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

1.1 Product identifier
Product name: tert-Amyl hydroperoxide
Product number: 1239260
CAS-No.: 3425-61-4

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier: J&K Scientific bvba
Louis Pasteurstraat 11 POB 103, B-3920 Lommel, Belgium
Telephone/Fax: +32 (0) 11 34 03 90 / +32 (0) 11 79 39 17
E-mail address: jkeu@jk-scientific.com

J&K Scientific Ltd.
AEF 18/F Bldg-D Majesty Garden 6 Bei-Si-Huan-Zhong Rd. Beijing
Telephone/Fax: +86 10 8284 8833 / +86 10 8284 9933
E-mail address: jkinfo@jkchemical.com

Preparation Information: Product safety department
Emergency telephone number: +86 10 8284 2121 (CN) +32 (0) 11 34 03 90 (EU)
Deutschland: Giftninformationszentrum Nord +49 551 19240

2 Hazards identification

2.1 Classification of the substance or mixture

GHS01 GHS02 Exploding bomb, Flame

Org. Perox. B H241 Heating may cause a fire or explosion.

GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.

GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.

2.2 Label elements

GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS01 GHS02 GHS08

Signal word Danger

Hazard statements
Highly flammable liquid and vapor.
Heating may cause a fire or explosion.
Suspected of causing genetic defects.
**Safety Data Sheet**

according to Regulation (EC) No. 1907/2006

Printing date 08/19/2016  Version 3  Reviewed on 11/07/2013

**Product name:** tert-Amyl hydroperoxide

**Precautionary statements**
- Keep/Store away from clothing/combustible materials.
- Do not get in eyes, on skin, or on clothing.
- Avoid release to the environment.
- Protect from sunlight.

**Classification system**

**NFPA ratings (scale 0 - 4)**
- Health = 0
- Fire = 3
- Reactivity = 0

The substance possesses oxidizing properties.

**HMIS-ratings (scale 0 - 4)**
- Health = 0
- Fire = 3
- Reactivity = 0

**2.3 Other hazards**

**Results of PBT and vPvB assessment**
- PBT: Not applicable.
- vPvB: Not applicable.

**3 Composition/information on ingredients**

**Chemical characterization: Substances**
- MF: C5H12O2
- MW: 104.15
- CAS-No. Description: 3425-61-4 tert-Amyl hydroperoxide

**4 First-aid measures**

**4.1 Description of first aid measures**

**General information:** Consult a physician. Show this safety data sheet to the doctor in attendance.

**After inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**After skin contact:** Wash off with soap and plenty of water. Consult a physician.

**After eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**After swallowing:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Information for doctor**

**Most important symptoms and effects, both acute and delayed**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Indication of any immediate medical attention and special treatment needed**
no data available
# Safety Data Sheet

according to Regulation (EC) No. 1907/2006

Printing date 08/19/2016  
Version 3  
Reviewed on 11/07/2013

**Product name:** tert-Amyl hydroperoxide

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## 5 Fire-fighting measures

<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Extinguishing media</td>
<td>Suitable extinguishing agents: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.</td>
</tr>
<tr>
<td>5.2 Special hazards arising from the substance or mixture</td>
<td>Carbon oxides</td>
</tr>
<tr>
<td>5.3 Advice for firefighters</td>
<td>Protective equipment: Mouth respiratory protective device.</td>
</tr>
</tbody>
</table>

---

## 6 Accidental release measures

<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1 Personal precautions, protective equipment and emergency procedures</td>
<td>Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust. Remove persons from danger area.</td>
</tr>
<tr>
<td>6.2 Methods and material for containment and cleaning up</td>
<td>Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.</td>
</tr>
</tbody>
</table>
| 6.3 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. |

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## 7 Handling and storage

<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
</tr>
</thead>
</table>
| 7.1 Handling | Precautions for safe handling: Open and handle receptacle with care. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.  
Information about protection against explosions and fires: Keep ignition sources away - Do not smoke. Protect against electrostatic charges. |
| 7.2 Storage | Conditions for safe storage, including any incompatibilities: Store in a cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Storage Class (TRGS510): LGK 13: Non-combustible solids that cannot be assigned to any of the above storage classes |

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## 8 Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
</tr>
</thead>
</table>
| 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. Wash hands before breaks and at the end of work.

