



**Consumer Testing
Services
Work Instruction**

**Work instruction for
inspection of Bathroom
accessories and Plumbing**

Doc. No. : **P-INSP-WI-
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Approved by: **Graham Powell**

WORK INSTRUCTION

FOR


INSPECTION OF BATHROOM ACCESSORIES AND

PLUMBING

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1. Scope

This document specifies the general quality requirements for the category of Bathroom accessories and plumbing products. It is used as a general guideline for inspection if clients have not defined their requirement.


2. Inspection Criteria of Product / Package

Ø Product:

- 2 Must be without any unsafe defect for using;
- 2 Should be free of damaged, broken, scratch, crackle etc. Cosmetic / Aesthetics defect;
- 2 Must be conform to the shipping market legal regulation / client's requirement;
- 2 The construction, appearance, cosmetics and material of all units should comply with client's requirement / approved samples;
- 2 All units should have full function complying with client's requirement / approved samples;
- 2 The marking / label on unit should be legal and clear.

Ø Package:

- 2 All units will be adequately packaged, and constructed from Suitably robust materials, such that it arrives in store in a merchantable condition;
- 2 The packaging material can protect the goods from damage during transportation;
- 2 The shipping mark, bar code, label (such as price label), should conform to client's spec. and/or approved samples;
- 2 The package should comply to client's requirement / approved samples;
- 2 Text of illustration, instruction, label and warning statement etc. must be clearly printed in user's language
- 2 The illustration and instruction on the packaging must conform to the product and its actual

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performance.

- 2 The method and material of pallet/crate etc. should be approved by client.

3. Inspection Plan

Ø Inspection Standard Adopted:

- 2 ISO 2859 / BS 6001 / DIN 40080 / NFX 06-022 / ANSI / ASQC - Z 1.4 / MIL- STD-105E / UNI 4842 Single Sampling Plan For Normal Inspection,

Ø Inspection Level:

- 2 Please Refer to “Sampling Size” stated on the table below
- 2 For combined inspection, the sampling of each item depends on the percentage of the item in the batch. The sample size is calculated proportionally. If the calculated number is less than 1, take 2 samples for checking for the inspection plan is General inspection level or take 1 sample for checking for the inspection plan is Special inspection level or Fixed sample size.

Ø Acceptable Quality Level:

- 2 Critical Non-conformity is not allowed
- 2 **AQL 2.5** For Major Non-Conformity
- 2 **AQL 4.0** For Minor Non-Conformity


Ø For checking item that adopts “Fix sample size”, nonconformity is not allowed.

Ø General defect classification:

- 2 **Critical Defect**
 - ♦ Defects which could result in hazardous or unsafe conditions for individuals using or maintaining the product as well as defects contravening legal regulations.
- 2 **Major Defect**
 - ♦ Functional defects reducing the usability or solidity of the product as well as obvious visual defects reducing the sales value of the product.
- 2 **Minor Defect**
 - ♦ Defects that are unlikely to reduce the use of the product, but nevertheless may influence the sale.


Ø For random inspection, the following rules are applied:

- 2 100% of the articles have been produced (finished product) and at least 80% are packed in the export carton cartons subject to client’s requirement

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- 2 If the same sample has several defects, only the most serious defect is counted.
- 2 Samples with defect have to be replaced or repaired; In the case of critical defects, the entire shipment must be rejected as a matter of principle and clients consulted for a decision.

Item code	Details	Sampling size
1	Packaging Check	
A	Appearance of master carton and unit package	At least the square root of the total number of cartons, or otherwise defined by client, And check all cartons/pallets/crates that were selected for sampling.
B	Shipping mark and artwork	
C	Package method / material of master carton and unit package	
D	Pack size	
E	Shipping pallet/crate	
2	Aesthetics / Appearance Check	
A	Instruction (sheet)/warning/warranty etc. printing material	G-II
B	Appearance of unit	G-II
3	Bar Code Verification (check samples drawn back in office if no any requirement for it from client)	S-1
4	Function check	G-II
5	Data Measurement	
A	Assembly check and special function (which can be checked after fully assembling) check	S-2
B	Size of unit (Refer to sample or requirement from client)	3 samples
C	Weight of unit (Refer to sample or requirement from client)	3 samples
D	Static loading check (for accessories)	2 samples
E	(Only for sinks / lavatories / laundry tubs / bidets)	2 samples
E1	Overflow check (only for sinks / lavatories / laundry tubs with overflow hole)	
E2	Loading check	
F	Moisture content check (for wood toilet seats)	S-2
G	(Only for toilets and urinals and bidets)	S-2
G1	Ball pass check (trapway)	
G2	Trap seal check	
G3	Ball test	
G4	Granule test	

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G5	Flush volume test	
G6	Loading test	

Item code	Details	Sampling size
H	Water supplying check	S-2
I	Fixture seal test (for bathtubs and shower receptors)	2 samples
J	Flowing rating check (for faucet / shower head / pipe line fixture / valve)	2 samples
K	Stability check (for freely standing)	2 samples
6	Transportation drop check (not for ceramic item)	1 carton
7	Painting / lacquering / powder coating check (only for metal parts)	
A	Adhesion of paint / lacquer / powder coating / printing	2 samples


