



Making paper fun

Temperature: 68° - 76° F
[20°-24° C]
Humidity: 35-55%

Handling and Storage

Paper is manufactured to tightly controlled moisture specifications based on its intended end use. Changes in temperature and humidity have a significant effect on paper. The amount of water vapor present in the air varies greatly depending on geography, season, climate, time of day and the weather. Therefore, certain precautions should be taken to ensure optimum performance of the paper.

Temperature changes resulting from bringing cold paper directly from a rail car or truck, or from a cold warehouse to a warm pressroom, can cause trouble, even though the paper is kept wrapped and sealed to protect it from humidity changes. If cold paper is brought to the pressroom and unwrapped, it will cool the surrounding air, and the unprotected edges of the paper quickly take on moisture. Cold rolls exposed to warm air will develop distortions on their face and softness at their ends.

The reverse situation occurs when paper that is warmer than the pressroom is unwrapped. The higher temperature of the paper warms up the surrounding air and lowers its relative humidity. The paper's edges lose moisture to the drier air and shrink.

These two troublesome consequences emphasize the importance of temperature conditioning all paper to pressroom temperature before unwrapping it. Rolls should also remain wrapped until they have been temperature-conditioned and go to press. Only the end wrappers should be removed (for shafting the roll). The wrapping around the face of the roll should remain intact until it reaches the intended station and is prepared for splicing.

GATF Conditioning Recommendations

Paper should be allowed to reach pressroom temperature before removing protective wrapping. This helps prevent condensation of moisture on the paper.



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Duration of conditioning depends on the volume of paper and the temperature difference between the paper and the pressroom.

The volume of one pallet of 8 1/2 X 11 paper is about 46 cubic feet. Based on this volume, approximate conditioning time required is as follows:

TEMPERATURE DIFFERENCE (DEGREES F)	CONDITIONING TIME (HOURS)
10	14
20	26
39	38
40	54
50	75
60	109

NOTE: For a 35" roll, 40 O.D. x 3" core, volume is about 30 cubic feet and requires about 1/3 less conditioning time than above.

Warehouse and store paper in such a manner as to minimize its movement and re-handling from its arrival until it goes to press. The more times the paper is handled, the greater the likelihood of handling damage, particularly for rolls. Make sure that inventory control and roll storage procedures provide an orderly inventory rotation to ensure that paper is used in the order received. Moisture absorption from damp floors will produce distorted and damaged paper. Platforms or racks that elevate the paper from damp floors are recommended. Never store paper next to radiators or other heated objects, cold walls, or areas subject to sudden and drastic changes in temperature. Store rolls on their ends, not on their sides. Storing rolls on their sides causes them to become out of round or pick up moisture unevenly. The resulting flat spots create printing problems on press. If rolls are unwrapped for testing or proofing purposes, rewrap them with a moisture barrier paper to prevent exposure and deterioration.

The roll tender should inspect rolls for visible defects. Do not remove the outer wrap from a roll until the splice is to be prepared. This minimizes the chances for moisture pickup or loss on the roll surface and keeps running waste to a minimum. The outer surface of the roll should be inspected for damage, and only a minimum number of outer layers of paper should be removed by hand stripping.