

Introduction to PAS 103

Collected waste plastics packaging

Specification for quality and guidance for good practice in collection and preparation for recycling



BPF
RECYCLING COUNCIL

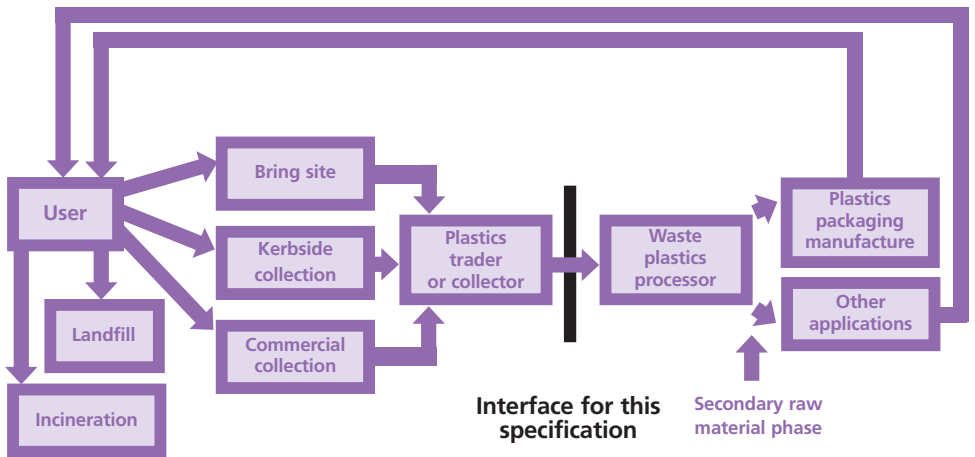
BSI



1.5 m tonnes of plastics packaging waste are landfilled each year in the UK. The Publicly Available Specification 103 (PAS 103) will help to reduce this by enabling more material to be recycled.

PAS 103 is a classification and grading system for the quality of collected waste plastics packaging intended for recycling. Through this system the value of the materials being bought and sold will increase, markets for the waste will expand and the trading process will be simplified through the adoption of a common language.

The better the information a supplier can provide to a potential buyer about the waste plastics being offered for sale, the easier it is for the buyer to value the consignment. The plastics waste is also likely to have a higher value and more market opportunities.



Example of completed visual inspection log sheet for assessment of waste plastics:

Part 1					
Source: <i>ABZ Ltd</i>			Inspection date: <i>30 April 2004</i>		
Batch ID: <i>291003 ABZ 01</i>			Assessor: <i>A.N Other</i>		
Net weight of batch, kg Excluding its packaging, e.g. pallets		<i>9000kg</i>			
Form of batch		<i>Bale / bag / box / drum / bulk / other.....</i>		(delete as appropriate)	
Number of units, e.g. bales or bags, in the batch		<i>25</i>			
Where applicable, how is the batch packaged?		<i>Metal strapping / plastic strapping / plastic wrapped / other.....</i>		(delete as appropriate)	
Form of waste plastics		<i>Original product / flake / granulate / shredded / crumbed / reel / other.....</i>		(delete as appropriate)	
Has the waste been used?		<i>Pre-consumer / post-consumer / both</i>		(delete as appropriate)	
Weight of bale or bag, kg		<i>305 kg</i>			
Dimensions of bale or bag, m		<i>1.1m x 1m x 0.8 m</i>			
Density of bale or bag, kg/m ³		<i>350 kg/m³</i>			
Is the packaging obligated?		<i>Yes / No</i>		(delete as appropriate)	
Part 2					
Specification category	Column 1 Classification and description	Column 2 Estimate % by weight ^{a) c)}	Column 3 Grading (see Table 2 & 3)		
1. Main original or originally intended application ^{a)} : (Table 4)	<i>A5, Any post-use applications, with associated labels & caps (>100ml & < 5 L capacity)</i>	<i>98</i>	<i>E</i>		
2a. Main polymer present ^{a)} : (Table 5)	<i>PET</i>	<i>98</i>	<i>E</i>		
2b. Other polymer(s) present ^{a)} : (Table 5)	<i>PP (caps)</i>	<i>2</i>			
3. Main colour ^{a) b)} : (Table 6)	<i>PI (Natural)</i>	<i>98</i>	<i>E</i>		
4. Category A contaminants (hazardous/clinical waste) ^{d)} : (See 4.4.2)	<i>None Visible</i>	<i>0</i>	<i>1</i>		
5. Category B contaminants ^{d)} : (See 4.4.3)	<i>Labels</i>	<i>1</i>	<i>4</i>		
6. Category C contaminants ^{d)} : (See 4.4.4)	<i>Plastic Caps</i>	<i>2</i>	<i>5</i>		
7. Surface water content:	<i>Damp (light condensation)</i>				
Any other comments: (e.g. history information provided by supplier, UV degradation, specific exclusions, etc)	<i>Soft drinks bottles - domestic waste stream</i>				
Part 3					
Full classification and grading					
Application <i>A5 (E)</i>	Material <i>- PET (E)</i>	Colour <i>- PI, Natural (E)</i>	Contaminant A <i>- CA (1)</i>	Contaminant B <i>- CB (4)</i>	Contaminant C <i>- CC (5)</i>

