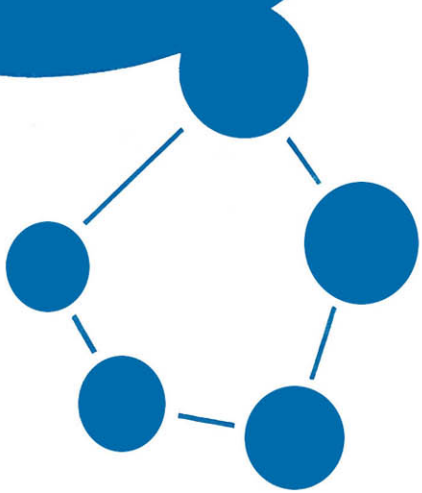
THE LABORATORY HANDLING AND STORAGE OF PEROXY COMPOUNDS



ASTM

ASTM SPECIAL TECHNICAL PUBLICATION NO. 471

LABORATORY HANDLING AND STORAGE OF PEROXY COMPOUNDS

Sponsored by Committee E-15
on Analysis and Testing of
Industrial Chemicals
AMERICAN SOCIETY FOR
TESTING AND MATERIALS

ASTM SPECIAL TECHNICAL PUBLICATION 471

List price $3.00

AMERICAN SOCIETY FOR TESTING AND MATERIALS
1916 Race Street, Philadelphia, Pa. 19103

Library of Congress Catalog Card Number: 71-105454
SBN 8031-0053-1

NOTE

The Society is not responsible, as a body,
for the statements and opinions
advanced in this publication.

Printed in Easton, Md.
January 1970

Foreword

This publication is the second of a series of papers on safe handling of peroxy compounds sponsored by ASTM Committee E-15 on the Analysis and Testing of Industrial Chemicals. It should be of considerable use to chemists and chemical engineers working with the ever growing list of organic and inorganic peroxy compounds in the laboratory and the chemical process industry. The first in this series of publications is *Fire and Explosion Hazards of Peroxy Compounds, ASTM STP 394*. Future publications will cover the following topics: (1) physical tests for evaluating stability; (2) formation, prevention of formation, and removal of peroxides from solvents; (3) hazards in purification; (4) chemical tests for qualitative detection; and (5) toxicity and physiological effects.

Related ASTM Publications

Fire and Explosion Hazards of Peroxy Compounds, STP 394 (1965), $1.50

Contents

Introduction 1
Prior Art 1
Properties 3
General Use of Peroxy Compounds 3
Classification System for Peroxy Compounds 3
Responsibility and Background 4
Personal Protective Equipment 4
Static Electricity 6
Handling–General: Storage to Use Area Transfer 9
In-Process Use 9
Laboratory Experiments Involving Peroxy Compounds 10
Preparation of a Peroxy Compound 11
Workup Procedures 14
Packaging 17
Labeling 18
Short-Term Storage 19
Disposal of Peroxy Compounds 19
Storage of Peroxy Compounds 20
Organization and Security 22
Autoxidation of Metals, Solvents, and Monomers 22
Fire Fighting 23
References 24