

Printify Mug Quality Standard

Version 1.0, June 2023

Introduction

This document aims to share the quality standard of Printify with our Print Providers. Quality is one of the most important requirements for a Print Provider to be able to join and support our merchants across the world. The quality standard will be an iterative standard document that lists the requirements and expectations for Print Providers to follow. The list provides a framework of quality areas and our expectations. As an organization, Printify is extremely committed to delivering consistent and high quality standards across all products and Print Providers. In order to guarantee a positive customer experience and avoid potential order issues with the newly added products, it is important to emphasize the overall product quality factor. Excellent product quality plays a significant part in building long-lasting trust between the merchant and the provider, and therefore, it is critical for Printify to consider only products that meet the criteria for good product quality. The criteria for a good quality product that Printify demands from Print Providers can be divided into four categories:

A. Product

B. Print

C. Packaging

D. Operations

(People, Equipment, Others)

Quality Requirements

A. Blank Product Quality

1. The Print Provider must use AAA or AA quality-rated ceramic mugs that are approved by Printify.
2. Sublimated mugs should withstand everyday use without showing signs of wear and tear, such as fading, cracking, or peeling of the design if treated according to care instructions.
3. The mug should be made from a material that is safe for use with hot liquids and does not affect the taste or odor of the drink. It should also be microwave and dishwasher-safe.
4. Blank product physical features (weight, height, width, etc.) should be consistent from one mug to another.
5. The blank product supplier must comply with the [EU & Global](#) safety and regulatory standards, such as food safety standards, and should be labeled with any relevant information, such as the country of origin and care instructions.
6. Product descriptions provided by the Print Provider must be true and reflect the actual properties of the product (size, weight, materials used, etc.).
7. If a Print Provider offers a certain brand mug, substitutes are not acceptable.

B. Print Quality

Print Design

1. The printed design should be crisp and clear with no pixelation, blurring, ghosting, or gassing (if the sublimated paper moves or has space).
2. The design should be accurately aligned with the edges of the mug centered on the handle if full bleed or as desired by the merchant.
3. The print should not appear faded.
4. The resolution of the design file should be a minimum of 300 DPI (dots per inch) to ensure that the printed image is sharp and clear. If the design file doesn't meet these criteria, please stop and reach out to Printify to clarify the next steps.
5. The color mode should be set to CMYK (Cyan, Magenta, Yellow, Black) for accurate color reproduction. RGB color modes should be avoided as the colors may shift during printing.

Printed Design Size

1. The print area should correspond to the product setup and design size in the Admin Panel. The print area template size is to be audited quarterly for each SKU or anytime there is a change in the blank product supplier.
2. The print should extend to the edges of the printable area but should not overlap onto the handle or the bottom or top of the mug.
3. The print must be printed in the exact size the design file was submitted. Automatically scaled (larger or smaller) prints are not acceptable.

Positioning

1. The print should be properly positioned on the mug, with no skewing or rotation.
2. The design must be positioned on the product as submitted.
3. The print has to be placed parallel to the top and the bottom of the mug.

Wash Test/ Durability

1. The print quality should remain intact after 30 wash cycles, with no peeling, fading, or rubbing off if treated according to recommended care instructions.

C. Packaging

Packaging Condition

1. Every product must be packaged as described in the product information form (including bulk orders) agreed with Printify.
2. Products have to be packaged separately, even with multi-item orders. Exceptions are when the Print Provider has approved packaging by Printify for multiple item orders, for example, boxes designed specifically to fit multiple mugs.
3. Product has to be delivered in pristine condition (no tears, rips, or punctures). The packaging must be strong enough to withstand handling and transportation without tearing or breaking.
4. The packaging needs to have construction and be made of materials that ensure the product is delivered in good condition. The packaging must comply with regulatory standards (for example, Environmental Commission Directive 84/500/EEC regulations).
5. The packaging should be of high-quality materials approved by Printify and as environmentally friendly and sustainable as possible.
6. The packaging must be appropriate for the size and shape of the mug, allowing for enough space to prevent the mug from shifting or rubbing against the sides of the packaging.
7. The packaging should be easy to open and close without special tools or techniques.

