

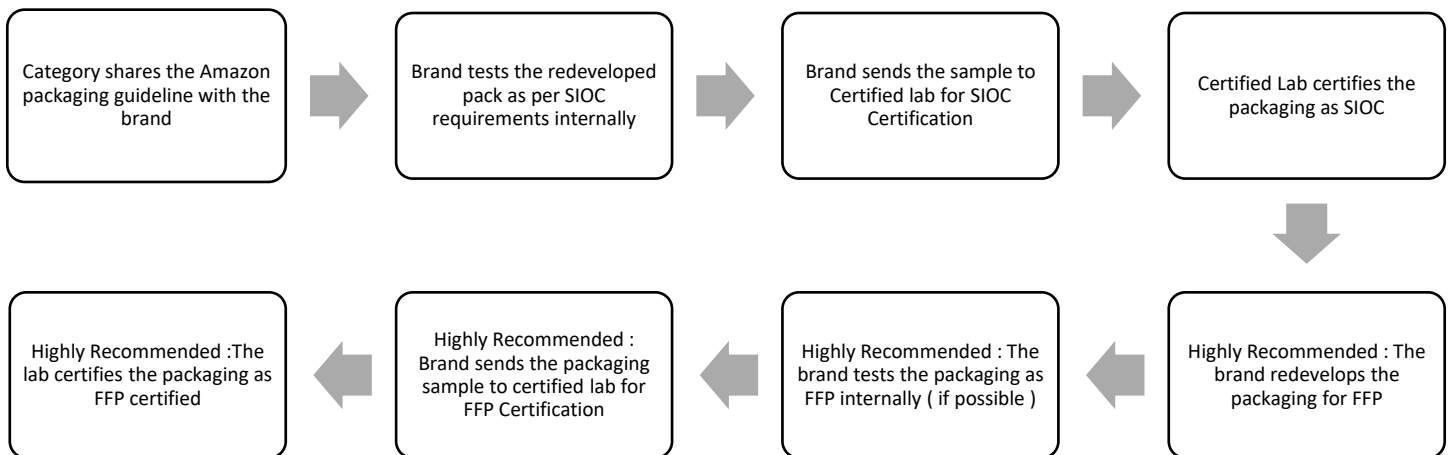
Brand Packaging Improvement (Guideline) – Water Heater

Objective

This document provides the packaging guideline for Water Heaters (Sub cat – 8026) in order to convert the existing brand packaging into an e-commerce friendly packaging (Essentially SIOC or ships-in-own-packaging) by redeveloping its primary packaging appropriately. The current packaging adopted by the brand doesn't necessarily comply with the requirements for e-commerce worthiness as SIOC. This type of ASIN is packed presently in large corrugated boxes at our end which results into a lot of packaging and shipping cost. We have been observing damage issues (high concessions) as well in such ASINs in spite of using over box at FCs. There would be a significant improvement in concessions (damage reduction) once this packaging for water heater is redeveloped by the brand to make it SIOC worthy [Pl. refer Appendix below] as a short-term packaging solution. We would highly recommend the brand to develop FFP packaging (Frustration-Free-Packaging) [Pl. refer Appendix below] appropriately as a long-term sustainable packaging.

Redevelopment Process Flow

The below process flow helps us understand the entire process from the category shares Amazon Packaging guideline to the brand till the brand gets the packaging redeveloped, tested and certified by the certified labs. The brand redevelops the packaging as per the recommendations and test it internally. The packaging sample is sent to the certified packaging lab for SIOC certification and lab certifies that as SIOC if it passes the certification. In case of failure, the brand needs to rework further on the packaging (Amazon packaging team can help here appropriately) till it gets certified as SIOC. As the most sustainable packaging, the brand should develop the FFP packaging which needs to be tested by the brand internally followed by FFP certification by the certified lab.



Concession Analysis

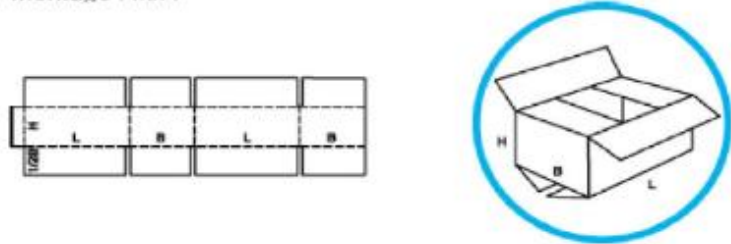
Category team provides the concession data for respective ASINs appropriately under this section.

Packaging Specification and Recommendations

Based on the detailed packaging evaluation for couple of national brands we have observed that the Water Heaters sets are normally packed in B or BC (narrow/medium) fluted corrugated carton (having offset printed top white duplex board) with all product components. The corrugated carton is not properly sealed sometime with tamper-proof seals on all its opening ends on tuck-in flap tab. The recommended packaging should be made out of strong corrugated board (cardboard) having ECT of min. 35 lb/inch in 5 ply (preferably BC or AB flute). The boxes must be sealed properly on all of its opening ends and there would be some internal fitments (engineered appropriately with the help of corrugated inserts preferably) to provide sufficient cushion during transit and handling to avoid damages to the products. All these recommendations would help in making the transit packaging more robust and SIOC worthy (preferably).

