

Valida formulation guidance.

When formulating with Valida, kindly consider the following key points in order to observe the added value Valida can bring to your formulation. Please note that the **general guideline can be finetuned in the later stages of formulation development**, depending on your equipment and operational environment.

1) **Add enough Valida**

Using Valida is like building a house, if there is **not enough fiber present** in the formulation, the network will not build in the entire formulation, and **phase separation will occur over time**. We highly recommend to do the **initial product validation** with **0.4% active fiber content (5% for the paste or 13% of the gel)** This will ensure a fiber network throughout the entire formulation and no phase separation will occur.

Additional fine-tuning is advised to be done at a later stage, depending on the requirements of the application.

2) **Pre-disperse Valida in water phase before adding other ingredients**

Surfactants, for example, can generate foam when high shear is applied, which will be stabilized by the Valida network and will cause phase separation or air entrapment.

3) **Choose the correct blade**

Propeller mixer will not work for the 8% solid grades but is effective for the 3% solid grades as long as the tip speed can reach 7m/s as seen in the demonstration video.





Disc stirrer – preferred



Propeller mixer – only for 3% grades

To summarise:

- 0.4% active fibre is recommended (**5% of paste or 13% of gel**) for the stabilization of active ingredients and pigments, this dosage **can be reduced** if other co-thickeners and surfactants are used as these will work in synergy to stabilise the system. For hair care, it is generally recommend to use 0.1-0.2% active fibres.
- High shear at around 10,000 rpm is required for the 8% paste to fully activate the fibre network. Generally 5 mins should be ok with ultraturrex or Silverson type mixer or they can homogenise for 1-2 mins.
- 2,000 rpm for the 3% gel for 15-30 mins or alternatively can also high shear for 5 mins.
- Pre-dispersing Valida with glycerin or Xanthan Gum in water is also okay.
- If network floats as shown below, the Valida network has not been fully created and further dispersion (time or shear) is required. The separation will occur in a few minutes. This is also observed in the demonstration video.



Valida Solid Content	Speed (rpm)	Batch Size (grams)	Dispersion time (min)	Visual check
8%	10.000	400	5	Well-dispersed Valida will appear as a homogeneous, hazy suspension. Visual lumps or aggregations are indications of insufficient dispersion.
	2000	400	30	
3%	1000	400	15 ~ 30	

If you have additional questions, feel free to contact our technical support:

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