t butyl hydroperoxide solution

t butyl hydroperoxide solution is a widely used organic peroxide, notable for its applications in chemical synthesis, polymerization, and as an oxidizing agent. This compound, often abbreviated as TBHP, is typically supplied as a solution in water or organic solvents, allowing safe handling and ease of use in various industrial and laboratory processes. Its chemical properties and reactivity make it a valuable reagent in producing fine chemicals, pharmaceuticals, and specialty polymers. Understanding the characteristics, handling precautions, and applications of t butyl hydroperoxide solution is essential for chemists and industry professionals. This article will explore its chemical structure, production methods, industrial uses, safety considerations, and environmental impact. The following sections provide a comprehensive overview of t butyl hydroperoxide solution to aid in effective and safe utilization.

Chemical Properties and Structure

T butyl hydroperoxide solution is an organic peroxide with the molecular formula C4H10O2, consisting of a tertiary butyl group attached to a hydroperoxide functional group (-OOH). This structure imparts unique oxidative properties, making it a potent oxidizing agent. The solution form typically contains 70% or less of the compound diluted in water or an organic solvent such as decane or methanol to stabilize the peroxide and reduce explosive hazards.

The molecule's tertiary butyl moiety contributes to its relative stability compared to other hydroperoxides, while the hydroperoxide group is responsible for its reactive oxygen transfer capabilities. It is a colorless to pale yellow liquid, with a characteristic sharp odor. The solution is miscible with many organic solvents but has limited solubility in water depending on concentration and temperature.

Physical and Chemical Characteristics

The key properties of t butyl hydroperoxide solution include:

- Appearance: Colorless to pale yellow liquid
- Boiling Point: Approximately 90-95°C at reduced pressure (varies with concentration)

- Density: Around 0.84 g/cm³ (for 70% solution)
- Stability: Sensitive to heat, light, and contaminants that may trigger decomposition
- Reactivity: Strong oxidizer, capable of initiating radical reactions

These properties make it suitable for controlled oxidation reactions, but they also necessitate careful handling to prevent hazardous decomposition or explosion.

Production and Manufacturing Process

The synthesis of t butyl hydroperoxide solution typically involves the reaction of isobutylene or tertiary butyl alcohol with hydrogen peroxide under acidic or catalytic conditions. The process aims to produce a high-purity hydroperoxide while minimizing the formation of by-products and ensuring safety due to the reactive nature of peroxides.

Common Production Methods

Two principal industrial routes are employed:

1. **Hydroperoxidation of Isobutylene:** In this method, isobutylene is reacted with oxygen or hydrogen peroxide in the presence of a catalyst, producing t butyl hydroperoxide in solution. This approach offers high selectivity and yield.
2. **Oxidation of Tertiary Butyl Alcohol:** Tertiary butyl alcohol is oxidized using hydrogen peroxide, often catalyzed by metal ions or acids, to form t butyl hydroperoxide solution. This method is commonly used in laboratory-scale synthesis.

Following synthesis, the product is stabilized and diluted to the desired concentration, typically between 50% and 70%, for commercial distribution.

Industrial and Laboratory Applications

T butyl hydroperoxide solution is valued for its versatility as an oxidant in various chemical processes. Its controlled oxidizing ability allows selective transformations without over-oxidation, making it indispensable in multiple sectors.

Key Applications

- **Organic Synthesis:** Used in epoxidation, hydroxylation, and oxidation of sulfides to sulfoxides or sulfones, enhancing synthetic routes for pharmaceuticals and fine chemicals.

- **Polymerization Initiator:** Acts as a radical initiator in the polymerization of vinyl monomers, facilitating the production of polymers with specific properties.
- **Environmental Chemistry:** Employed in advanced oxidation processes (AOPs) for wastewater treatment, where it helps degrade organic contaminants.
- **Cosmetic and Pharmaceutical Industries:** Utilized in the synthesis of active ingredients and intermediates due to its selective oxidation capacity.

Its compatibility with different solvents and reaction conditions allows adaptation to diverse chemical manufacturing needs.

Handling, Storage, and Safety Measures

Due to its oxidative nature and potential instability, t butyl hydroperoxide solution requires stringent safety protocols during handling and storage. Improper management can lead to decomposition, fire, or explosion hazards.

