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Guidance for dust explosion hazard identification and protection of chemicals

化学品粉尘爆炸危害识别和防护指南

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document is proposed and coordinated by the National Technical Committee on Hazardous Chemicals Management Standardization (SAC/TC 251).

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A Guide to Chemical Dust Explosion Hazard Identification and Prevention

1 Scope

This document provides identification of dust flammability of chemicals, identification of explosion hazards, basic protection measures, and hazard and risk communication.

This document applies to dust explosion hazard identification and protection for chemicals.

This document does not apply to explosive or self-decomposing substances or mixtures.

2 Normative references

GB/T 3836.12

GB 15577-2018

GB/T 15604-2008

GB/T 15605

GB/T 16425

GB/T 17519

GB/T 24626

GB 25285.1

GB/T 25445

3 Terms and definitions

The following terms and definitions as defined in GB 15577-2018, GB/T 15604-2008 and GB/T 16425 apply to this document.

3.1 Combustible dust

Dust, fibers or flying catkins that can undergo violent oxidation reactions with gaseous oxidants (mainly air) under atmospheric conditions. [Source. GB 15577-2018, 3.1]

3.2 dust explosion

The flame propagates in the dust cloud, causing a significant jump in pressure and temperature.

[Source. GB/T 15604-2008, 2.11]

3.3 subsequent explosion

When a dust explosion occurs, the shock wave of the initial explosion will lift up the deposited dust that has not exploded, forming a dust cloud, which will be ignited and Continuous explosions occurred. [Source. GB 15577-2018, 3.8]