



PERLITE MANAGEMENT

Doc 146/21

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As part of a programme of harmonisation of industry standards, the European Industrial Gases Association, (EIGA) has published EIGA Doc 146, *Perlite Management*, jointly produced by members of the International Harmonisation Council and originally published by the Compressed Gas Association as CGA P-8.3, *Perlite Management*.

This publication is intended as an international harmonised standard for the worldwide use and application of all members of the Asia Industrial Gases Association (AIGA), Compressed Gas Association (CGA), European Industrial Gases Association, and Japan Industrial and Medical Gases Association (JIMGA). Each association's technical content is identical, except for regional regulatory requirements and minor changes in formatting and spelling.

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Amendments to 146/18

Section	Change
3.2.4	Clarification on perlite eruption
4.3	Additional hazard and clarification on perlite eruption
5.4	Clarification of hazards from perlite abrasion
7	Additional text for preparation for perlite installation
7.2	Additional warning and caution statements

NOTE Technical changes from the previous edition are underlined

1 Introduction

Perlite is used as an insulation medium in cryogenic enclosures such as coldboxes, cryogenic liquid tanks, field-erected flat bottom tanks, and pipe ducts where perlite is filled into the annular spaces between the inner and the outer shells.

2 Scope

Perlite is non-toxic and non-flammable; however, the nature of the material and the large quantities involved require the use of special operations, handling, and safety procedures. This publication provides guidance for reducing the risks of uncontrolled perlite releases and incidents that have potential for serious personnel injury, property damage, downtime, environmental impact, and consequences outside the perimeter of the plant.

It covers the use of perlite in cryogenic enclosures and focuses on safety, perlite handling procedures, and emergency perlite management. This publication is for industrial gas plant manufacturers, owners, and operators of facilities that use and maintain perlite as an insulation medium for cryogenic equipment. Insulating materials such as mineral wool or vermiculite and other synthetic silicates are not covered in this publication. This publication does not cover hazards related to toxic and flammable gases.

Information regarding design considerations, operation, and maintenance of cryogenic enclosures is contained in EIGA Doc 170, *Safe Design and Operation of Cryogenic Enclosures* [1].¹

This publication does not attempt to recommend or establish specific design or usage criteria but provides best practices. The end user shall determine the specific requirements.

3 Definitions

For the purpose of this publication, the following definitions apply.

3.1 Publication terminology

3.1.1 Shall

Indicates that the procedure is mandatory. It is used wherever the criterion for conformance to specific recommendations allows no deviation.

3.1.2 Should

Indicates that a procedure is recommended.

3.1.3 May

Indicates that the procedure is optional.

3.1.4 Will

Is used only to indicate the future, not a degree of requirement.

3.1.5 Can

Indicates a possibility or ability.

¹ References are shown by bracketed numbers and are listed in order of appearance in the reference section.