Safe Handling Practices

Key precautions include:

- Use of personal protective equipment (PPE), such as gloves, goggles, and lab coats.
- Working in well-ventilated areas or fume hoods to avoid inhalation of vapors.
- Avoiding contact with incompatible materials, such as reducing agents, metals, or strong acids.
- Preventing contamination with organic matter or metal ions that can catalyze decomposition.

Storage Recommendations

T butyl hydroperoxide solution should be stored in cool, dry, and well-ventilated locations away from direct sunlight or sources of heat. Containers must be tightly sealed and made of compatible materials such as certain plastics or stainless steel. Regular inspections for leaks or degradation signs are essential to maintain safety.

Environmental Impact and Disposal

While t butyl hydroperoxide solution is effective in various industrial processes, its environmental impact requires careful consideration. The compound and its degradation products can be hazardous if released untreated into the environment.

Environmental Considerations

The oxidative nature of t butyl hydroperoxide can lead to the formation of reactive oxygen species that may affect aquatic life and ecosystems. Therefore, strict regulations govern its discharge and waste management to minimize ecological harm.

Disposal Methods

Proper disposal involves:

- Neutralization or decomposition under controlled conditions using reducing agents or catalytic destruction.
- Following local and federal regulations for hazardous chemical waste disposal.
- Utilizing licensed chemical waste disposal services to ensure environmentally safe handling.

Employing these measures helps prevent contamination and promotes sustainability in chemical manufacturing and application.

Frequently Asked Questions

What is t-butyl hydroperoxide solution commonly used for?

t-Butyl hydroperoxide solution is commonly used as an organic peroxide oxidizing agent in chemical synthesis, polymerization initiations, and as a radical initiator in various industrial processes.

What safety precautions should be taken when handling t-butyl hydroperoxide solution?

When handling t-butyl hydroperoxide solution, it is important to wear appropriate personal protective equipment such as gloves, goggles, and lab coats, work in a well-ventilated area, avoid contact with combustible materials, and store it away from heat and direct sunlight due to its flammability and oxidizing properties.

How is t-butyl hydroperoxide solution typically stored?

t-Butyl hydroperoxide solution should be stored in a cool, dry, and well-ventilated area away from sources of ignition and incompatible materials, in tightly sealed containers made of compatible materials to prevent decomposition and maintain stability.

What are the main hazards associated with t-butyl

hydroperoxide solution?

The main hazards include its strong oxidizing nature, flammability, potential to cause fire or explosion if contaminated or improperly handled, and its ability to cause skin and eye irritation upon contact.

Can t-butyl hydroperoxide solution be used as a polymerization initiator?

Yes, t-butyl hydroperoxide solution is frequently used as a radical initiator in polymerization reactions, particularly in the production of plastics and resins.

What is the chemical formula of t-butyl hydroperoxide?

The chemical formula of t-butyl hydroperoxide is C4H10O2.

How should spills of t-butyl hydroperoxide solution be managed?

Spills should be contained immediately using inert absorbent materials, avoiding ignition sources, and the area should be ventilated. Personnel should use protective equipment and dispose of waste following local regulations to prevent environmental contamination.

Additional Resources

1. *Tert-Butyl Hydroperoxide: Chemistry and Applications*
This book provides a comprehensive overview of tert-butyl hydroperoxide (TBHP), covering its chemical properties, synthesis methods, and industrial applications. It delves into the role of TBHP as an oxidizing agent in organic synthesis and its use in polymerization processes. Detailed discussions include safety considerations and handling protocols for TBHP solutions.

2. *Oxidation Reactions Using Tert-Butyl Hydroperoxide*
Focusing on the use of TBHP in oxidation reactions, this text explores various catalytic systems and reaction mechanisms. It highlights recent advancements in selective oxidation and green chemistry approaches employing TBHP. The book serves as a practical guide for chemists interested in utilizing TBHP for efficient and sustainable chemical transformations.

3. *Industrial Applications of Tert-Butyl Hydroperoxide Solutions*
This volume examines the industrial-scale applications of TBHP solutions, including their use in the manufacture of epoxides, alcohols, and other fine chemicals. It discusses process optimization, reactor design, and environmental impacts associated with TBHP utilization. Case studies provide insight into commercial production strategies.