Damage

1. The delivered product must be delivered in pristine condition. Product damage during the shipping process is unacceptable.
2. Packaged orders should be carefully handled in shipping, such as shipping conveyance, gaylords, and drop-offs, to avoid stacking and pressure-causing damage. The Production team should carefully assess each process to avoid any potential breakages internally in production.
3. All mugs should pass drop testing. To ensure that mugs are not damaged, packaged products must be tested with drop testing from 10 ft once a month or anytime there is any blank product supply, production, packing setup, packaging, or staff changes. The drop test should be performed from at least 10 ft height, and the same packaging should be tested 3 times. Measures should be taken to reduce damage during transit using appropriate protective packaging. In cases where possible, the drop testing is to be done with the shipping carrier (e.g. UPS).

Color Profile

1. The colors of the print match or are very similar to the colors on the print file when compared to benchmark samples. The gap to the color profile scale should match as agreed with Printify.
2. To ensure color accuracy, regular audits must be made to ensure colors match the design file.

D. Operational Requirements

Operator Training

1. Only trained and qualified personnel are deployed on the Printify production areas and print equipment, with passed assessments and audits.
2. Performance management processes are in place for defects on the operators consistently making errors.
3. Every operator is trained on this Printify production quality standard document. Training records are in place to validate that this training happens during onboarding, quarterly re-trainings, and coaching sessions.
4. Training records are to be shared with Printify every quarter to ensure compliance.

Printer Service and Maintenance

1. All printers are serviced as per OEM instructions and maintained according to the maintenance plan of the machine manufacturer. Maintenance must be recorded.
2. Nozzle test to be conducted at the start of the shift for every printer to ensure accuracy in design and color.
3. The printer settings and color profile must be agreed upon with the Printify Quality team, meeting OEM's benchmark settings.

Quality Control

1. A Quality Control process must be in place to ensure any defects are caught before products are shipped to customers. The process needs to ensure checks on top defects. A checklist for QC checks will be shared.
2. The Quality Control team/persons must be trained on Printify's Quality Standard.
3. The Quality Control team and manager must review the complaints/defects data in the [PP Portal](#) on a weekly basis and ensure any findings are addressed and actions are taken immediately. The CXM tab shows the defects data and allows drilling down to the order level data. If the CXM/Quality scores continue to underperform, the Quality Control team will need to prioritize the implementation actions necessary to show improvements and can be enrolled in QIP (Quality Improvement Program) as per the Printify CXM model launched in 2022.

