

MATERIAL PROPERTIES



Ingredients

Oyster shell	Heated at 250 °C	Heated at 250 °C	Heated at 250 °C	Heated at 950 °C	Heated at 950 °C	Raw + heated 950 °C	Heated at 250 °C	250°C and 950 °C	250°C and 950 °C	Heated at 250°C	250°C and 950 °C	250°C and 950 °C	Only raw particles	Raw + heated 950 °C	Heated at 250°C
Polymer	Agar agar	Agar agar	Potato starch	Gelatine	Potato starch	Potato starch	Potato starch	Potato starch	Potato starch	Gelatine	Gelatine	Corn starch	Gelatine	Potato starch	Gelatine
Additives	Suger, water	Suger, water	Water	Water, Glycerine	Water	Water	Water	Water	Water	Water, Glycerine	Water, Glycerine	Water	Water, Glycerine	Water	Water, Glycerine

Process

Mixing	With heat	With heat	Cold	With heat	Cold	Cold	Cold	Cold	With heat	With heat	With heat	Cold	With heat	Cold	With heat
Casting	Pour into mold	Pour into mold	Press into mold	Pour, add powder	Press into mold	Press into mold	Press into mold	Pour into mold	Press into mold	Pour, add powder	Pour, add powder	Pour into mold	Pour, add particles	Pour into mold	Pour, add particles
Drying	Air dry, 7 days +	Air dry, 7 days +	Microwave, 3 min	Air dry, 4 days	Microwave, 3 min	Microwave, 3 min	Microwave, 3 min	Air dry, 2 days +	Air dry + microwave	Air dry, 7 days +	Air dry, 2 days +	Air dry + microwave	Air dry, 7 days +	Air dry + Microwave	Air dry + microwave
Deformation	Beds and cracks	Shrins + deforms	Some	Curls while drying	Some	Some (uneven edges)	Some (uneven edges)	None	Some	Slightly bends	Limited	Limited	Slightly bends	None	Slightly bends

Physical properties

Weight	70 g	23 g	54 g	4 g	32 g	66 g	57 g	58 g	49 g	17 g	8 g	50 g	47 g	60 g	25 g
Flexible/Brittle/Porous	Brittle	Some flexibility	Porous	Very brittle	Very pourous	Porous	Porous	Compact + brittle	Compact	Some flexibility	Very brittle	Very Porous	Some flexibility	Porous	Some flexibility
Surface	Rough and cracked	Grained texture	Grained texture	Fine powder texture	Fine grained, crumbly	Fine texture + pores	Rought grained	Smooth	Uneven + wrinkly	Smooth, fine grained	Smooth	Fine grained, crumbly	Rough, uneven	Fine grained, crumbly	Rough, uneven
Color	Beige, brown spots	Beige, brown spots	Beige/sand	Off white	Crisp white	White/grey	Beige/sand	Light beige/yellow	Light beige w/spots	Beige, brown, black	Yellow	Light beige w/spots	Mottled grey	Light grey w/spots	Mottled Beige
Tranparicy	None	None	None	Light transparent	None	None	None	None	None	None	Yes	None	Light transparent	None	Light transparent
Glossy/Matte	Matte	Matte	Matte	Matte + gloss	Matte	Matte	Matte	Matte	Matte	Some gloss	Some gloss	Matte	Some gloss	Matte	Some gloss

Interventions

Strength (Force applied by hand)	●●○○○○	●●●●○○	●●●●●●	●○○○○○	●○○○○○	●●●○○○	●●●●●●	●●●○○○	●●●●○○	●●●●○○	●●○○○○	●○○○○○	●●●●●●	●●○○○○	●●●●●●
Scratch resistance (With sharp tool)	Medium	Medium	Medium	-	Low	Low	Medium	Medium	Medium	High	Low	Low	High	Low	High
Heat/Fire resistance	Slowly charred	Slowly charred	Slowly charred	Melts	Slowly Charred	Charred	Slowly charred	Charred	Charred	Melts	Melts	Charred	Melts	Charred	Melts
Water proof/resistance (wet surface)	Slowly absorbs	Slowly absorbs	Repellent	Starts to dissolve	Absorbs immediately	Absorbs immediately	Repellent	Slowly absorbs	Slowly absorbs	Repellent	Starts to dissolve	Absorbs immediately	Repellent	Absorbs immediately	Repellent