

SYMPOSIUM ON EFFECTS OF LOW TEMPERATURES ON THE PROPERTIES OF MATERIALS

Presented at a
MEETING OF THE PHILADELPHIA DISTRICT
AMERICAN SOCIETY FOR TESTING MATERIALS

March 19, 1946, Philadelphia, Pa.



Special Technical Publication No. 78

Published by the
AMERICAN SOCIETY FOR TESTING MATERIALS
1916 Race Street, Philadelphia 3, Pa.

SYMPOSIUM ON EFFECTS OF LOW TEMPERATURES ON THE PROPERTIES OF MATERIALS

Presented at a
MEETING OF THE PHILADELPHIA DISTRICT
AMERICAN SOCIETY FOR TESTING MATERIALS

March 19, 1946, Philadelphia, Pa.

(Papers reviewed by authors, in October, 1949, prior to publication)



Reg. U. S. Pat. Off.

Special Technical Publication No. 78

Published by the
AMERICAN SOCIETY FOR TESTING MATERIALS
1916 Race Street, Philadelphia 3, Pa.

COPYRIGHT, 1950
BY THE
AMERICAN SOCIETY FOR TESTING MATERIALS

Printed in Baltimore, Md., U. S. A.
December, 1949

FOREWORD

The papers and discussions in this Symposium on Effects of Low Temperatures on the Properties of Materials were presented in two Sessions at a Meeting of the Philadelphia District, held in Philadelphia, Pa., on March 19, 1946.

This Symposium was arranged by a Program Committee consisting of:

A. O. Schaefer, *Chairman*, The Midvale Co.
G. E. Landt, Philadelphia Textile Finishers, Inc.
F. B. Foley, The Midvale Co.

Mr. Landt acted as the chairman for the Afternoon Session and Mr. Foley for the Evening Session.

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

CONTENTS

	PAGE
Introduction—A. O. Schaefer.....	1
Low Temperature Behavior of Organic Plastics—H. K. Nason, T. S. Carswell, and C. H. Adams.	3
Low Temperature Properties of Elastomers—John W. Liska.....	27
Discussion.....	46
Effects of Subatmospheric Temperatures on the Properties of Non-Ferrous Metals—Norman L. Mochel.....	47
Discussion.....	50
The Properties of Weldments at Low Temperatures—Robert D. Stout.....	51
Discussion.....	60

