

PAS 510:2021

Plastic pellets, flakes and powders –
Handling and management throughout
the supply chain to prevent their leakage
to the environment – Specification



Scottish Government
Riaghaltas na h-Alba
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Foreword

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¹⁾ Allianz Global Investors, Brewin Dolphin, Man Group, Environment Agency Pension Fund, Generation Investment Management LLP, LGPS Central Ltd, McInroy & Wood Ltd, Ownership Capital B.V., Troy Asset Management Ltd.

It has been assumed in the preparation of this PAS that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

Presentational conventions

The provisions of this PAS are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Where words have alternative spellings, the preferred spelling of the Shorter Oxford English Dictionary is used (e.g. “organization” rather than “organisation”).

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In particular, attention is drawn to regulations that cover the following topics:

- Health and safety
- Control of pollution
- Water quality
- Dust emissions
- Discharges into public sewerage systems

For further information on legal obligations that might apply contact the relevant Government Agency.

0 Introduction

Plastic pellets, flakes and powders (collectively referred to in this PAS as pellets) are the raw material used to make a wide variety of plastic products, including mouldings, pipes and packaging. As a result of current handling and management practices, pellets can be lost to the environment at every stage of the plastic supply chain, including road transport, shipping and storage (ICF and Eunomia, “Investigating Options for reducing releases in the aquatic environment of microplastics emitted by (but not intentionally added in) products – Final Report for DG Environment of the European Commission” [1]).

Once in the environment, pellets, along with other types of microplastics, are known to be eaten by a range of animals including fish and seabirds, and known to cause harm (see Wright, Thompson & Galloway, “The physical impacts of microplastics on marine organisms: A review” [2]).

Every part of the supply chain that handles pellets, including raw material manufacturers, distributors, recyclers, transporters, and plastics processors, has a responsibility to contain any pellets they handle or manage, and ensure that they do not contribute to the plastic pollution problem.

The plastics industry has developed a voluntary programme for plastic pellet containment. The American Chemistry Council and The Plastics Industry Association maintain Operation Clean Sweep® (www.opcleansweep.org), where organizations voluntarily commit to a set of good practices for preventing plastic material loss to the environment. The British Plastics Federation (BPF) have the license to operate Operation Clean Sweep® in the UK (www.bpf.co.uk/sustainability/operation_clean_sweep.aspx) and Plastics Europe have the license to operate Operation Clean Sweep® in the EU (www.opcleansweep.eu/).

This PAS builds on the groundwork laid by Operation Clean Sweep® by creating a standardized and consistent approach to risk management and containment of pellets, in order to prevent loss to the environment across the plastic supply chain. Adoption of the PAS can assure an organization’s customers, suppliers and other stakeholders that the organization has a disciplined, systematic process in place for the handling and management of plastic pellets and is complying with good practice in preventing pellet loss.

The overarching goal of this PAS is to help companies achieve and maintain zero pellet loss across their pellet handling operations.

This PAS supports the European Commission’s *A European Strategy for Plastics in a Circular Economy* [3], which notes the need for “development of measures to reduce plastic pellet spillage”. In addition, it supports the European Union’s Circular Economy Action Plan 2.0 (see https://ec.europa.eu/environment/strategy/circular-economy-action-plan_en) which is committed to developing “labelling, standardisation, certification and regulatory measures on unintentional release of microplastics” (European Commission, *Circular Economy Action Plan for a Cleaner and More Competitive Europe* [4], at p.12) as well as the objectives of EU Directive 2019/904 on the reduction of the impact of plastic products on the environment [5].

1 Scope

This PAS provides requirements for the handling and management of plastic pellets, flakes and powders throughout the supply chain to prevent spills, leaks and loss to the environment.

The PAS covers the following:

- a) Organizational responsibilities.
- b) Leadership and commitment.
- c) Competence, training and awareness.
- d) Risk assessment of pellet loss to the environment.
- e) Operational controls:
 - 1) Prevention, containment and clean-up.
 - 2) Procurement and suppliers.
- f) Internal and external communication.
- g) Performance evaluation:
 - 1) Monitoring and documentation.
 - 2) Auditing and verification of conformity.
- h) Improvement:
 - 1) Internal and external non-conformity and corrective action.
 - 2) Continual improvement.

This PAS is for use by any organization of any size in any part of the supply chain that handles pellets, including raw material manufacturers, distributors, storage facilities, recyclers, transporters, and plastics processors.

This PAS is also of use to any company handling materials of similar properties and dimensions that might pose a pollution risk.

This PAS might also be of interest to anyone buying, selling or using plastic materials and products as well as anyone investing in companies that do so, enabling them to ensure that actions to prevent plastic pellet pollution are being implemented at all stages in their supply chains.

This PAS is intended to be internationally applicable.