4. *Safety and Handling of Tert-Butyl Hydroperoxide in the Laboratory*
Dedicated to the safe use of TBHP, this book outlines best practices for storage, handling, and disposal of TBHP solutions. It discusses the compound's reactive hazards, potential decomposition pathways, and emergency response measures. The text is essential for researchers and technicians working with TBHP in academic or industrial labs.

5. *Catalysis and Mechanistic Studies of Tert-Butyl Hydroperoxide Reactions*
This book delves into the catalytic roles and mechanistic insights of TBHP in various chemical reactions. It covers homogeneous and heterogeneous catalysis, focusing on reaction kinetics and intermediate species. The detailed mechanistic discussions assist researchers in designing more efficient catalytic processes involving TBHP.

6. *Tert-Butyl Hydroperoxide in Polymer Chemistry*
Exploring the utility of TBHP in polymer synthesis, this text discusses its function as an initiator and cross-linking agent. It covers polymerization techniques such as free radical polymerization and copolymerization involving TBHP solutions. The book also highlights advances in developing novel polymer materials through TBHP-mediated processes.

7. *Analytical Techniques for Tert-Butyl Hydroperoxide Solutions*
This book provides methodologies for the qualitative and quantitative analysis of TBHP in various matrices. It reviews spectroscopic, chromatographic, and titrimetric methods tailored for TBHP detection and purity assessment. Practical tips for sample preparation and data interpretation make it a valuable resource for quality control laboratories.

8. *Green Chemistry Perspectives on Tert-Butyl Hydroperoxide*
Focusing on sustainable chemistry, this volume discusses the environmentally benign aspects of using TBHP as an oxidant. It reviews catalytic processes that minimize waste and energy consumption, promoting TBHP as a green alternative to traditional oxidants. The book also addresses challenges and future directions in eco-friendly TBHP chemistry.

9. *Fundamentals of Organic Peroxides: Tert-Butyl Hydroperoxide and Beyond*
This foundational text covers the broad class of organic peroxides with a special focus on TBHP. It explains their chemical behavior, stability, and reactivity patterns, providing context for TBHP's unique properties. The book serves as an essential reference for chemists studying organic peroxides and their applications.

T Butyl Hydroperoxide Solution

t butyl hydroperoxide solution: Methods for Oxidation of Organic Compounds V1 Alan Haines, 2012-12-02 Methods for the Oxidation of Organic Compounds: Alkanes, Alkenes, Alkynes, and Arenes is an account of the different methods used for the controlled oxidation of alkanes, alkenes, alkynes, and arenes. Most of the oxidative techniques considered are illustrated with detailed experimental procedures taken from the literature. This book is comprised of five chapters and begins with a discussion on alkanes, alkyl groups, and hydrocarbon residues. The formation of alkenes, alcohols, hydroperoxides, dialkyl peroxides, cyclic peroxides, ethers, and esters as well as aldehydes, ketones, and carboxylic acids is described, together with the aromatization of cyclic systems. The following chapters are devoted to alkenes, alkynes, and arenes and focus on the formation of compounds ranging from 1,2-diols and oxiranes (1,2-epoxides) to 1,2-dicarbonyl

compounds, phenols and their derivatives, and quinones. The formation of dialkynes by oxidative coupling of 1-alkynes is described, along with the oxidative cleavage of arenes and oxidative coupling of phenols. This monograph should be of interest to organic chemists and research students.

t butyl hydroperoxide solution: Petrochemical Processes.... Alain Chauvel, Gilles Lefebvre, 2003 Contents: 7. Ethylene and propylene oxydes. 8. Acetic derivatives. 9. Alcohols. 10. Phenol, acetone and methyl ethyl ketone. 11. Vinyl monomers. 12. Monomers for polyamide synthesis. 13. Monomers for polyester synthesis. 14. Monomers for polyurethane synthesis. Bibliography. Index.

