Contents Foreword 1. Scope		Page 3
		-
	2.1 soil improver	4
	2.2 growing media	4
	2.3 harm	4
	2.4 hazard	4
	2.5 risk	4
	2.6 contaminant	4
	2.7 pollutant 2.8 potentially toxic element	4 4
	2.8 potentially toxic element 2.9 user	4
	2.10 intended use	4
	2.11 reasonably foreseeable misuse	4
	2.12 safety	4
3.	Description of hazards and products	4
	0, -	
4.	Product safety assessment	7
	4.1 Fire	7
	4.2 Dust explosion	9
	4.3 Potentially Toxic Elements	10
	4.4 Organic contaminants	21
	4.5 Mineral constituents4.6 Biological hazards, pathogens to humans and animals; microbial by-products and	25
	allergens	27
	4.7 Traumatic hazard	35
	4.8 Dust	36
	4.9 Radiation	37
	4.10 Physicochemical	38
	4.11 Seeds and propagules	39
	4.12 Plastic, glass, metal and other undesirable materials	40
	4.13 Eutrophication agents	42
	4.14 Gaseous emission	43
	4.15 Phytotoxic factors4.16 Plant pathogens	44 45
5.	Summary of hazards and corresponding recommended actions	46
	Annex A Background	47
	Annex B Metal limits in soil improvers and growing media note for discussion	49
	Annex C Heavy Metal Limits in Soil Improvers: Discussion Guidelines	58
	Annex D Proposal for the elaboration of precautionary soil values	78
	Annex E Working priorities for WG 2	84
	Bibliography	85

Introduction

This CEN report has been drawn up by CEN/TC 223, Soil improvers and growing media, Working Group 2, Safety. This report is primarily intended to inform the other Working Groups of CEN/TC 223 on significant health and safety issues related to soil improvers and growing media (SI/GM). It also classifies the hazards and risks from soil improvers and growing media so that technical information is available for manufacturers, users and regulators to refer to when evaluating the necessary risk minimization strategies to be adopted.

This comprehensive information is also intended as a resource to manufacturers, to assess their own products in relation to the markets that they sell in, to retailers and suppliers and to users of these products.

The objective of Working Group 2 of TC 223 was to examine aspects of soil improvers and growing media that are related to safety, and to propose to TC 223 the measures to ensure the protection of users and the environment from risks derived from the use of soil improvers and growing media.

WG 2 adopted the definition of safety of ISO/IEC Guide 51 (1990) *Guidelines for the inclusion of safety aspects in Standards*, as 'freedom from unacceptable risk of harm'.

1. Scope

This document contains an assessment of the safety implications of soil improvers and growing media. This assessment provides a framework in which guidelines have been suggested to protect users (the exposed human population in general), the environment (flora, fauna, and ecosystems in a broad sense, including soil and water) and plants that are grown in the soil improver or growing medium.

Each hazard is discussed separately and includes:

- a description of the hazard;
- existing regulations that are relevant;
- a discussion of the applicability of the hazard to soil improvers and growing media; and;
- recommended safety guidelines formulated by WG 2 of CEN/TC 223.

This is summarized with a list of the hazards and corresponding recommended actions. The annexes contain references and background information.

Not included in WG 2's investigations were those quality aspects that are:

- commonly referred to as 'fitness for purpose', i.e. the commercial quality, composition or formulation that makes a product suited to satisfy a specific market application;
- pertaining to consumer protection from commercial fraud including product conformity to a stated composition and tolerances of deviations from it.