Other Examples

Examples of good quality mug prints



Sharp, vibrant print

Examples of bad quality mug prints



Blurry print



Color of the print matches the mockup



Coloring issue

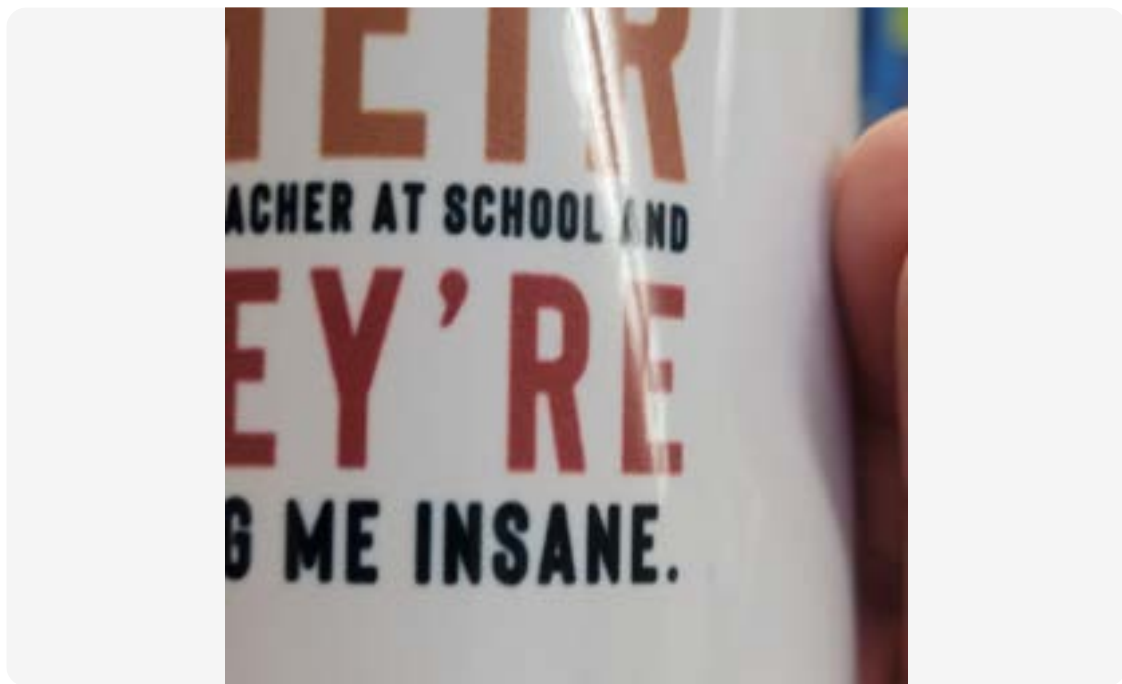


Vibrant, precise print



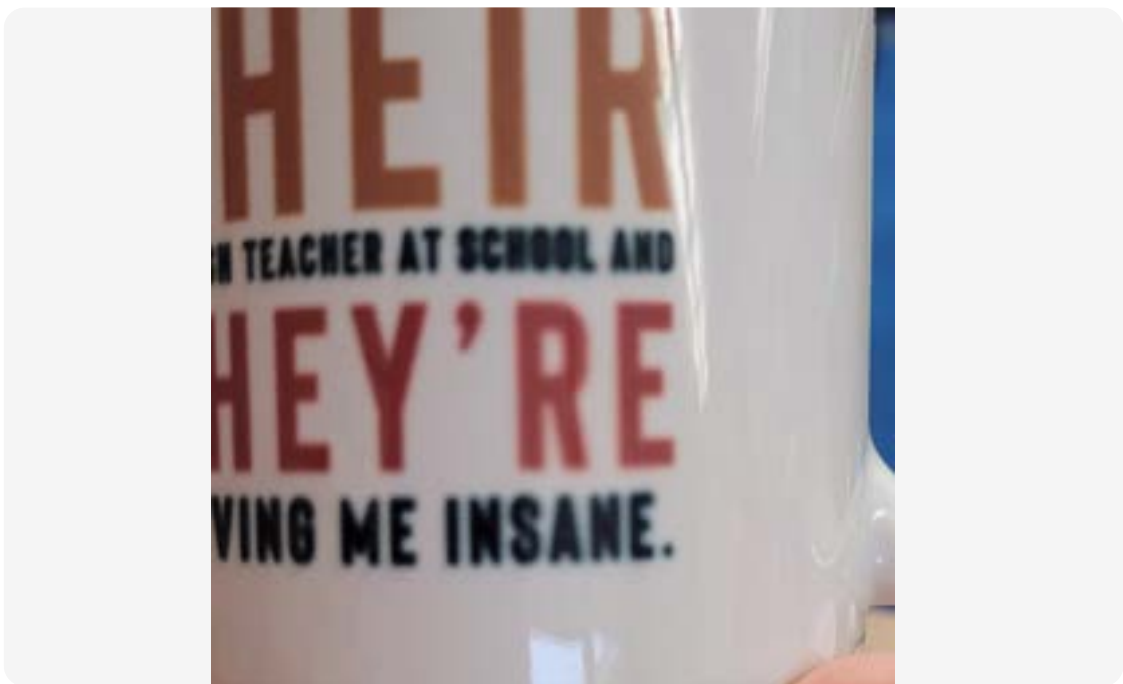
Faded print, the colors are off and do not match the design submitted.

