



Highlander International Recycling

Customer guidance on Chinese export quality requirements

As of January 2019, the Chinese government have further tightened their quality regulations with regards to the import or solid waste items for recycling, from all countries all over the world.

Waste paper grades such as Sorted Office Papers & Cardboard now have a more stringent standards to meet if they are to be exported to and accepted by Chinese paper mills. Other grades such as Mixed Papers and Mixed Plastic have now been completely banned from being exported to China.

As your recycling provider, we sell your recycled paper to worldwide markets to ensure you get the best available price and most sustainable market at all times. This guidance is designed to detail the quality requirements of the Chinese government import agency (CCIC) which in turn should be the quality standards the material supplied by you to Highlander should strive to meet at all times. We would be grateful if you could familiarise staff at your operations with the following requirements so they place only suitable waste paper for export to China into the bin, bag, baler, compactor or truck used to contain and transport the waste paper to our recycling operations.

How does this affect your business / your waste paper?

With the recent changes to China quality guidelines, the waste paper you produce for recycling (for example waste cardboard) is now measured to the new higher standards. If the standard is not met this can result in your material having to be reprocessed by us at a higher cost and with disposal costs for poor quality material which in turn, can cause price or weight reductions or added disposal costs.

What are the new quality standards?

The new standards are broken down into three important area, which are now assessed by Chinese government officials and Highlander staff when the waste is being loaded for export. The areas are:

1. **Is there any contamination?**
2. **Is the material overly wet?**
3. **Is the material Radioactive?**

Each of the above areas have limits and allowances (as dictated by the Chinese government), which are described below.

Contamination Guidelines (Cardboard):

Contamination can range from a plastic bag being found in a bale, to food residue left on a fruit box. With the new quality guidelines in place all contaminants are now categorised so that they are easier to understand based on their risk and allowance if found in waste cardboard. The categories are as follows:

1. **Prohibited Class (Max 0 % Allowance) – by WEIGHT**
2. **Restricted Class (Max 0.01 % Allowance) – by WEIGHT**
3. **General Class (Max 0.5 % Allowance) – by WEIGHT**

The allowances above are essentially the amount of each contaminate category that can be found in your material. For example, you may produce a 500kg bale (or a skip filled with 500kg of loose Cardboard). If a

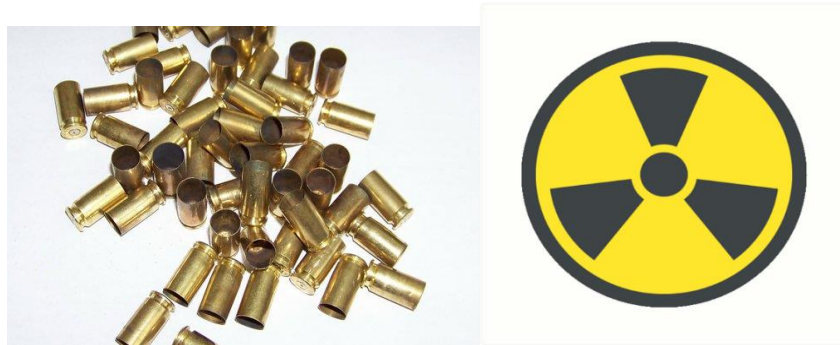
[Business]



General class contaminate is found in the bale/skip and that contaminate weighs more than the 0.5% allowance (in this case would be 2.5 kg)

Prohibited Contaminates:

This category of contamination is the most serious level of contamination and is strictly NOT allowed in any china bound goods / waste cardboard (Max 0% by WEIGHT). Examples of this contamination – Bullet shell / explosive casings & radioactive wastes.



