



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

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: July 7, 2020
SDS number: SEM-05-4 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 ≤2.5%
EINECS	204-617-8		Acute Tox 4, H302 / Skin Sens 1 H317 / Aquatic Acute H400

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 ³
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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

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 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

15.2 Chemical safety assesment

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