Examples of **good quality** mug prints



Sharp print

Examples of **bad quality** mug prints



Blurry print



No stains



Stains



Peeling print



Centered print



Print positioning off-centered

Mug Packaging and Shipping Quality Standard

Materials

All packaging materials must be high quality, durable, and able to protect the mug during transportation. The following materials are recommended for mug packaging:

1. Corrugated cardboard boxes

2. Pulp crate inserts
3. All labeling must be in compliance with relevant legislation, including any labeling requirements for hazardous materials.

Packaging

The packaging design must be tailored to the shape and size of the mug, with sufficient cushioning and support to prevent any damage during transit. The following guidelines must be followed when packaging mugs:

1. The mug must fit snugly inside the packaging, with no excessive movement or sliding around.
2. Adequate cushioning can be provided around the mug to absorb any shocks or impacts during transportation.

3. The packaging must be designed with reinforced corners and edges to provide extra protection against damage.
4. The packaging shouldn't be excessive, so there are no additional shipping charges.
5. Make sure the mugs are clean and free of dust or debris before packaging. This will not only ensure that the mugs arrive in good condition, but will also make them more attractive to customers.

Durability

All mug packaging must be subject to rigorous inspection and testing prior to distribution to ensure that it meets the required quality standards. The following tests must be performed:

1. Physical inspection of the packaging and mug to ensure they are free from defects and damage.

2. Testing of the packaging to ensure that it provides sufficient protection during transit.
3. Testing the labeling to ensure it is clear, legible, and compliant with relevant legislation.