**Breathing equipment:** Not required.

**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.

**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:**
Tightly sealed goggles

**Body protection:**
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

**Appearance**
- **Form:** Liquid
- **Color:** Colorless

**Odor:** No data available

**Odor threshold:** Not determined.

**pH-value:** Not determined.

**Change in condition**
- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** 145 °C (293 °F)

**Flash point:** 41 °C (106 °F)

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

**Ignition temperature:**
- **Decomposition temperature:** Not determined.

**Auto igniting:** Not determined.

**Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

**Explosion limits**
- **Lower:** Not determined.
- **Upper:** Not determined.

**Vapor pressure:** Not determined.
Product name: tert-Amyl hydroperoxide

Density at 20 °C (68 °F): 0.905 g/cm³ (7.552 lbs/gal)
Bulk density: Not determined
Relative density Not determined.
Vapor density Not determined.
Evaporation rate Not determined.
Solubility in / Miscibility with Water: Not determined.
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
  Dynamic: Not determined.
  Kinematic: Not determined.
Other information no data available

10 Stability and reactivity

10.1 Reactivity no data 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 data available
10.5 Incompatible materials Strong oxidizing agents
10.6 Hazardous decomposition products Carbon oxides

11 Toxicological information

11.1 Information on toxicological effects
Acute toxicity
Primary irritant effect
  on the skin: No irritant effect.
  on the eye: No irritating effect.
Sensitization: No sensitizing effects known.
Germ cell mutagenicity:
Carcinogenic categories
IARC (International Agency for Research on Cancer) Substance is not listed.
NTP (National Toxicology Program) Substance is not listed.
OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

12.1 Toxicity no data available
Aquatic toxicity no data available
12.2 Persistence and degradability no data available
12.3 Behavior in environmental systems Bioaccumulative potential: no data available
Mobility in soil: no data available
Product name: tert-Amyl hydroperoxide

12.4 Additional ecological information
General notes: no data available

12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

12.6 Other adverse effects: no data available

13 Disposal considerations

13.1 Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

13.2 Contaminated packaging
Dispose of as unused product.

13.3 Recommendation
Disposal must be made according to official regulations.

14 Transport information

14.1 UN-Number
DOT, ADR, IMDG, IATA UN3107

14.2 UN proper shipping name
DOT Organic peroxide type E, liquid (tert-Amyl hydroperoxide)
ADR 3107 Organic peroxide type E, liquid (tert-Amyl hydroperoxide)
IMDG, IATA ORGANIC PEROXIDE TYPE E, LIQUID (tert-Amyl hydroperoxide)

14.3 Transport hazard class(es)
DOT
Class 5.2 Organic peroxides

ADR, IMDG, IATA

Class 5.2 Organic peroxides

14.4 Packing group
DOT, ADR, IMDG, IATA Not regulated

14.5 Environmental hazards:
Marine pollutant: No

Special precautions for user
Warning: Organic peroxides
EMS Number: F-J,S-R
Stowage Category D
Product name: tert-Amyl hydroperoxide

Stowage Code
SW1 Protected from sources of heat.

Segregation Code
SG35 Stow "separated from" acids.
SG36 Stow "separated from" alkalis.
SG72 See 7.2.6.3.2.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

14.6 Transport/Additional information:

ADR
Excepted quantities (EQ) Code: E0
Not permitted as Excepted Quantity

UN "Model Regulation": UN 3107 ORGANIC PEROXIDE TYPE E, LIQUID (TERT-AMYL HYDROPEROXIDE), 5.2

15 Regulatory information

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

Sara
Section 355 (extremely hazardous substances): Substance is not listed.
Section 313 (Specific toxic chemical listings): Substance is not listed.

TSCA (Toxic Substances Control Act): Substance is listed.

Proposition 65
Chemicals known to cause cancer: Substance is not listed.
Chemicals known to cause reproductive toxicity for females: Substance is not listed.
Chemicals known to cause reproductive toxicity for males: Substance is not listed.
Chemicals known to cause developmental toxicity: Substance is not listed.

Carcinogenic categories
EPA (Environmental Protection Agency) Substance is not listed.

TLV (Threshold Limit Value established by ACGIH) Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.

GHS label elements
The substance is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms
GHS01 GHS02 GHS08

Signal word Danger

Hazard statements Highly flammable liquid and vapor.
Heating may cause a fire or explosion.
Suspected of causing genetic defects.
Product name: tert-Amyl hydroperoxide

Precautionary statements
- Keep/Store away from clothing/combustible materials.
- Do not get in eyes, on skin, or on clothing.
- Avoid release to the environment.
- Protect from sunlight.

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

16 Other information
The above information is believed to be correct but does not represent any guarantee of the properties of the product. Some new information or amendments may be added afterwards. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility. 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.

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
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HLDIS: Hazardous Materials Identification System (USA)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- NIOSH: National Institute for Occupational Safety
- OSHA: Occupational Safety & Health
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- REL: Recommended Exposure Limit
- Flam. Liq. 2: Flammable liquids – Category 2
- Org. Perox. B: Organic peroxides – Type B
- Muta. 2: Germ cell mutagenicity – Category 2