Parameter	Importance	Recommendations
Master Box		
Type/Design of Box	High	The transit box should be made out of strong corrugated board which is structurally engineered (cardboard) for required protection following suitable structural design. Designs ref. below for RSC type box –

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		<p>Description : 0201 Montage : M/A</p> 
Box Opening	High	The opening of the box should be securely sealed on the tuck-in flap tab to make it tamper-proof
Strapping Type	High	Required depending on the product weight
Strap Material	Medium	PP Material
No. of straps	Medium	2
Taping Type	Moderate	Proper taping on the opening ends of the transit box using H type taping
Tape Substrate	Moderate	BOPP is widely used tape substrate for related application
No. of ply	High	Box should be made out of min. 3/5 ply corrugated board (cardboard)
Flute Type	High	5 ply board should consist of BC (Narrow and Medium) or AB (Broad and Narrow) flutes appropriately and flute direction should be always vertical along the height of the box (once the box is kept in upright condition)
Board Thickness	Moderate	The standard cardboard thickness should be min. 6.8 mm in case of BC flute and 8 mm for AB flute type
Outer layer of the board	Moderate	Ideally all the layers of the board should be made out of kraft instead of duplex outer layer (paperboard) to maximize the strength of cardboard
Board Edge Crush (ECT)	High	The corrugated board should have min. ECT of 35 lb/inch for required performance in e-commerce supply chain
Manufacturing Joint	Moderate	Glued joint is preferred over stapling without affecting packaging performance
Internal Components		
Poly Bag	High	The product should be properly covered to avoid any dust
Foam sheet (EPE)	High	This may be appropriately used as internal fitment for delicate products in order to provide sufficient cushion inside the corrugated transit packaging.
Inserts (Corrugated /EPE)	High	The primary pack (irrespective of packaging type) should be suspended within the transit box appropriately with the help of internal fitments (if required) so that it doesn't move around during transit and handling. The fragile products should be protected by suitable internal fitments made out of corrugate (min. 25 ECT) or EPE foam sheet.
Cushion at top and bottom	High	As appropriate based on existing product design (Corrugated fitment or EPE foam sheet is highly recommended)
Cushion for accessories	High	As appropriate based on existing product design (corrugated fitment or EPE foam sheet)
Void Filler	Medium	It can be used if necessary to arrest any movement inside the corrugated primary packaging
EPE Density	High	Appropriate based on product design. Recommended density for molded EPE sheet is 11 kg/m ³ or more.

Acronyms:

RSC – Regular Slotted Container

PP – Polypropylene

CCNB – Clay Coated Newsback

EPS – Expanded Polystyrene

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Note – The recommendations are purely based on the observations during packaging evaluation of few National brands. The brand may have some other suggestions for packaging improvement which should be referred along with above recommendations for necessary packaging design or material change. The prescribed packaging quality parameters as mentioned above are just for reference. There would be a joint review of by the brand, Amazon Category team and Packaging team once packaging is redeveloped and certified by the lab before implementation.

Questions

Please reach out to in-packaging@amazon.com for any queries related to this document or any other technical clarification.

Appendix

A1: Packaging Evaluation for few national brands

Packaging Type – Printed corrugated carton or box
Corrugated Box

1. The primary packaging is made out of B fluted 3 ply corrugate having top printed duplex (top grey back or CCNB) paperboard.
2. The corrugated cartons for few of the ASINs don't appear to have sufficient strength for making them transit worthy in e-commerce supply chain and they are not tamper-proof to convert them into SIOC.
3. The gross weight of the product is typically 3 - 12 kg depending on the pack size.
4. Some of the brands use special cushion pad (Instapak Foam Pack) at the top and bottom of the product while packing it inside the corrugated brand packaging.

Internal Fitments

1. The internal fitments (normally EPS or thermocol sheet) seem to be insufficient in existing primary brand packaging which can help those packaging act as SIOC in our supply chain.

Images for Primary Brand Packaging



Pic. 1



Pic. 2

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Pic. 3



Pic. 4



Pic. 5



Pic. 6



Pic. 7



Pic. 8

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Pic. 9



Pic. 10 (Instapack Cushion Pad)

A2: SIOC Certification

Once the primary-cum-transit packaging is redeveloped based on the recommendations from Amazon, the brand needs to test the packaging internally as per below test protocol and send the sample to the certified lab to get it certified for SIOC. Below criteria needs to be followed for SIOC certification –

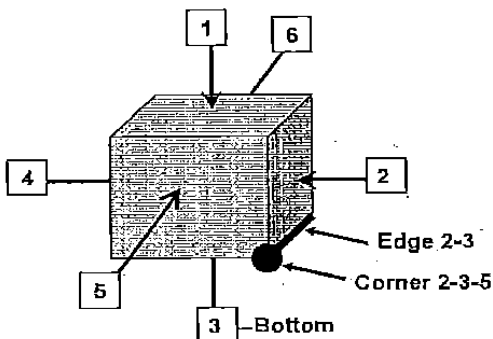
- a. Shippable without any Amazon over box
- b. No prep. Is required by Amazon
- c. Minimal damage/defect rates
- d. ISTA 6 – Amazon Test Compliant

The SIOC test process as per ISTA 6 is depicted here below –

Sample Inspection

Select the ASIN and ensure it is sufficiently protected, not damaged and below conditions are met –

- No pre-existing damage (e.g. dents, broken parts, cracks, chips, wet surface etc.).
- The pack is closed properly by taping.