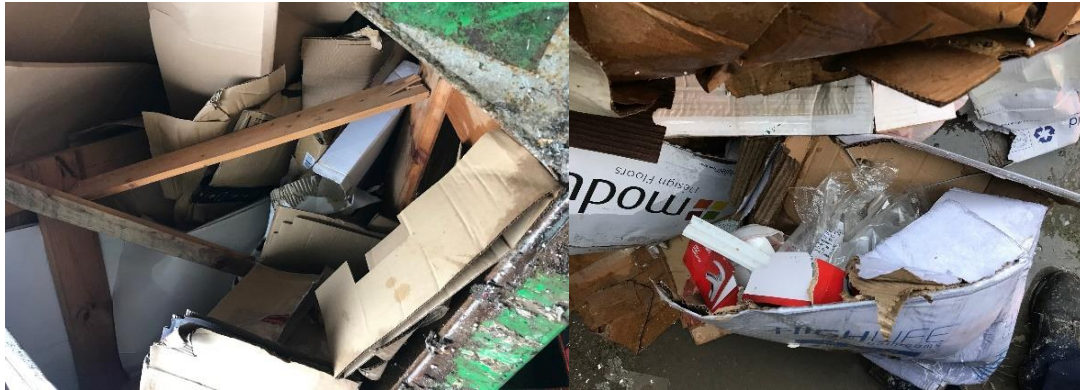
Strictly Restricted Contaminates:

This category of contamination is the medium level of contamination and acceptable in China bound goods at the maximum limit of 0.01% by WEIGHT. Examples of this contamination – Burnt or partially burnt waste paper, or waste paper contaminated by fire extinguishing agent. Sealed Sharps Containers. Food Waste. Any hazardous wastes such as being corrosive, toxic, flammable or reactive.



General Contaminates:

This category of contamination is the lowest level of contamination and acceptable in China bound goods at the limit of 0.5% by WEIGHT. Examples of this contamination – Wastes of a Wood, Metal, Glass, Plastic, Rubber or Textile nature and coated Papers like Self-Adhesive and Wallpaper.



Moisture Guidelines:

The second Key area in the new guidelines refers to the moisture levels of the waste paper. This is essentially measuring how damp or wet the waste material is. The moisture is measured using a calibrated Moisture meter (photo below). Similar to the contamination allowances there is a maximum natural moisture allowance of 12%. If the material exceeds this allowance, any additional percentage would normally be deducted from the net weight of the material. For example, if a 500 kg bale had a moisture reading of 22%, this would result in 10% being deducted from the net weight (which in this case would be 50kg).



Radiation Guidelines:

(NB – it is **HIGHLY UNLIKELY** this will ever affect waste paper, but is covered here for **reference only**)

The final key area in the new guidelines is with regards to radiation levels contained within waste paper. The radiation level of goods is measured by Highlander using a calibrated Radiation Meter / Geiger Counter (photo as below) and the allowance of radiation within the material is 0.25 usv/h over and above the Highlander's site background average radiation reading.



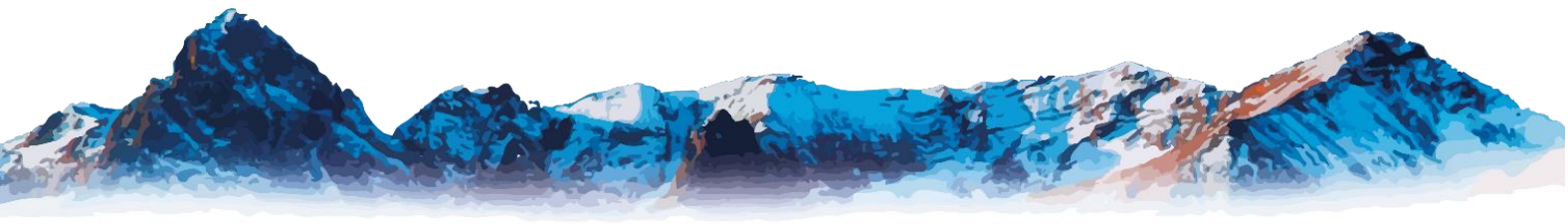
Non-conformances & Corrective Actions

If any waste paper we supply to China fails the quality standards within the 3 key areas (as detailed previously), this can result in Highlander losing its accreditation to ship waste paper to China. In order to ensure we can continue to supply these crucial markets, we conduct a series of internal material checks on customer material on a regular basis, which we will from the 1st March, begin to communicate back the results of these tests to the affected customers. The test performed will be:

1. **Material “Bale breaks” (To measure the contamination within cardboard bales)**
2. **Loose material sampling (To measure the contamination within loose cardboard)**
3. **Material moisture tests**
4. **Material radiation tests**

Photos below of a bale break / reprocessing which involves the bale being burst opened and handpicked for any of the three categories of contaminants. The contaminants would then be weighed, then the loose cardboard material is also weighed so we know the exact percentage of each.