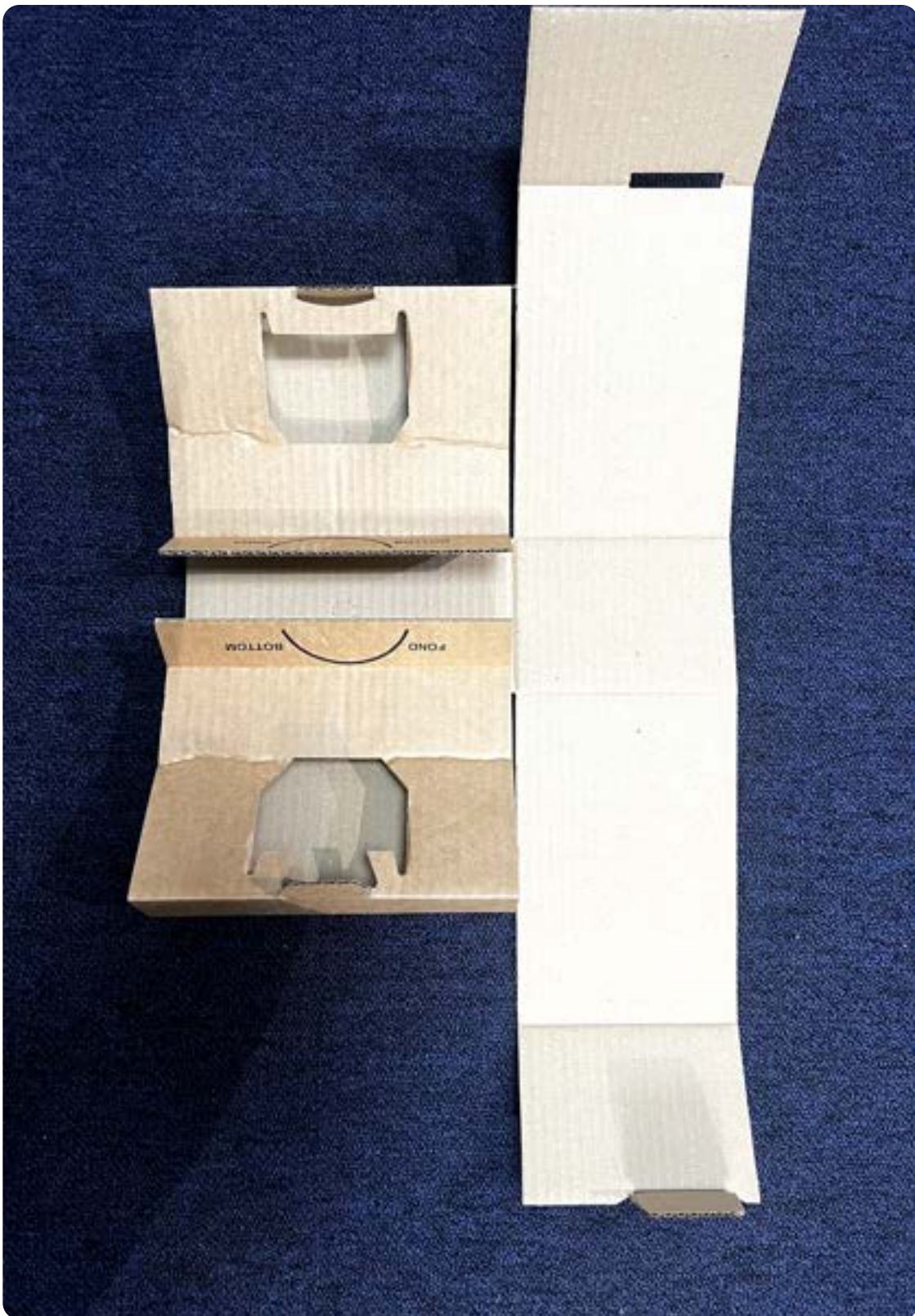
Environmental Considerations

To minimize the environmental impact of packaging materials, it is recommended to use biodegradable or recyclable materials. The packaging should also be designed to minimize waste and be easy to recycle. Use carbon-neutral shipping options where possible.

Shipping requirements

1. Mugs must be shipped via a reputable shipping carrier that offers tracking and insurance.
2. The package must be labeled clearly with the recipient's name and address.
3. The shipment has to be tracked, and any delivery issues should be addressed promptly.

Examples of good packaging



Best practices for Mug production

Materials

1. The first step in mug production is to choose the right raw materials. High-quality ceramic mugs approved by Printify should have a low absorbent rate and be resistant to thermal shock. The mug's thickness should be uniform, and the coating should be durable. The handle and lip should also be well-made to ensure comfort and durability.
2. The ink quality used for printing on mugs is critical. High-quality ink should be fade-resistant, heat-resistant, and waterproof. The ink should also have a good transfer rate and adhere well to the surface of the mug. Use sublimation paper that is compatible with your ink and mug material.

Prepare the Mug

1. Before printing, the mug must be cleaned and prepared properly. Any dust or debris must be removed, and the surface must be free from any contaminants.
2. Maintain a clean and organized workspace to avoid any contamination of the printing process.

Design preparation

1. Checking the mockup, right design, and right product (attention to detail).
2. Before printing out the design, check if the design is mirrored.

Printing Process for Mug Sublimation

1. Standardize and train proper processes and techniques for all sublimation operators.
 - a. placing mug/artwork
 - b. removing artwork paper
 - c. using the correct equipment and pressure (mug presses, clamps)
2. Using a sublimation printer, print your design onto sublimation transfer paper.
3. Using heat-resistant tape, attach the sublimation transfer paper onto the mug, ensuring it is securely attached and without wrinkles.
4. Ensure the design is properly aligned and placed parallel to the top and the bottom of the mug to avoid awkward placement of the image.
5. Place the mug into a mug press or the oven and adjust the temperature, pressure, and time according to the manufacturer's instructions. Be sure to follow the recommended time and temperature for the mug, as overheating or leaving the transfer on for too long can result in discoloration or fading.
6. To avoid blurry images, gassing or ghosting, it is best to remove the paper carefully or opt for a quick removal process. If the mug is left in the mug press to be cooled down, it will get overheated, burnt, and discolored, as well as negatively impact and reduce machine capacity.

