

the case for & against
DRY COLOR

*Association of Rotational Molders
Belfast Meeting, 2026*

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THE DIFFERENCES

DRY COLOR

- PE powder
- Dry pigment
- Additives

- Physically mix in a blender
- Low speed or high speed
- Temperature increase?

COLOR COMPOUND

- PE pellets
- Dry pigment or masterbatch
- Additives

- Melt & mix in an extruder
- Create colored pellets
- Pulverize to powder

THE DIFFERENCES

DRY COLOR

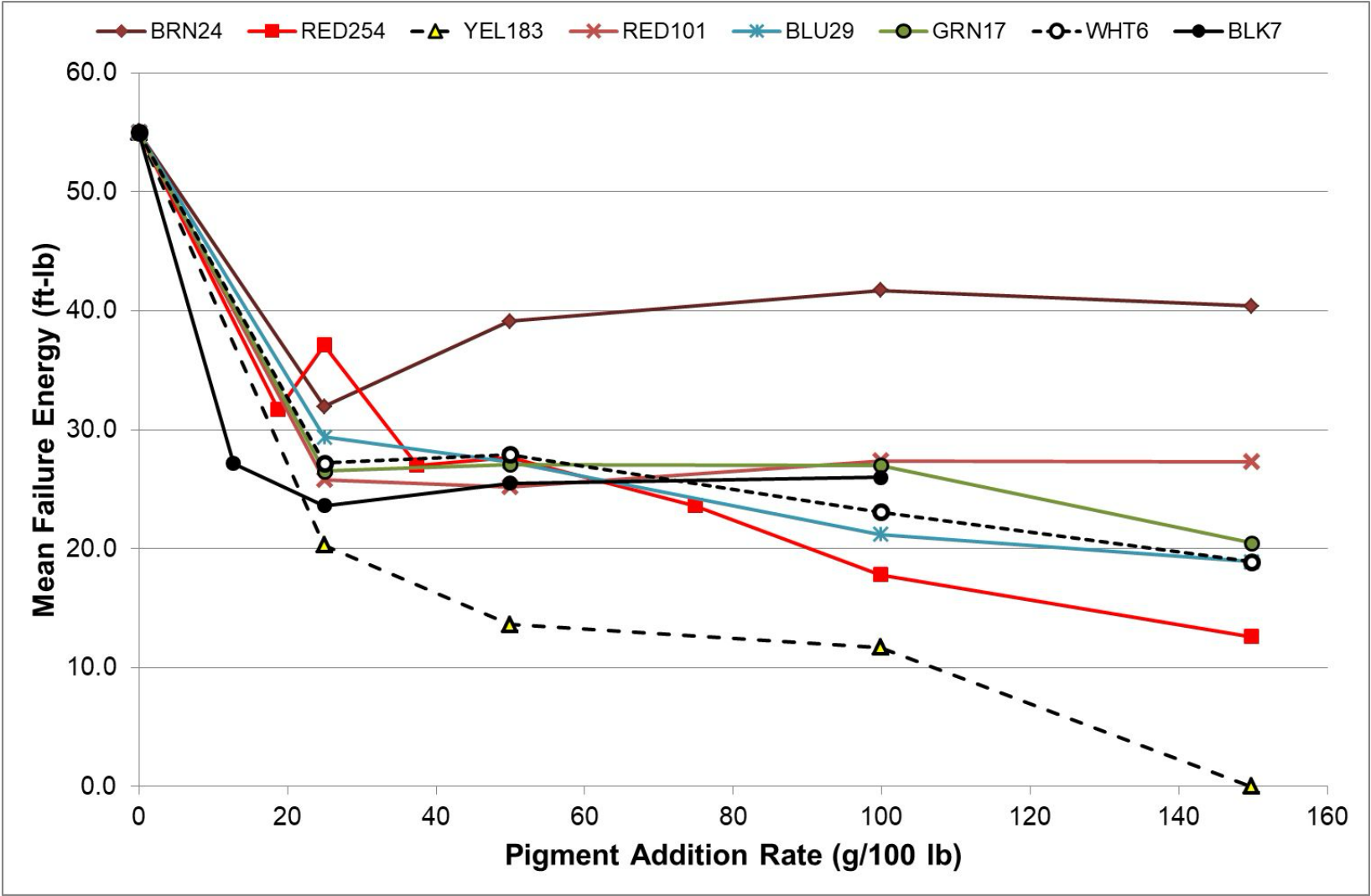
- Made in-house
- More flexible
- Lower cost
- Faster availability