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4. Checking Procedure & Defect Classification (Note 1)


Item code	Details	Defective Classification		
		Critical	Major	Minor
1	Packaging Check (Note 2)			
A	Appearance of master carton and unit package			
	· Damaged / deteriorative/wet		X	X
	· Open end is not sealed securely		X	
	· Dirty / dusty		X	X
	· Missing “Country of origin” marking or label		X	
	· Missing “Distributor or importer’s name and post address” marking or label		X	
	· Missing / illegal warning statement / hole for some type/size packing polybag	X		
B	Shipping mark and artwork			
	· For carton, shipping label and/or pallet/crate, shipping label less than requirement		X	
	· Wrongly in content and format		X	
C	Package method / material of master carton and unit package			
	· Wrong package method / material was used		X	
D	Pack size			
	· The actual quantity / measurement size / weight does not match requirement of package		X	
	· The actual quantity / measurement size does not match the case pack size times pallet pack size on the pallet label. (If applicable)		X	
E	Shipping pallet/crate (if applicable)			
	· The pallet is not made of solid wood.		X	X
	· Cracked/broken/rotten/knot/grain separation		X	X
	· Missing boards		X	
	· Protruding nail end	X		
	· Damaged poly film		X	
	· Product overhang the side of pallet		X	
	· Deformed top portion of pallet or other pallet can not be placed over it		X	X
	· Rusty or poorly assembly of metal fastener on nylon strap		X	X
	· Unsafe packing materials were used		X	
	· Fix or fasten two or more pallets together by any means		X	

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Item code	Details	Defective Classification		
		Critical	Major	Minor
	<ul style="list-style-type: none"> Pallet not wrapped with poly film or fastened by nylon strap, in other words, the goods is not firmly fastened to pallet 		X	
2	Aesthetics / Appearance Check			
A	Instruction (sheet)/warning/warranty etc. printing material			
	<ul style="list-style-type: none"> Dirt / scratch / unclear / illegible / wrong / damaged / wrinkled/peeled/detached/smeared/displaced 		X	X
	<ul style="list-style-type: none"> Misleading/incorrect descriptions/claims 		X	
	<ul style="list-style-type: none"> Wrong label / Instruction used 		X	
	<ul style="list-style-type: none"> Missing instruction/warning/warranty sheet 	X	X	
	<ul style="list-style-type: none"> Bar code label is damaged 		X	X
	<ul style="list-style-type: none"> Two same bar code labels were respectively stuck on two cartons of one set 		X	
B	Appearance of unit			
	<ul style="list-style-type: none"> Sharp point and sharp edge 	X		
	<ul style="list-style-type: none"> Live insect/infestation / mildew 	X	X	
	<ul style="list-style-type: none"> Knives, blades, needles and similar sharp foreign object contamination 	X	X	
	<ul style="list-style-type: none"> Incorrect material used 		X	
	<ul style="list-style-type: none"> Excessive/unpleasant odour 		X	
	<ul style="list-style-type: none"> Deformed, damaged, scratched, dirty mark, broken, chipped, cracked, dent mark 		X	X
	<ul style="list-style-type: none"> Wrong color or style or type 		X	
	<ul style="list-style-type: none"> Poorly sticking veneer (for toilet seat) 		X	X
	<ul style="list-style-type: none"> Uneven wall 		X	X
	<ul style="list-style-type: none"> Insect hole 		X	X
	<ul style="list-style-type: none"> Missing / illegal warning label or marking 	X		
	<ul style="list-style-type: none"> Missing / illegal other label or marking 		X	
	<ul style="list-style-type: none"> Rust mark / corrosion, sand hole 		X	X
	<ul style="list-style-type: none"> Wobble unit 		X	X
	<ul style="list-style-type: none"> Missing / detached part 		X	
	<ul style="list-style-type: none"> White mark, burn mark, burr, short injection, distortion, flow mark 		X	X
	<ul style="list-style-type: none"> Stain, pits, pin hole, blister, wavy, speck, spot, discoloration, bubble, wave mark, dimple, dunt 		X	X

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Item code	Details	Defective Classification		
		Critical	Major	Minor
	· Poorly coating / plating / polishing / glaze / printing / stamping		X	X
	· Loose part		X	X
	· Warpage		X	X
	· Missing accessory component		X	
	· Poor connection or assembly		X	X
	· The edge / corner is not round or bevel		X	X
3	Bar Code verification (check samples drawn back in office if no any requirement for it from client)			
	· Bar code can not be scanned	Fail the shipment		
	· Wrong bar code label is used			
4	Function check			
	Without any function (for example: Valves cannot be shut off or leakage was found) against reference samples and / or requirement of client		X	
5	Data Measurement			
A	Assembly check and special function (which can be checked after assembling) check			
	Cannot be assembled with inlet and / or outlet fixing kit what should be connected; Wobble unit or malfunction was found.	Fail the shipment		
B	Size of unit (Refer to sample or requirement from client)			
	The measured data is out of range +/-3% against sample and / or requirement of client	Fail the shipment		
C	Weight of unit (Refer to sample or requirement from client)			
	The measured data is out of range +/-3% against sample and / or requirement of client	Fail the shipment		
D	Static loading check (for accessories)			
	For grab bar: put loading-130kgs horizontally, vertically and at a 45 degree angle on bar for 5 minutes; For towel rail / ring / shelf: Put loading-1kg / dm or 1kg / dm ² for 10 minutes			
	Damaged, broken or deformation	Fail the shipment		