With the new quality standards in place we need you to help Highlander ensure we continue to supply only the highest quality materials to our worldwide markets. Some practical actions you and your staff can take for each key area of material quality management, are detailed as below:

Corrective Contamination Actions:

The best way to avoid any contamination claims is to be vigilant to the waste that is being put in your skip, van, compactor or baler. Though there are allowances to certain types of contaminants, we advise you to only recycle paper or cardboard – if it is not fibre based it CANNOT be recycled as paper.

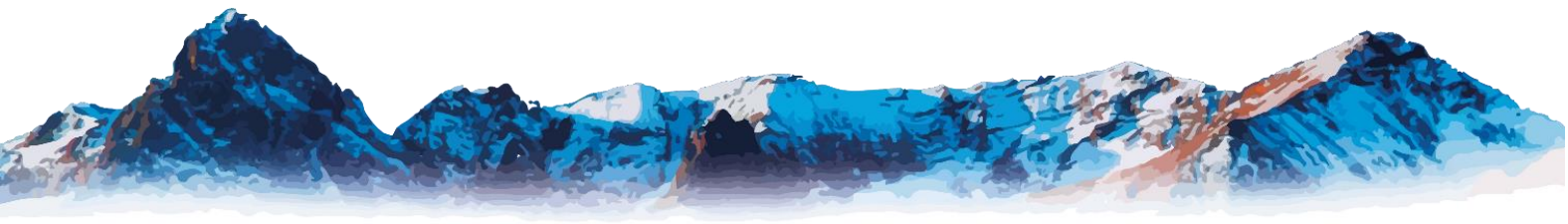
Corrective Moisture Actions:

We advise that you simply keep your waste materials dry, most effective option being that the materials are kept indoor or undercover or in a closed container. If space is an issue and your cardboard must be kept outside, we recommend that it be covered with a tarpaulin.

Corrective Radiation Actions:

To combat any Radiation claims we advise that your waste materials are kept far away from any sort of toxic / hazardous materials to reduce any form of radiation spreading to your waste materials. Again it is highly unlikely this will ever affect customers, however we must make reference to this and bring it to your attention for the purposes of our export accreditation with the Chinese Government.

Thank you for your assistance in ensuring our recycling is clean, legal and sustainable. Finally, to help give customers a better idea on how we inspect any waste paper that arrives on our site for recycling, please see a copy of our Inspection form on the following page, which our staff will complete when inspecting any waste paper materials from customers that are identified as requiring inspection.



Customer Quality Report Form (Material Received)

+ Supplier Name:		Site:	
Date/Time:		Scale Ticket:	
Sales Rep:		Inspector:	
Grade:		Loose (L) or Baled (B)	
Contamination Report			
Type of Contamination: (Allowance)	Prohibited <input type="checkbox"/> (0 %)	Restricted <input type="checkbox"/> (0.01%)	General <input type="checkbox"/> (0.5 %)
Description:	Radioactive <input type="checkbox"/> Explosive/Ammunition Shells <input type="checkbox"/>	Food Waste <input type="checkbox"/> Medical Waste <input type="checkbox"/> Flammable <input type="checkbox"/> Toxic <input type="checkbox"/> Corrosive <input type="checkbox"/> Burnt <input type="checkbox"/>	Wood <input type="checkbox"/> Rubber <input type="checkbox"/> Metal <input type="checkbox"/> Glass <input type="checkbox"/> Plastic <input type="checkbox"/> Textile <input type="checkbox"/> Absorbent <input type="checkbox"/> Other (extra notes) <input type="checkbox"/>
Corrective Action Required:			
Contaminates (Small Amounts) removed from material <input type="checkbox"/>			
Quarantined for Separate Reprocessing <input type="checkbox"/>			
Quarantined for Rejection <input type="checkbox"/>			
Other: _____			
Preventive Action to be Taken:			
Contamination Quantity:		Extra Notes:	
Photos Taken <input type="checkbox"/>	<input type="checkbox"/>	Moisture Tested <input type="checkbox"/>	<input type="checkbox"/>
Radiation Tested <input type="checkbox"/>		Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Signed: _____ (Inspector)		Date: _____	
Signed: _____ (Sales Rep)		Date: _____	