

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.07.2020



Revision: 24.07.2020

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Affi-Gel® Hz Oxidizer
- **Article number:** 1536055, 9701044
- **CAS Number:**  
7790-28-5
- **EC number:**  
232-197-6
- **1.2 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
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories Ltd.  
The Junction  
Station Road  
Watford  
Hertfordshire  
WD17 1ET  
e:mail contact: techsupport.uk@bio-rad.com
- **Information department:** techsupport.uk@bio-rad.com
- **1.4 Emergency telephone number:** 020-8328-2000

phone: +44 00 800 00 246 723 fax: +44 01 923 47 1340

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
  - **Classification according to Regulation (EC) No 1272/2008**  
Ox. Sol. 2 H272 May intensify fire; oxidiser.  
Acute Tox. 2 H310 Fatal in contact with skin.  
Skin Irrit. 2 H315 Causes skin irritation.  
STOT SE 3 H335 May cause respiratory irritation.
  - **2.2 Label elements**
  - **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
  - **Hazard pictograms**
- 


GHS03 GHS06
- **Signal word** Danger
  - **Hazard-determining components of labelling:**  
sodium periodate
  - **Hazard statements**  
H272 May intensify fire; oxidiser.  
H310 Fatal in contact with skin.

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*H315 Causes skin irritation.**H335 May cause respiratory irritation.***· Precautionary statements***P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**P220 Keep away from clothing and other combustible materials.**P261 Avoid breathing dust/fume/gas/mist/vapours/spray.**P280 Wear protective gloves/protective clothing/eye protection/face protection.**P405 Store locked up.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***· 2.3 Other hazards****· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

**· 3.1 Chemical characterisation: Substances****· CAS No. Description:***7790-28-5 sodium periodate***· Identification number(s):****· EC number:** 232-197-6**· Additional information:** For the wording of the listed risk phrases refer to section 16.

## SECTION 4: First aid measures

**· 4.1 Description of first aid measures****· General information** Immediately remove any clothing soiled by the product.**· After inhalation** Supply fresh air; consult doctor in case of complaints.**· After skin contact***Immediately wash with water and soap and rinse thoroughly.**Immediately rinse with water.***· After eye contact** Rinse opened eye for several minutes under running water.**· After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.**· 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: Firefighting measures

**· 5.1 Extinguishing media****· Suitable extinguishing agents** Use fire fighting measures that suit the environment.**· 5.2 Special hazards arising from the substance or mixture** No further relevant information available.**· 5.3 Advice for firefighters****· Protective equipment:** Wear self-contained respiratory protective device.

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#### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4 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.

#### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
No special measures required.  
Thorough dedusting.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **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.
- **7.3 Specific end use(s)** No further relevant information available.

#### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
- **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.
- **8.2 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 skin.
- **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.
- **Material of gloves** Synthetic gloves

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· **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

### SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Solid.
Colour:	White
Odour:	Odourless
Odour threshold:	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/freezing point:	300 °C
Initial boiling point and boiling range:	undetermined

· **Flash point:** Not applicable  
Not determined.

· **Flammability (solid, gaseous)** Product is not flammable.

· **Decomposition temperature:** Not determined.

· **Self igniting:** Not determined.

· **Explosive properties:** Not determined.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapour pressure:** Not applicable.

· **Density at 20 °C:** 3.865 g/cm<sup>3</sup>

· **Relative density** Not determined.

· **Vapour density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**

Water: Fully miscible

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

dynamic:	Not applicable.
kinematic:	Not applicable.

**Solids content:** 100.0 %

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· **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **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:** No dangerous decomposition products known

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**

- **Acute toxicity**

Fatal in contact with skin.

- **LD/LC50 values that are relevant for classification:**

**7790-28-5 sodium periodate**

Dermal	LD50	58 mg/kg (rat)
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- **Primary irritant effect:**

- **Skin corrosion/irritation**

Causes skin irritation.

- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
- **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.
- **Additional ecological information:**
- **General notes:**
- **Water hazard class 1 (German Regulation) (Self-assessment):** slightly hazardous for water.

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- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
  - **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1479
- **14.2 UN proper shipping name**
- **ADR** 1479 OXIDIZING SOLID, N.O.S.  
1479 OXIDIZING SOLID, N.O.S.
- **IMDG** OXIDIZING SOLID, N.O.S.
- **IATA** OXIDIZING SOLID, N.O.S. (sodium periodate)
- **14.3 Transport hazard class(es)**
- **ADR, IMDG, IATA**
- **Class** 5.1 Oxidising substances.
- **Label** 5.1
- **14.4 Packing group**
- **ADR, IMDG, IATA** II
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Warning: Oxidising substances.
- **Hazard identification number (Kemler code):** 50
- **Stowage Category** B
- **Segregation Code** SG38 Stow "separated from" SGG2-ammonium compounds.  
SG49 Stow "separated from" SGG6-cyanides  
SG60 Stow "separated from" SGG16-peroxides  
SG61 Stow "separated from" SGG15-powdered metals
- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

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### · Transport/Additional information:

#### · ADR

· Limited quantities (LQ)

1 kg

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

· Transport category

2

· Tunnel restriction code

E

#### · IMDG

· Limited quantities (LQ)

1 kg

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

· UN "Model Regulation":

UN 1479 OXIDIZING SOLID, N.O.S., 5.1, II

## 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 I Substance is not listed.

· Seveso category

H2 ACUTE TOXIC

P8 OXIDISING LIQUIDS AND SOLIDS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t

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

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

Substance is not listed.

### · National regulations

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

· 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.

· 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

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**· 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

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Sol. 2: Oxidizing solids – Category 2

Acute Tox. 2: Acute toxicity - dermal – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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