Before marking the carton, place the smallest flat surface of the carton facing you. Proceed to mark the sample as illustrated in the image here.

The following drops must be made onto a hard flat surface, like concrete -

Drop Order	Drop Height	Drop Orientation
1	18 in	Edge 3-4
2	18 in	Edge 3-6
3	18 in	Edge 4-6

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4	18 in	Corner 3-4-6
5	18 in	Corner 2-3-5
6	18 in	Edge 2-3
7	18 in	Edge 1-2
8	36 in	Face 3
9	18 in	Face 3
10	18 in	Edge 3-4
11	18 in	Edge 3-6
12	18 in	Edge 1-5
13	18 in	Corner 3-4-6
14	18 in	Corner 1-2-6
15	18 in	Corner 1-4-5
16	36 in	Most fragile flat surface
17	18 in	Face 3

Acceptance Criteria (what is considered to be passed)

- The product is not physically damaged or broken
- The primary packaging is not ruptured exposing any of the contents to hazard
- Standard criteria for shipment via existing shipping companies is applicable
- Any acceptable damage of primary packaging as per FC damage standards (to be attached)
- Undamaged plastic blister or clamshell in case of blister and clamshell packaging respectively

A3. FFP (Frustration Free Packaging) Certified Packaging

In long-term the packaging should be ideally converted into a FFP type packaging by respective brand where the packaging would fulfill below criteria –

- Use of Curbside Recyclable Packaging Materials (e.g. the outer box and internal fitments are made out of 100% corrugate)
- Easy-to-open by the end customers
- Use of minimal packaging materials
- Shippable without any Amazon Overbox
- No prep. requirement by Amazon
- Minimal damage and defect rate &
- ISTA 6 -Amazon SIOC Test compliant

In order to develop FFP packaging, the brand needs to work with Amazon IN Packaging team closely. The packaging team would help to innovate the packaging structurally so that molded EPS is replaced by corrugated fitments appropriately to convert it into a FFP certified packaging. Once the packaging is redeveloped as per FFP requirements (as depicted above), this is sent to the certified lab (Intertek/PCRI/SIES) for FFP certification.

Here is the Test Protocol for FFP Certification -



FFP Packaging
Certification (Test P

A4: Contact details for the certified Labs (First 3 labs are preferred over the 4th lab)

- Intertek
Umesh Kumar (Key Account Manager) / Raj Kumar (General Manager - Soft lines)
Plot No. 290, Udyog Vihar, Phase-2,
Gurugram, 122016, India
Direct: 0124-4503455; Mobile: Umesh (9886306272)/Rajkumar (09535510005)
Mail ID: umeshkumar.m@intertek.com/rajkumar@intertek.com
- Packaging Clinic & Research Institute / PCRI (Hyderabad)

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Prof. Karna BK (Director)

114, 1st floor, Amrutha ville, Opposite-Yashoda Hospital

Rajbhavan, Road, Somajiguda, Hyderabad-500082, Telangana, India; www.pcri.co.in

Mobile: 7799771357/Mail ID : pcri.bk@gmail.com, karnaips@gmail.com

3. Sealed Air Packaging Materials (India) LLP "C" Block.
Bombay Textile Research Association Compound, LBS Road, Ghatkopar (West),
Mumbai – 400086 Phone: +91-22-62781781 / 62781774 Contact Person: Prathamesh Fatnaik
Email:prathamesh.fatnaik@sealedair.com / amitava.chatterjee@sealedair.com
4. SIES (Mumbai)
Plot No – 1C, Sector – 5 , Nerul , Navi Mumbai – 400706
Tel.- 022 – 61196433/35/27
Email – naratananp@sies.edu.in/shelys@sies.edu.in ; Website – www.siesedu.in

A6: Contact details for the Structural Packaging Design Service Providers

1. Avon Pacfo
Faridabad, Haryana
Contact Person – Himanshu Bansali ; Mail ID : hb@pacfo.com; Mobile No. - 9910611061

Please inform Amazon Packaging team while working with Pacfo for structural design development services. Please refer above test protocol while developing suitable packaging with the help of Pacfo.

Important Note: The above testing labs and Structural Design Service provider are purely recommended by Amazon India Packaging team for required testing and structural packaging development services. The testing and development charges haven't been negotiated by Amazon. The brands are advised to get the quotes from respective service providers and negotiate the cost accordingly based on their annual volumes and other terms/conditions. In case of any service related issues, the brand needs to approach to Amazon Packaging team for necessary help.