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

1.1 Product identifier
Product name: tert-Amyl hydroperoxide
Product number: 1239260
CAS number: 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

Further information obtainable from: Product safety department

1.4 Emergency telephone number:
+86 10 8284 2121 (CN)  +32 (0) 11 34 03 90 (EU)
Deutschland: +49 551 19240

SECTION 2: Hazards identification

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

GHS02 flame
Flam. Liq. 2    H225 Highly flammable liquid and vapour.

GHS08 health hazard
Muta. 2        H341 Suspected of causing genetic defects.
Aquatic Chronic 3  H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008
Hazard pictograms

The substance is classified and labelled according to the CLP regulation.

Signal word
Danger

Hazard statements
H225 Highly flammable liquid and vapour.
Safety data sheet
according to 1907/2006/EC, Article 31

Product name: tert-Amyl hydroperoxide

Precautionary statements
H242 Heating may cause a fire.
H341 Suspected of causing genetic defects.
H412 Harmful to aquatic life with long lasting effects.
P220 Keep/Store away from clothing/combustible materials.
P262 Do not get in eyes, on skin, or on clothing.
P273 Avoid release to the environment.
P410 Protect from sunlight.

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: 3425-61-4 tert-Amyl hydroperoxide

SECTION 4: First aid measures

4.1 Description of first aid measures
After inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
After skin contact: Immediately wash with water and soap and rinse thoroughly.
After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing: Do not induce vomiting; call for medical help immediately.

4.2 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.

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: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective clothing.
Product name: tert-Amyl hydroperoxide

6.2 Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and material for containment and cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

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 Handling:
Precautions for safe handling: No special measures required. For precautions see section 2.2.
Information about fire - and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.

7.2 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:
Requirements to be met by storerooms and receptacles: Store in a cool location.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed receptacles.

Storage class: LGK 5.2: Organic peroxides and self-reactive substances

7.3 Specific end use(s): A part from the uses mentioned in section 1.2, no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace: Not required.
Additional Occupational Exposure Limit Values for possible hazards during processing: Install a closed system or local exhaust as possible so that workers should not be exposed directly. Also install safety shower and eye bath. The lists valid during the making were used as basis.

Additional information: (Contd. on page 4)
Exposure controls
8.2 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.

Respiratory protection:
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 selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact
Material: Fluorinated rubber
Minimum layer thickness: 0,7 mm
Break through time: 480 min
Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M)

Splash contact
Material: Fluorinated rubber
Minimum layer thickness: 0,7 mm
Break through time: 480 min
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves.
This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers.

Eye/face 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.

Limitation and supervision of exposure into the environment
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:
Form: Liquid
Colour: Colourless
Odour: No data available
Odour threshold: Not determined.

pH-value: Not determined.
Product name: tert-Amyl hydroperoxide

Change in condition
- Melting point/freezing point: Undetermined.
- Initial boiling point and boiling range: 145 °C

Flash point: 41 °C

Flammability (solid, gas): Not applicable.

Ignition temperature:
- Decomposition temperature: Not determined.
- Auto-ignition temperature: Not determined.

Explosion properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

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

Vapour pressure: Not determined.

Density at 20 °C: 0.905 g/cm³

Bulk density: Not determined

Relative density Not determined.

Vapour 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.

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 Stable under recommended storage conditions.

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 Strong oxidizing agents

10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity No data available

Primary irritant effect:
- Skin corrosion/irritation: Based on available data, the classification criteria are not met.
- 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 (carcinogenity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity: Suspected of causing genetic defects.
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: 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 Behaviour in environmental systems:
Bioaccumulative potential: No further relevant information available.
12.4 Mobility in soil
No further relevant information available.
Ecotoxical effects:
Remark: Harmful to fish
Additional ecological information:
General notes: Generally not hazardous for water
Harmful to aquatic organisms
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 together with household garbage. Do not allow product to reach sewage system.
13.2 Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number
ADR, IMDG, IATA: UN3107
14.2 UN proper shipping name
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)
ADR, IMDG, IATA

Class
5.2 Organic peroxides.

14.4 Packing group
ADR, IMDG, IATA
Not regulated

14.5 Environmental hazards:
Marine pollutant: No

14.6 Special precautions for user
Warning: Organic peroxides.
EMS Number: F-J,S-R
Stowage Category D
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.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable.

14.8 Transport/Additional information:
Not dangerous according to the above specifications.

ADR
Limited quantities (LQ) 125 ml
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

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Chinese Chemical Inventory of Existing Chemical Substances Substance is not listed.
Directive 2012/18/EU Named dangerous substances - ANNEX I Substance is not listed.
Seveso category P6b SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES

Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 40
Product name: tert-Amyl hydroperoxide

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.

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
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Org. Perox. C: Organic peroxides – Type C/D
Muta. 2: Germ cell mutagenicity – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3