t butyl hydroperoxide solution: *Official Gazette of the United States Patent and Trademark Office* , 1996

t butyl hydroperoxide solution: Vibrationally Mediated Photodissociation of T-butyl Hydroperoxide and Hydrogen Peroxide Michael David Likar, 1988

t butyl hydroperoxide solution: *Sulfur Acids—Advances in Research and Application: 2013 Edition* , 2013-06-21 Sulfur Acids—Advances in Research and Application: 2013 Edition is a ScholarlyEditions™ book that delivers timely, authoritative, and comprehensive information about Sulfinic Acids. The editors have built Sulfur Acids—Advances in Research and Application: 2013 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Sulfinic Acids in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Sulfur Acids—Advances in Research and Application: 2013 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

t butyl hydroperoxide solution: *Handbook of Pyrrolidone and Caprolactam Based Materials, 6 Volume Set* Osama M. Musa, 2021-07-06 HANDBOOK OF PYRROLIDONE AND CAPROLACTAM BASED MATERIALS Brings together, for the first time, a comprehensive review of all aspects of pyrrolidone- and caprolactam-based materials This comprehensive, six-volume set describes the broad technical universe of γ- and ε- lactams, reviewing in-depth the chemistry of the small lactam-based molecules, uncovering their unique properties and showing how they have enabled a myriad of commercially important applications. From synthesis, through production and into applications, this extensive work targets significant and recent trends in γ- and ε-lactam science and technology and addresses all key aspects of pyrrolidone- and caprolactam-based materials to produce a definitive overview of the field. Handbook of Pyrrolidone and Caprolactam Based Materials provides a detailed and modern portrait of the impact of pyrrolidone- and caprolactam-based materials on the world, as well as potential future possibilities. Volume One presents the chemistry of small lactam-based molecules and uncovers their unique properties. Volume Two covers polymeric materials, including polyvinyl pyrrolidone and polyvinyl caprolactam, and reviews homopolymerization, copolymerization, controlled radical polymermization and acrylate based pyrrolidone polymerizations. Volume Three examines the physical chemistry and molecular interactions of pyrrolidone and caprolactam based materials. Volume Four expands upon the characterization theme from the third volume, and includes detailed discussions of nuclear magnetic resonance (NMR) and Fourier transform-infrared (FT-IR) spectroscopy, thermal and mechanical properties, and imaging techniques. Volume Five explores pharmaceutical applications in both ingredients and materials, as well as the antimicrobial properties and applications of pyrrolidone and caprolactam-based materials, and their toxicology. Volume Six covers personal and home care, skin care, transdermal applications and wound care, oral care, adhesion related applications and digital applications such as inkjet technology. Handbook of Pyrrolidone and Caprolactam Based Materials will appeal to industrial scientists and engineers interested in polymer development and manufacturing. It will also benefit academic researchers working in the fields of chemistry, materials science, and chemical and process engineering.

t butyl hydroperoxide solution: *Official Gazette of the United States Patent Office* United States. Patent Office, 1972

t butyl hydroperoxide solution: *Encyclopedia of Explosives and Related Items* Basil Timothy Fedoroff, 1972

t butyl hydroperoxide solution: *Peroxiredoxin Systems* Leopold Flohé, J. Robin Harris, 2007-09-04 A volume within the Subcellular Biochemistry series is an appropriate setting for the first multi-author book devoted to the new family of antioxidant and cell signalling proteins, the peroxiredoxins. Within the antioxidant and cell signalling fields, even the existence of the peroxiredoxins has yet to be appreciated by many; with this book we aim to rectify this situation. We have tried to select diverse chapter topics to cover relevant aspects of the subject and to persuade knowledgeable authors to contribute a manuscript. As almost inevitable, a few authors let us down by failing to respond, others could not submit a manuscript in time for personal reasons. These unfortunately were two of the pioneers, Earl Stadtman and Sue Goo Rhee, but we appreciate that they communicated a lot of details that helped us to reconstruct the early phase of peroxiredoxin enzymology. We have thus compiled a book that competently covers the peroxiredoxin field from its beginnings through to currently relevant topics. In the introductory Chapter 1 we provide a short historical survey of the subject, based upon the early structural and enzymic studies on peroxiredoxins, and then lead into some of our current personal interests, such as the likely continuing contribution of transmission electron microscopy (TEM) for the study of high molecular mass peroxiredoxin complexes and the association of peroxiredoxins with other proteins, and the targeting of drugs against microbial peroxiredoxins, as future therapeutic approaches.

