



120 Valley Court
Oak Ridge, TN 37830
Ph: 865-482-5717
FAX: 865-482-1281
zypcoatings.com

LRC Binder

Water-based, Acidic pH Binder Liquid For Creating Your Own Paint

LRC Binder is a very versatile water-based binder liquid. Coatings produced with this binder liquid typically have low to medium hardness and have low water resistance, as applied/dried. The binder has a high ability to suspend solids and can suspend relatively high-density powders, producing high to medium viscosity coatings with most materials. With a pH of 2-3 (like lemon juice), careful consideration should be given concerning whether the powder to be used is stable in a pH-acidic medium. Other properties – long shelf life of over 12 months; used in all atmospheres to 1900 C.

Key Attributes

- Water-resistant is low after applying/drying at ambient temperature
- Forms 100% Aluminum Oxide after heating to 600 C for complete outgassing (H_2O , NO_x)
- High suspendability of 'filler' powders
- Forms low-medium hardness coatings
- Good in all atmospheres, including air
- Safe, water-based
- No cure needed

Ideal Uses

- Binder/Suspender
- Infiltrant

Possible Fillers

Al_2O_3 , ZrO_2 , TiO_2 , Si_3N_4 , TiN, BN, & pH-Acidic stable materials

- Consider eutectics

Use Notes

1. Add refractory 'filler' (<10 microns preferred)
2. Start at 50wt.% powder. Mix by rolling/shaking.
3. If too thick, add water; if too thin, add powder.
4. Re-mix by rolling or shaking.

After making paint above, clean substrate, apply paint, dry (with no cure needed), and place into use.



Specifications

Active Ingredients	>99% Al_2O_3
Max Use Temperature	1900 C
Use Atmosphere	All
Fired Composition	Al_2O_3
Binder Phase	Aluminum Oxide
Hardness	Low-Medium
Liquid Carrier	Water
Water Resistance	Low
Ability to Suspend Solids	High
Brookfield Viscosity (cps)	1100@3/60
Specific Gravity	1.0
Shelf Life (months)	>12
Coating pH	2-3
H F R Ratings	1-0-0
Substrate Use	All
% Volatiles	97

Safety Information

- Consult SDS before use.
- Avoid breathing of spray/vapors.
- For Industrial Use only.

Sizes and colors

LRC Binder is a cloudy viscous liquid.
Standard Size: 1 gallon Nalgene container.

CAUTION: DO NOT CONTACT WET COATINGS WITH MOLTEN METAL.

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