroquinone

Oral LD50(rat): 320 mg/kg

Skin corrosion/irritation: Based on available data, the classification criteria are not met

Serious eye damage/eye irritation: Causes serious eye irritation

Respiratory or skin sensitization: May cause an allergic skin reaction

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity: Suspected of causing genetic effects

Carcinogenicity: Suspected of causing cancer

Reproductive toxicity: Based on available data, the classification criteria are not met

STOT-single exposure-: Based on available data, the classification criteria are not met

STOT-repeated exposure-: Based on available data, the classification criteria are not met

Aspiration hazard: Based on available data, the classification criteria are not met

**11.2 Information on other hazards**

This product does not contain any known or suspected endocrine disruptors

---

**Section 12: Ecological information****12.1 Toxicity**

Aquatic toxicity: No further relevant information available

**12.2 Persistence and degradability**

No further relevant information available

**12.3 Bioaccumulative potential**

No further relevant information available

**12.4 Mobility in soil**

No further relevant information available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Endocrine disrupting properties**

This product does not contain any known or suspected endocrine disruptors

**12.7 Other adverse effects**

Very harmful to aquatic life

Water hazard class 3 (self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities

Danger for drinking water if even in small quantities leak into the ground

Also poisonous for fish and plankton in water bodies

Very toxic for aquatic organisms

---

**Section 13: Disposal Considerations****13.1 Waste treatment methods**

Recommendation: Must not be disposed together with household garbage. Do not allow product to reach sewage system

Uncleaned packaging: Disposal must be made according to official regulations

---

**Section 14: Transportation Information****14.1 UN number**

ADR/RID: not regulated

IMDG: not regulated

IATA: not regulated

**14.2 UN proper shipping name**

ADR/RID: not regulated

IMDG: not regulated

IATA: not regulated

**14.3 Transport hazard classes**

ADR/RID: not regulated

IMDG: not regulated

IATA: not regulated

**14.4 Packaging group**

ADR/RID: not regulated

IMDG: not regulated

IATA: not regulated

**14.5 Environmental hazards**

Not applicable

**14.6 Special precautions for user:**

Not applicable

---

**Section 15: Regulatory Information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Directive 2012/18/EU Named dangerous substances-Annex 1: None of the ingredients is listed

Seveso category: E1 Hazardous to the Aquatic Environment

Qualifying quantity (tonnes) for the application of lower-tier requirements: 100t

Qualifying quantity (tonnes) for the application of upper-tier requirements: 200t

Regulation (EC) No 1907/2006 Annex XVII Conditions of restriction: 3

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Commission Regulation (EC) 2020/878 amending Annex II to Regulation (EC) No 1907/2006

**15.2 Chemical safety assessment**

A chemical safety assessment has not been carried out

**Section 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

Relevant phrases:	H318	Causes serious eye damage
	H317	May cause an allergic skin reaction
	H341	Suspected of causing genetic effects
	H351	Suspected of causing cancer
	H400	Very harmful to aquatic life

**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

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 2: Germ cell mutagenicity – Category 2

Carc. 2: Carcinogenicity – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1