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

**1.1 Product identifier**

Trade name **Sodium peroxide**

Stock number: L13306

CAS Number: 1313-60-6

EC number: 215-209-4

Index number: 011-003-00-1

**1.2 Relevant identified uses of the substance or mixture and uses advised against.**

Identified use: SU24 Scientific research and development

**1.3 Details of the supplier of the safety data sheet**

Manufacturer/Supplier: Alfa Aesar

Avocado Research Chemicals, Ltd.

Shore Road

Port of Heysham Industrial Park

Heysham Lancashire LA3 2XY

United Kingdom

Office Tel: +44 (0) 1524 850506

Office Fax: +44 (0) 1524 850608

Email: uktech@alfa.com

www.alfa.com

Informing department: Product safety department.

**1.4 Emergency telephone number:** Call Carechem 24 at +44 (0) 1865 407333 (English only); +44 (0) 1235 239670 (Multi-language)

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008

- **GHS03 flame over circle** Ox. Sol. 1 H271 May cause fire or explosion; strong oxidiser.

- **GHS05 corrosion** Skin Corr. 1A H314 Causes severe skin burns and eye damage.

- **Other hazards that do not result in classification** No information known.

**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**

**Signal word Danger**

**Hazard statements**

H271 May cause fire or explosion; strong oxidiser.

H314 Causes severe skin burns and eye damage.

**Precautionary statements**

P221 Take any precaution to avoid mixing with combustibles.

P263 Wear fire/flame resistant/retardant clothing.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P303+P351+P335 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P306+P360 IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

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 Substances**

CAS# Designation: 1313-60-6 Sodium peroxide

Identification number(s):

EC number: 215-209-4

Index number: 011-003-00-1

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**General information** Instantly remove any clothing soiled by the product.

**After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. Seek immediate medical advice.

**After skin contact**

Instantly wash with water and soap and rinse thoroughly. Seek immediate medical advice.

**After eye contact**

Rinse opened eye for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**After swallowing** Seek medical treatment.

**4.2 Most important symptoms and effects, both acute and delayed** Causes severe skin burns.

**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 carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.

For safety reasons unsuitable extinguishing agents: Halocarbon extinguisher

5.2 Special hazards arising from the substance or mixture
This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

If this product is involved in a fire, the following can be released:
Sodium oxide

5.3 Advice for firefighters
Protective equipment:
Wear self-contained breathing apparatus.
Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.

6.2 Environmental precautions: Do not allow product to reach sewage system or water bodies.

6.3 Methods and material for containment and cleaning up:
Use neutralizing agent.
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.

Prevention of secondary hazards:
Acts as an oxidizing agent on organic materials such as wood, paper and fats
Keep away from combustible material.

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 information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handle under dry protective gas.
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires:
Substance/product can reduce the ignition temperature of flammable substances. This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

7.2 Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and containers: No special requirements.
Information about storage in one common storage facility:
Store away from flammable substances.
Store away from reducing agents.
Store away from air.
Do not store with organic materials.
Store away from metal powders.
Store away from water.

Further information about storage conditions:
Store under dry inert gas.
This product is hygroscopic.
This product is air sensitive.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from humidity and keep away from water.
Store in a locked cabinet or with access restricted to technical experts or their assistants.

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

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters
Components with critical 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: No data

8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.

Breathing equipment: Use breathing protection with high concentrations.
Recommended filter device for short term use:
Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands:
Check protective gloves prior to each use for their proper condition.
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.

Material of gloves: Nitrile rubber, NBR

Penetration time of glove material (in minutes) 480

Glove thickness 0.11 mm

Eye protection:
Tightly sealed safety glasses.

Full face protection:

Body protection: Protective work clothing.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

**General Information**

**Appearance:** Granules or beads

**Smell:** Not determined

**Odour threshold:** Not determined

**Change in condition**

**Melting point/Melting range:** 460 °C (dec)

**Boiling point/Boiling range:** Not determined

**Sublimation temperature / start:**

**Inflammability (solid, gaseous):** Contact with combustible material may cause fire.

**Ignition temperature:** Not determined

**Decomposition temperature:** Not determined

**Self-inflammability:** Not determined.

**Danger of explosion:** Not determined.

**Critical values for explosion:**

**Lower:** Not determined

**Upper:** Not determined

**Steam pressure:** Not applicable.

**Density at 20 °C**

2.805 g/cm³

**Relative density:** Not determined.

**Vapour density:** Not applicable.

**Evaporation rate:** Not applicable.

**Solubility in / Miscibility with**

**Water:** Insoluble

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

**Viscosity:**

**Dynamic:** Not applicable.

**Kinematic:** Not applicable.

9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

May intensify fire; oxidiser.

10.2 Chemical stability

Stable under recommended storage conditions.

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

10.3 Possibility of hazardous reactions

Reacts with reducing agents

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials:

- Flammable substances
- Reducing agents
- Air
- Water/moisture
- Organic materials
- Metal powders

10.6 Hazardous decomposition products:

Sodium oxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

LD/LC50 values that are relevant for classification: No data

**Skin irritation or corrosion:** Causes severe skin burns.

**Eye irritation or corrosion:** Causes serious eye damage.

**Sensitization:** No sensitizing effect known.

**Germ cell mutagenicity:** No effects known.

**Carcinogenicity:** No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**Reproductive toxicity:** No effects known.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity: No effects known.

**Additional toxicological information:** To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity

**Aquatic toxicity:** No further relevant information available.

**Bioaccumulative potential:** No further relevant information available.

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

**Additional ecological information:**

**General notes:**

Water hazard class 1 (Assessment by list): slightly hazardous for water.

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

Avoid transfer into the environment.

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:**

Hand over to disposers of hazardous waste.

Must be specially treated under adherence to official regulations.

Consult state, local or national regulations for proper disposal.

Uncleaned packagings:

**Recommendation:** Disposal must be made according to official regulations.
### SECTION 14: Transport information

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#### 14.2 UN proper shipping name

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<th>IMDG, IATA</th>
<th>SODIUM PEROXIDE</th>
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#### 14.3 Transport hazard class(es)

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<tr>
<td>UN 1504 SODIUM PEROXIDE</td>
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#### 14.4 Environmental hazards:

Not applicable.

#### 14.5 Special precautions for user

**Warning:** Oxidising substances.

### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- Australian Inventory of Chemical Substances: Substance is listed.
- Standard for the Uniform Scheduling of Medicines and Poisons: Substance is not listed.

#### National regulations

- Information about limitation of use: Employment restrictions concerning young persons must be observed. For use only by technically qualified individuals.
- Classification according to VbF: Not applicable.

#### Water hazard class:

Water hazard class 1 (Assessment by list): slightly hazardous for water.

#### Other regulations, limitations and prohibitive regulations

- ELINCS: Substance is not listed.
- SVHC: Substance is not listed.

#### ANNEX XIV of the REACH Regulations (requiring Authorisation for use)

Substance is not listed.

#### 15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

### Department issuing SDS:

Global Marketing Department

### 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 Harmonized 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)
- VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)
- LD05: Lethal dose, 50 percent
- LD50: Lethal dose, 50 percent
- vPvB: very Persistent and very Bioaccumulative
- ACGIH: American Conference of Governmental Industrial Hygienists (USA)
- OSHA: Occupational Safety and Health Administration (USA)
- NTP: National Toxicology Program (USA)
- IARC: International Agency for Research on Cancer
- NRC: National Research Council Canada (USA)
- Ox. Sol. 1: Oxidising Solids, Hazard Category 1
- Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A