Printing Process for Mug UV Prints

1. Set the printer to the appropriate resolution, print speed, and ink saturation for the best results. Use a printer with a high-quality UV lamp to ensure proper curing of the ink.
2. Before printing on the actual mug, perform a test print on a piece of similar material to check for color accuracy, resolution, and ink adhesion.
3. Load the mug into the printer and start the printing process. Ensure the mug is secured in place to prevent movement during printing.
4. Once the printing is complete, cure the ink using a UV lamp or oven to ensure the ink is fully cured and adhered to the mug surface.
5. Inspect the printed mug for any defects, such as color shifts or ink smudging. White outlines or blurs can happen if there is too much distance between the print head and the surface of drinkware or alignment issues.

Quality Control

Inspect each printed mug for any defects such as:

1. **Uneven or incomplete transfer:** This can happen when the pressure or temperature is inconsistent throughout the entire transfer process, resulting in areas of the design that are not fully transferred onto the mug.
2. **Blurred or distorted images:** This can occur when the image is not properly aligned on the mug or when the sublimation paper has shifted during the transfer process. This can also be caused by using low-quality sublimation paper or printers.
3. **Ghosting:** Ghosting occurs when the design from the sublimation paper transfers onto the mug, but then a secondary image or shadow appears on the mug due to excess ink or residue. This happens if the clamp or the press pressure is not tight enough or when the paper is removed while the ink is still sublimating and the paper re-touches or hovers the mug.
4. **Ink bleed:** This is when the ink spreads beyond the intended design area and results in smudging or smearing.
5. **Inconsistent ink coverage:** The ink may not be consistent in terms of color, saturation, or intensity.
6. **Discoloration:** This can occur due to improper curing, incorrect ink type, or exposure to light or heat.
7. **Cracking or peeling:** This is caused by improper printing techniques or low-quality inks that do not adhere well to the mug surface.
8. **Missing prints:** Incomplete printing can occur if the ink runs out during the printing process or if there are technical issues with the printer.
9. **Uneven surface:** If the mug surface is not smooth, it can result in an uneven printing surface that affects the quality of the design.
10. **Bubbles or blisters:** This can occur due to air pockets trapped under the ink during the curing process.
11. Make sure the mugs are **clean and free of dust or debris** before packaging. This will not only ensure that the mugs arrive in good condition, but it will also make them more attractive to customers.
12. Pay attention to similar designs where only small details have changed.

Shipping

1. Use sturdy packaging. You can use bubble wrap or packing peanuts to cushion the mug and prevent it from moving around during shipping.
2. Use bubble wrap or tissue paper to wrap the mug, making sure to cover all sides and edges. Secure the wrapping with tape to prevent it from coming loose during transit.
3. Clearly label the package with the recipient's address, your return address, and any relevant shipping information, such as fragile or handle with care.
4. Choose a reputable shipping carrier that offers tracking and delivery confirmation. This will help you keep track of the package and ensure that it arrives at its destination safely.

Maintenance

1. Regularly clean your printer using a soft, lint-free cloth and a cleaning solution specifically designed for sublimation printers. This will help prevent any clogs or ink buildup that can affect the quality of your prints.
2. Using high-quality sublimation ink will ensure your prints are vibrant and long-lasting. It is also important to use ink specifically designed for your printer model.
3. It is important to replace ink cartridges and printheads when they run out or become worn. This will help prevent any quality issues or damage to your printer.
4. When not in use, store your printer in a cool, dry place and cover it with a dust cover. This will help prevent any dust or debris from accumulating in the printer.
5. Make sure to use the correct printing settings for your mug substrate, including temperature, pressure, and time. This will help ensure that your prints are transferred onto your mug correctly and last for a long time.
6. Follow the manufacturer's guidelines for regular maintenance, such as replacing filters, lubricating moving parts, and inspecting belts and rollers. Regular maintenance can help prevent problems and prolong the life of the printer.