FOREWORD

Publication of this Technical Report that has been registered with ANSI has been approved by the Accredited Standards Developer ISA, 67 Alexander Drive, Research Triangle Park, NC 27709. This document is registered as a Technical Report according to the Procedures for the Registration of Technical Reports with ANSI. This document is not an American National Standard and the material contained herein is not normative in nature. Comments on the content of this document should be sent to the Secretary, Standards and Practices Board; ISA; 67 Alexander Drive; P. O. Box 12277; Research Triangle Park, NC 27709.

As a service to industry, the accompanying document, Bureau of Mines Bulletin 680 - Investigation of Fire and Explosion Accidents in the Chemical, Mining, and Fuel-Related Industries - A Manual, by Kuchta, 1985, is hereby reprinted in its entirety.

This compendium, formerly available from the U.S. Bureau of Mines, contains information essential to an understanding of detection, measurement, and handling of flammable gases and vapors.

For further information, refer to ANSI/ISA-TR12.13.01.

ABSTRACT

This technical report includes theoretical and practical work carried out and collected by the U.S. Bureau of Mines relating to ignitability, flammability and physicochemical properties of flammable gas mixtures, liquids, and solids. While emphasis of this document is on investigation of fires and explosions, a significant amount of theoretical & practical data related to flammability limits, under varying conditions of proportion, temperature and pressure is included.

KEY WORDS

Fire

Explosion

Flammability limits

Flammable

Combustible

LEL, UEL

LFL, UFL

Gas