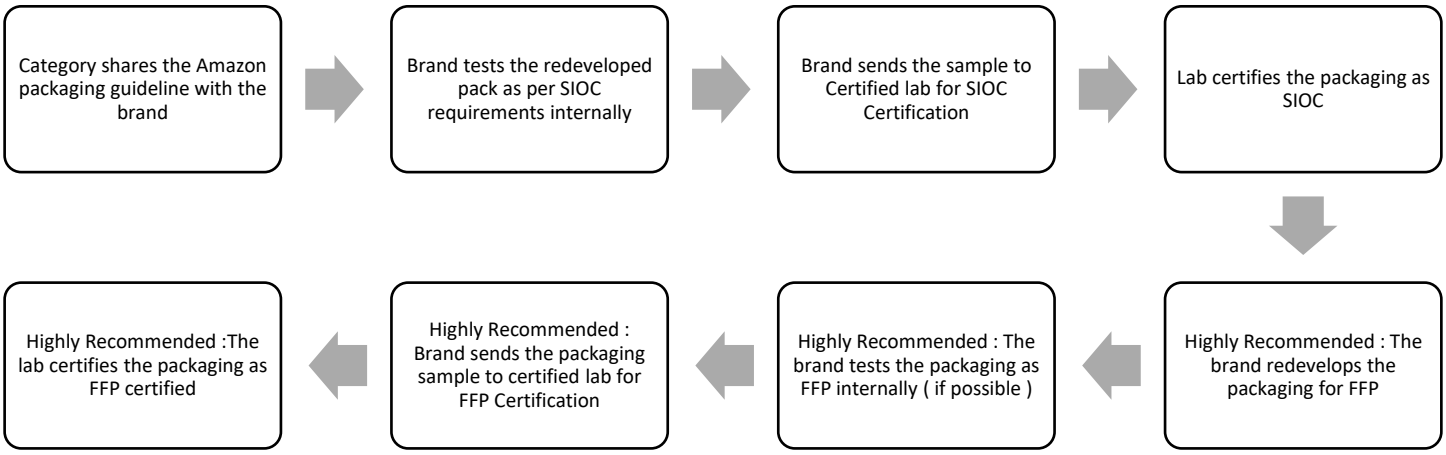
Gas Stove - Packaging Guideline

Objective

This document provides the packaging guideline for gas stove in order to convert the existing packaging into an e-commerce friendly packaging (Essentially SIOC or ships-in-own-packaging) by redeveloping its packaging appropriately. Currently the present 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 that results into a lot of packaging consumption. We have been facing lot of damage issues (high concessions) in such ASINs in spite of using overbox at FCs. There would be a significant improvement in concessions (damage reduction) once this packaging for Gas Stove is redeveloped by the brand to make it SIOC worthy [Pl. refer Appendix] as a short-term packaging solution. We would high recommend to develop FFP (Frustration-Free-Packaging) [Pl. refer Appendix] appropriately as a long-term packaging solution.

Process Flow

The below process flow helps us understand the entire process since the category shares Amazon Packaging guideline to the brand till it gets the packaging redeveloped, tested and certified by the lab . 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 further rework on the packaging (Amazon packaging team can help appropriately here) 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 [Pl. refer the Appendix].



Concession Analysis

Category team provides relevant concession data in this section appropriately.

Packaging Specification and recommendations

Based on the detailed packaging evaluation for couple of national brands we have observed that the stove is normally packed inside a 5 ply RSC type corrugated box with molded EPS or thermocol (density approx. 8 – 9 kg/cm^3) placed between stove and the corrugated box. The box is taped with C type taping method followed by 2 plastic (PP) straps along the length of the box. There is no protection between the legs of the stove and the corrugated board which seems to be quite vulnerable to damage during transit and handling in case of high impact. The recommended packaging should be made out of 5 ply strong corrugate (Min 35 lb/inch ECT , BC Fluted, all brown kraft paper) with molded EPS with higher density (approx. 11 – 12 kg/cm^3) on all the sides of the stove appropriately so that the stove components are well protected (full suspension) during transit. There should be H type taping covering the length and width of the box and 2 straps along the length of the box , 1 strap along the width in case of 2 or 3 burners and 2 straps along the width in case of 4 burners . This would help in making the transit packaging more robust and SIOC worthy most likely.

