

SOLID FORMULAS

Cosmetics and detergency with less water and lower environmental impact

The elimination or minimization of water in solid formulas is driving a new generation of more concentrated, efficient and sustainable products. In cosmetics and detergency, this approach can reduce packaging, transport and resource consumption, although its true impact always depends on the overall design of the formula and how it is used.



1 What are solid formulas?



- Products with little or no water in their composition.
- They are usually presented as bars, powders, tablets or solid concentrates.
- They are common in shampoos, facial cleansers, deodorants, powder detergents and tablets for different applications.

2 Why are they interesting?



Less water transported

Because they are more concentrated, less weight and volume need to be moved.



Less packaging

They can reduce plastic use and encourage lighter or recyclable formats.



Higher concentration

Less quantity is needed per use.



Lower need for preservatives

In anhydrous systems or those with little water, microbiological risk is reduced.

3 Potential environmental benefits



Lower logistics footprint



Reduction of packaging waste



More efficient use of raw materials



Important: a solid formula is not automatically more sustainable. A proper evaluation must consider ingredients, manufacturing process, packaging, dosage and in-use behavior.

4 Technical challenges



Texture and sensoriality



Correct dissolution or dispersion



Resistance to humidity



Physical stability during storage



User experience and dosing

5 Most common applications

Cosmetics



- Solid shampoos
- Syndets and facial cleansers
- Balms and deodorants
- Powder exfoliants and masks

Detergency



- Powder detergents
- Tablets or blocks
- Concentrated cleaners
- Solid formats to reduce water and packaging

6 Keys to formulating well



Select raw materials compatible with the solid format



Design release and in-use behavior



Control moisture, compaction and stability



Validate efficacy, safety and consumer acceptance



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