



BERTHOLD TECHNOLOGIES USA, LLC  
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### Application Data Sheet For:

Concentration & Moisture Measurement with  
Microwave Systems

LB 566, LB 567 and LB 568

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## Customer Information

Project: \_\_\_\_\_ Date: \_\_\_\_\_  
Company: \_\_\_\_\_ Name: \_\_\_\_\_  
Street / P.O. Box: \_\_\_\_\_  
Postal Code / City: \_\_\_\_\_ Country / State: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

## Process Specifications

Product description \_\_\_\_\_  
Chemical composition \_\_\_\_\_  
Measured variable ☐ %DS ☐ Weight-% ☐ \_\_\_\_\_  
Measuring range min.: \_\_\_\_\_ nom.: \_\_\_\_\_ max.: \_\_\_\_\_  
Requested accuracy \_\_\_\_\_ Standard deviation \_\_\_\_\_  
Consistency ☐ liquid ☐ pasty ☐ lumpy  
Particle size ☐ refined ☐ coarse ☐ approx. non-varying  
Grain size distribution % in / mm % in / mm % in / mm  
Abrasion ☐ low ☐ medium ☐ high  
(Bulk) density [g/cm<sup>3</sup>] min.: \_\_\_\_\_ nom.: \_\_\_\_\_ max.: \_\_\_\_\_  
Product temperature [°C] min.: \_\_\_\_\_ nom.: \_\_\_\_\_ max.: \_\_\_\_\_  
Ambient temperature [°C] min.: \_\_\_\_\_ nom.: \_\_\_\_\_ max.: \_\_\_\_\_  
Electrically conductive ☐ Yes \_\_\_\_\_ mS/cm ☐ No  
Salt content ☐ constant \_\_\_\_\_ Weight.-%  
Power supply ☐ 100-240 V AC ☐ 24 V DC  
Ex-classification ☐ Yes Zone/Class: \_\_\_\_\_ ☐ No

## Physical Arrangement \*\*A drawing of the arrangement is very helpful to clarify the project\*\*

### ☐ Arrangement Pipeline

Nominal Width, Flange ☐ mm \_\_\_\_\_ ☐ Inch \_\_\_\_\_ ☐ Flange \_\_\_\_\_  
Pressure range [bar] min.: \_\_\_\_\_ nom.: \_\_\_\_\_ max.: \_\_\_\_\_  
Flow ☐ horizontal ☐ vertical

### ☐ Arrangement Belt

Belt data Width: \_\_\_\_\_ Belt material: \_\_\_\_\_  
Belt reinforced (steel) ☐ Yes ☐ No If yes, please provide sketch.  
Belt speed [m/s] min.: \_\_\_\_\_ max.: \_\_\_\_\_ ☐ constant: \_\_\_\_\_  
Dumping height [mm] min.: \_\_\_\_\_ nom.: \_\_\_\_\_ max.: \_\_\_\_\_  
☐ smooth ☐ Scraper ☐ Leveling

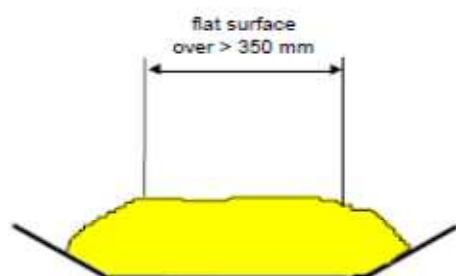
### ☐ Arrangement Other

A sketch of the arrangement is very helpful to clarify the project.

☐ Appendix

Comments: \_\_\_\_\_

## Preferred Measurement

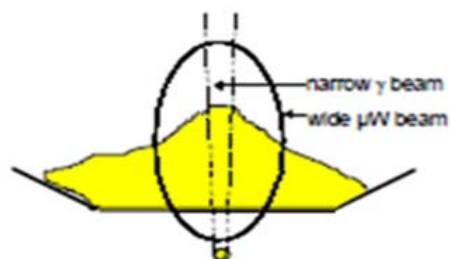


Homogeneous product in measuring path, flattened over at least twice the width of the beam. No gaps or slots in the product.

A heavy, abrasion resistant, hard steel plate is typically used to flatten the top of the product.

Homogeneous material ensures good measurement quality and representative sampling.

The belt has to be made of non conductive material, without repaired sections, and without steel reinforcement (see special recommendations for using steel-reinforced belts).

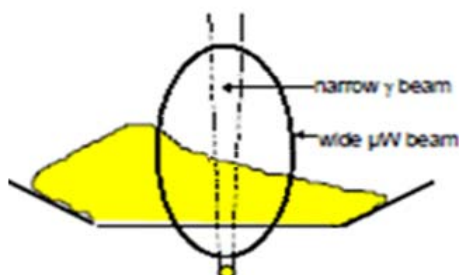


### Possible Issue:

To much of a peak of product on the belt can cause the microwave (wide) and the gamma ray (narrow) beams to measure different thicknesses.

### Possible Solution:

Should be able to eliminate possible errors by making process changes.

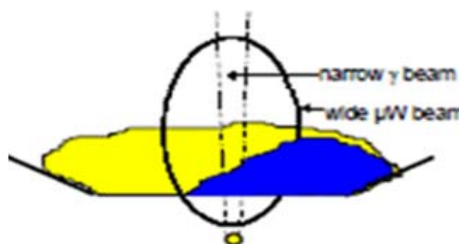


### Possible Issue:

Offset peak of product on the belt can cause the microwave (wide) and the gamma ray (narrow) beams to measure different thicknesses.

### Possible Solution:

Should be able to eliminate possible errors by making process changes.



### Possible Issue:

Two or more products not mixed on a belt can cause a sample to be not accurate.

### Possible Solution:

Should be able to eliminate possible errors by making process changes to run one product at a time.

### Still have questions???

Please contact Berthold Technologies USA at (865) 483-1488 and we will be happy to start a dialog to insure our system can meet all of your specific needs.