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Parameter	Importance	Recommendations
Type of Box	High	The master box should be a RSC type box
Box Opening	High	The opening of the box should be at the top
Strapping Type	Moderate	The plastic strapping is recommended for better performance
Strap Material	High	The standard plastic strap is made out of PP material
No of straps	High	There should be 2 straps along the length of the box ; 1 strap along the width in case of 2 or 3 burners and 2 straps along the width in case of 4 burners
Taping Type	Moderate	H type taping along the length and edge of the box is recommended for better performance
Tape Substrate	Moderate	BOPP is widely used tape substrate for such application
No of ply	High	Box should be made out of min. 5 ply corrugated board (cardboard)
Flute Type	High	The 5 ply board should consist of both B (Narrow) and C (Medium) flute
Board Thickness	Moderate	The standard board thickness should be min. 12 mm
Outer layer of the board	Moderate	Ideally all the layers of the board should be made out of kraft instead of duplex outer layer for better strength of the board
Board Edge Crush (ECT)	High	The corrugated board should have min. ECT of 35 lb/inch for required performance level
Manufacturing Joint	Moderate	Glued joint is preferred over stapling without affecting pack performance (if possible)
Parameter	**Severity**	**Recommendations**
Poly Bag	High	The product must be wrapped in a poly bag to make it dust-proof
Foam sheet	High	The glass top must be protected by the foam sheet made out of LPDE (20 gsm approx..)
Cushion Material (Molded Thermocol or EPS)	High	The product must be suspended within the box with the help of molded EPS or EPE foam with suitable density or structurally engineered corrugated fitments (preferably) in place of EPS [Ref. below pics 3 and 4]
Cushion on edges	High	Ideally all 4 sides should be well protected by molded thermocol or EPE foam with suitable density. The gas inlet point and knobs must be well protected.
Cushion on the burners	High	All the burners must be well protected by molded EPS (approx. 40 mm thickness) to avoid any in-transit damages [Ref. below images]
Cushion at the bottom (legs)	High	The legs should be well protected with some cushion material (e.g. molded EPS or corrugated fitments) so that they are suspended within the corrugated box [Ref. below pic. 5]
EPS Density	High	The density of EPS should be increased up to 11 – 12 kg/cm^3 appropriately in order to provide better protection during transit and handling

Acronyms:

RSC – Regular Slotted Container
PP – Polypropylene
CCNB – Clay Coated Newsback
EPS – Expanded Polystyrene

Note – The recommendations are purely based on the observations during packaging evaluation of few National brands. The brand may have some 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 and Amazon Packaging team once packaging is redeveloped and certified by the lab.

Queries

Please reach out to sibsanka@amazon.com for any queries related to this document or any other clarifications.

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Appendix

A1: Packaging Evaluation for a typical national brand
Packaging Type – Printed Duplex Corrugated Box
Corrugated Box

1. The primary cum transit packaging is made out of 5 ply B (Narrow) fluted duplex (top grey back or CCNB) corrugated board.
2. The corrugated box appears to have an ECT of around 30 lb/inch.
3. The gross weight of the pack is approx. 12 kgs (for 4 burners)
4. The box is tapped following C type taping and strapped (heat sealed strapped) in 2 locations along the length of it.

Internal Fitments

1. The glass top is protected by thin foam sheet made out of LDPE.
2. All the four sides of the gas table are protected by molded EPS (thermocol) having a density of around 8 kg/cm^3
3. There are molded EPS plates on all four burners which are molded as per the design of the burner stand and fit into them. This provides required protection during transit and handling.
4. The entire stove fitted with the foam sheet and four piece of molded EPS is packed inside a large poly (made out of LDPE) liner to avoid any scratches during handling.
5. The bottom of the gas table (four legs) are rested on the corrugated box directly without and cushion or protective layer between the board and the legs.

Images for Four Burners Stove

Pic 1

Pic 2

Pic 3

Pic 4

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Pic 5

Images for Two Burners Stove

Pic 1

Pic 2

A2: SIOC Certification

Once the primary-cum-transit packaging is redeveloped based on the recommendations from Amazon, the brand needs to send the packaging to the certified lab (Intertek/PCRI/SIES) and get it certified for SIOC. Below criteria need 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 3 – Amazon Test Compliant

The SIOC test process as per ISTA 3 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.).

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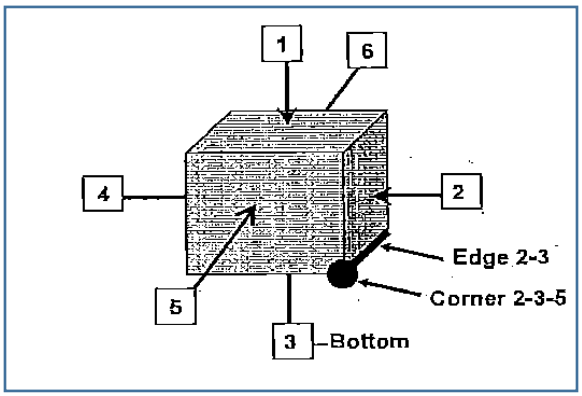
- The pack is closed properly by taping.



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
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)

a. The product is not physically damaged or broken
b. The primary packaging is not ruptured exposing any of the contents to hazard
c. Standard criteria for shipment via existing shipping companies is applicable
d. Any acceptable damage of primary packaging as per FC damage standards (to be attached)
e. 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 for Gas Stove should be ideally converted into a FFP type packaging by respective brand where the packaging would fulfill below criteria –

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

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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

1. **Intertek**
   Rajkumar (General Manager - Softlines)
   Plot No. 290, Udyog Vihar, Phase-2, Gurugram, 1220016
   Direct: 0124-4503455 / Mobile : 09535510005
   Mail ID: rajkumar@intertek.com

2. **Packaging Clinic & Research Institute (PCRI)**
   Prof. Karna BK (Director)
   Mobile: 7799771357
   114, 1st floor, Amrutha ville, Opposite-Yashoda Hospital,
   Rajbhavan, Road, Somajiguda, Hyderabad-500082, Telangana
   Mail ID: pcri.bk@gmail.com / karnaips@gmail.com
   Website: www.pcri.co.in

3. **Sies School of Packaging (SIES)**
   P.V. Narayanan (Director)
   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