The core of PAS 103 is a visual inspection log sheet for describing and grading waste plastics. An automated version of the log sheet is also available at www.wrap.org.uk/publications/plasticspasclassifier.xls

Specification of waste plastics packaging

The classification and grading is carried out by a visual assessment of each batch of waste plastics.

Initially, details of the batch are recorded, including:

- the source and batch identification;
- the net weight of the batch;
- the form of the batch (e.g. baled, bagged);
- the number of units (e.g. bales or bags) in the batch;
- the form of the waste plastics (e.g. original product, flaked, granulate, shredded, crumbed or reel);
- whether the waste is pre-consumer or post-consumer;
- the weight, dimensions and density of the bales or bags;
- whether it is obligated packaging.

The quality of the waste is then specified, and the waste graded, according to the following categories:

- Main original application of the waste;
- Main polymer type(s) present;
- Main colour;
- Contaminants.

In each category the type and percentage by weight is assessed visually and reported. The surface water content and any additional information on the batch of waste may also be provided.

Original or originally intended application

The batch of waste plastics packaging is classified by the main original application, e.g. bottles, bags and films. Each category may be subdivided, e.g. for bags into carrier bags, polymer bags, woven big bags or sacks.



"PAS 103 makes it easier for waste holders and plastics recyclers to do business"

"Visual assessment is normally all that is required to classify the waste"

How to order a copy

Copies of PAS 103 can be obtained free of charge from WRAP.

E-mail: helpline@wrap.org.uk

Telephone: 0808 1002040

Acknowledgement

The Publicly Available Specification PAS 103 has been prepared by BSI in consultation with the BPF Recycling Council, WRAP, NPL and a development committee.

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WRAP

The Old Academy
21 Horse Fair
Banbury
Oxon
OX16 0AH
www.wrap.org.uk

BPF Recycling Council

6 Bath Place
Rivington Street
London
EC2A 3JE

BSI

389 Chiswick High Road
London
W4 4AL
www.bsi-global.com

Main polymer type(s)

The waste plastic is classified on the basis of the main polymer, although additional polymer types can also be identified, using the standard terminology for polymers e.g. PET, PP.

Main colour

The waste plastic is classified on the basis of the main colour, whether it is natural, clear tinted, single or mixed colour.

Contaminants

The waste plastic is classified on the basis of any contaminants present. Contaminants are identified in three categories:

Category A: those that are not normally accepted and usually result in rejection of the waste (e.g. hazardous or clinical waste);

Category B: those that are normally permitted and can be removed from the waste by cleaning and separation procedures (e.g. paper, metal or glass);

Category C: those that may be permitted to agreed levels and do not necessarily require removal from the waste plastics (e.g. fillers).

Test methods

PAS 103 includes test methods for the verification of quality in the event of a dispute.

Good practice in collection, storage and delivery of waste plastics packaging

PAS 103 identifies key issues in the handling of waste plastics packaging that have an impact on the value of the waste plastics produced and the eventual cost of recycling.

Consideration of Health and Safety issues is paramount in handling waste plastics.