t butyl hydroperoxide solution: The Chemistry of Peroxides, Parts 1 and 2, 2 Volume Set , 2007-02-06 The Chemistry of Peroxides is a new volume in the Chemistry of Functional Groups series. This series covers all aspects of organic chemistry with each volume containing chapters on: General and theoretical aspects Computational approaches Thermodynamics and kinetics NMR and ESR Mass Spectrometry Spectroscopies Analytical aspects Reaction mechanisms Syntheses Biological effects Environmental effects Industrial applications Edited by Zvi Rappoport, this series provides outstanding reviews on all aspects of functional groups in analytical, physical, synthetic and applied chemistry.

t butyl hydroperoxide solution: Cumulated Index Medicus , 1983

t butyl hydroperoxide solution: *NBS Monograph* United States. National Bureau of Standards, 1959

t butyl hydroperoxide solution: National Bureau of Standards Circular , 1950

t butyl hydroperoxide solution: Acid-base Behavior in Aprotic Organic Solvents Marion Maclean Davis, 1968 A unified picture of acid-base behavior in aprotic organic solvents is presented, based on an extensive survey of the literature and experimental results of the author and associates. Evidence given to support this picture includes data pertaining to colligative properties of acids, bases, and salts and also conductance, dielectric constants, distribution between immiscible solvents, and spectral absorption in the infrared, visible, and ultraviolet. The acids upon which attention is centered are proton-donor compounds that are measurably ionized in water, such as aliphatic and aromatic carboxylic acids, substituted phenols and mineral acids. The bases of principal interest are likewise compounds capable of forming ions in water, for example, aliphatic and aromatic amines and derivatives of guanidine or pyridine. The solvents emphasized are hydrocarbons and halohydrocarbons, but data for dipolar aprotic solvents (for example, acetone, acetonitrile, and nitrobenzene) are included. Contrasts in acid-base behavior and in acidity and basicity scales in aprotic and water-like solvents are discussed. The role of hydrogen bonding in aprotic solvents is discussed at length. Important types of hydrogen-bonded structures include chelate rings; self-associated acids, bases, and salts; hydrogen-bonded ion pairs; and homo- and heteroconjugate cations and anions. Examples are given in which hydrogen bonding of these types affects such properties as the absorption spectrum of a salt, the catalytic effect of an acid, and the accurate location of a titration endpoint. (Author).

t butyl hydroperoxide solution: Circular - National Bureau of Standards United States. National Bureau of Standards, 1950

t butyl hydroperoxide solution: Fiesers' Reagents for Organic Synthesis, Volume 7 Mary Fieser, 1979-05-10 Other volumes in the series Reagents for Organic Synthesis, Volume 1 ...well on the way to becoming the reference of choice for everyone concerned with techniques of synthesis in organic chemistry. —Science Due to the book's unprecedented coverage of reagents and their uses, the suppliers section, the well-organized indexes, and the ease of locating information either in the reagents section or in one of the indexes, I would consider this book a valuable addition to the library of every college of pharmacy. I would also recommend that graduate students acquire this valuable reference book for their own personal library. —Richard H. Hammer, University of Florida 1967 1,457 pp. Reagents for Organic Synthesis, Volume 2 The Fiesers' second volume updates, revises, and adds immensely to the content and worth of their first compilation of organic reagents. The need for a sequence of handbooks such as the Fiesers have provided has long been recognized, and the authors' almost traditional association with, keen awareness of, and interest in the special techniques of organic chemistry make the reading and study of these works especially worthwhile. —Journal of the American Chemical Society, 1969 538 pp. Reagents for Organic Synthesis, Volume 3 This volume, as well as the previous ones, is extremely valuable to a synthetic organic chemist. All three volumes should be in his library. —American Journal of Pharmaceutical Education, 1972 401 pp. Reagents for Organic Synthesis, Volume 4 Synthetic chemists have found the first three volumes of the Fiesers' Reagents for Organic Synthesis very useful and will welcome the new fourth volume of this series.... As before, the authors have carefully culled the recent (1970–1972) literature for applications of organic, inorganic, and organometallic reagents, old and new, and present them alphabetically according to reagent.... Not only are their applications in synthesis discussed, but useful hints, with references, concerning their preparation or commercial suppliers are given. The synthetic chemist will find this volume a veritable gold mine of useful information. —Journal of Organometallic Chemistry, 1974 660 pp. Reagents for Organic Synthesis, Volume 5 New reagents for organic synthesis play an extremely important role in the armentarium of the practical organic chemist. It is, therefore, not surprising that this excellent series by Mary and Louis Fieser is a bestseller and a must for the home library.... The Fiesers have done it again. An excellent volume that can be heartily recommended. —Pharmaceutical Journal, 1975 864 pp. Reagents for Organic Synthesis, Volume 6 1977 765 pp.