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Item code	Details	Defective Classification		
		Critical	Major	Minor
E	(Only for sinks / lavatories / laundry tubs / bidets)			
E1	Overflow check (only for sinks / lavatories / laundry tubs / bidets with overflow hole)			
	Blocking (closing) outlet, then supplying water at rate of 7liter / Minute.			
	Overflowing within 5 minutes	Fail the shipment		
E2	Loading check (not including bidets)			
	Mounting as actual using; Blocking the outlet; Then filling full water and maintaining for 30 minutes.			
	Damaged, broken or deformation	Fail the shipment		
F	Moisture content check (for wood (MDF) toilet seats)			
	Record the actual findings.	Record it in report		
G	(Only for toilets and urinals and bidets)			
G1	Ball pass check (trapway)			
	A (dia.) 38mm (min.) (for toilet) / (dia.) 19mm(min.)(for urinals) ball must can pass the trapway of toilet			
	· If the ball cannot pass the trapway.	Fail the shipment		
G2	Trap seal check			
	· Less than 2”(50mm) (for toilet) / 1.5”(38mm)(for Urinals)	Fail the shipment		
G3	Ball test (for toilet)			
	Connect a toilet to a assembled Tank; Supplying water with pressure (0.4M Pa) to the tank until the water reaches to the water line; Put 100 ((Dia.)19±0.38mm and density of 0.85-0.9gram/cm ³) balls in the bowl of toilet.			
	· More than 25 balls are left in bowl after flush	Fail the shipment		
G4	Granule test (for toilet)			
	Connect a toilet to a assembled Tank; Supplying water with pressure (0.4M Pa) to the tank until the water reaches to the water line; Put 2500 ((Dia.)4.32±0.25mm and density of 0.94-0.95 gram/cm ³) balls in the bowl of toilet.			
	· More than 125 balls are left in bowl after flush	Fail the shipment		
G5	Flush volume test (for toilet)			

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Item code	Details	Defective Classification		
		Critical	Major	Minor
G5.1	Connect a toilet to a assembled Tank; Supplying water with pressure (0.4M Pa) to the tank until the water reaches to the water line.			
	· Flush volume is more than 13.5Liter or claims, whatever it is depended on the less data.	Fail the shipment.		
G5.2	Supplying water with pressure (0.4M Pa) to the urinal until the water reaches to the water line.			
	· Flush volume is more than 5.7Liter or claims, whatever the less data.	Fail the shipment.		
G6	Loading test (for wall-hung units)			
	Mounting the testing sample as actual using; For toilets and bidets: loading-300kg on center of top surface for 10 minutes.			
	Damaged, broken, deformation after testing	Fail the shipment		
H	Water supplying check			
	Connecting the testing sample to water supply kit (0.55Mpa pressure) for 15 minutes; Then turn on / off the sample as actual using for 10 times.			
	Malfunction or leakage	Fail the shipment		
I	Fixture seal test (for bathtub and shower receptors)			
	Put loading 130kgs on rim, drain, bottom and threshold for 2 minutes. And then spray water of rate of 13.5liter/m at 70kPa for 15 minutes.			
	Damaged, broken, deformation or leakage after testing	Fail the shipment		
J	Flowing rating check (for faucet / shower head / pipe line fixture / valve)			
	Connecting the sample to flow meter and water supply kit (the water pressure depends on actual using), then supply water.			
	The flowing rating is out of requirement of client or specified by manufacturer			
K	Stability check (for freely standing)			
	Put sample on a plane at an angle of 10 degree to the horizontal, then put loading as actual use on unit			
	Tip over	Fail the shipment		

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Item code	Details	Defective Classification		
		Critical	Major	Minor
6	Transportation drop check			
	· Critical defect or malfunction or broken carton cannot be shipped	Fail the shipment		
	· Wrinkle carton or slightly visual defect on unite such as slightly scratch or deformation which that does not affect on shipment purpose	Mention the issue in report		
7	Painting / lacquering / powder coating check			
A	Adhesion of paint / lacquer / powder coating / printing			
	· More than 10 out of 100 grids of paint/ powder coating are damaged	Fail the shipment.		
	· Printing on unit is peeled off by 3M 600 gummed tape			

Note: 1. The above described defects are those most commonly found, but not necessarily cover all possible defects. And the defective classification is for reference only. The final decision of the defective classification would be decided by the inspector.

Note: 2. The defect of packaging can be corrected before inspector leaves factory. It can not be counted defects, only records in inspection report.