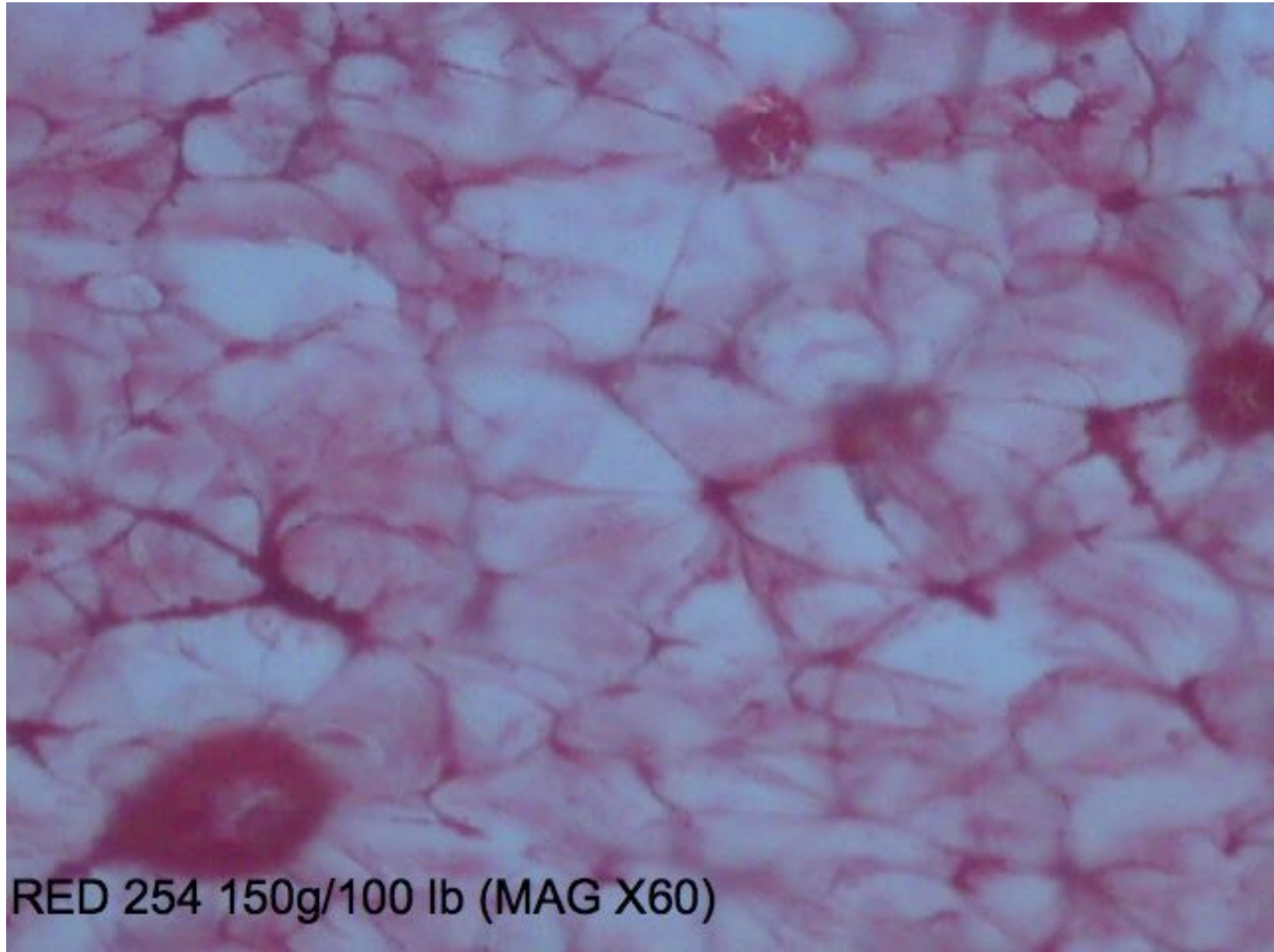
- Brittle failure mode
- Loss of impact properties
- Lower addition limit
- Bleed & wipe-off issues

COLOR COMPOUND

- Usually bought-in
- Less flexible
- Higher cost
- Longer lead time

- Ductile failure mode
- Retains impact properties
- Higher addition limit
- Few operating issues





RED 254 150g/100 lb (MAG X60)

CONCLUSIONS

- Dry pigment interferes with particle fusion
 - Pigment agglomerations can create stress points
 - Thicker parts may show less differences
 - Constraints for thin-wall parts requiring opacity
 - Increased brittleness is inevitable – especially at low operating temperatures
 - Avoid applications where vibration or cyclic stresses are involved
 - Choose your application carefully
 - Test pigment-by-pigment
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