t butyl hydroperoxide solution: *Antiparasitic and Antibacterial Drug Discovery* Paul M. Selzer, 2009-06-08 Aus erster Hand berichten die Autoren der Beiträge dieses Bandes, mit welchen Strategien in der kommerziellen Forschung nach Wirkstoffen gegen Infektionskrankheiten gesucht wird. Dabei konzentrieren sie sich in erster Linie auf Parasitosen, berücksichtigen aber auch bakterielle Infektionen. Hochinteressante Informationen, die man in dieser Form nirgends findet!

t butyl hydroperoxide solution: *Butyric Acids—Advances in Research and Application: 2013 Edition* , 2013-06-21 Butyric Acids—Advances in Research and Application: 2013 Edition is a ScholarlyEditions™ book that delivers timely, authoritative, and comprehensive information about 3-Hydroxybutyric Acid. The editors have built Butyric Acids—Advances in Research and Application: 2013 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about 3-Hydroxybutyric Acid in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Butyric Acids—Advances in Research and Application: 2013 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

t butyl hydroperoxide solution: Heterocyclic Chemistry H Suschitzky, O Meth-Cohn, 2007-10-31 Specialist Periodical Reports provide systematic and detailed review coverage of

progress in the major areas of chemical research. Written by experts in their specialist fields the series creates a unique service for the active research chemist, supplying regular critical in-depth accounts of progress in particular areas of chemistry. For over 80 years the Royal Society of Chemistry and its predecessor, the Chemical Society, have been publishing reports charting developments in chemistry, which originally took the form of Annual Reports. However, by 1967 the whole spectrum of chemistry could no longer be contained within one volume and the series Specialist Periodical Reports was born. The Annual Reports themselves still existed but were divided into two, and subsequently three, volumes covering Inorganic, Organic and Physical Chemistry. For more general coverage of the highlights in chemistry they remain a 'must'. Since that time the SPR series has altered according to the fluctuating degree of activity in various fields of chemistry. Some titles have remained unchanged, while others have altered their emphasis along with their titles; some have been combined under a new name whereas others have had to be discontinued. The current list of Specialist Periodical Reports can be seen on the inside flap of this volume.

t butyl hydroperoxide solution: *Glutathione Metabolism and Psychological Functions* A. M. Michelson, 1986

Related to t butyl hydroperoxide solution

The Photochemical Decomposition of t-butyl Hydroperoxide in Solution (JSTOR Daily9mon) This is a preview. Log in through your library . Abstract The photochemical decomposition of t-butyl hydroperoxide by light of wave-length 3130 Å has been investigated in three solvents. Reaction

The Photochemical Decomposition of t-butyl Hydroperoxide in Solution (JSTOR Daily9mon) This is a preview. Log in through your library . Abstract The photochemical decomposition of t-butyl hydroperoxide by light of wave-length 3130 Å has been investigated in three solvents. Reaction

Nouryon to add peroxide intermediates in China (C&EN5y) Nouryon plans to build a 35,000-metric-ton-per-year facility in Ningbo, China, to produce t-butyl alcohol and t-butyl hydroperoxide, intermediates for its organic peroxides business. Raw material will

Nouryon to add peroxide intermediates in China (C&EN5y) Nouryon plans to build a 35,000-metric-ton-per-year facility in Ningbo, China, to produce t-butyl alcohol and t-butyl hydroperoxide, intermediates for its organic peroxides business. Raw material will

Back to Home: https://test.murphyjewelers.com