

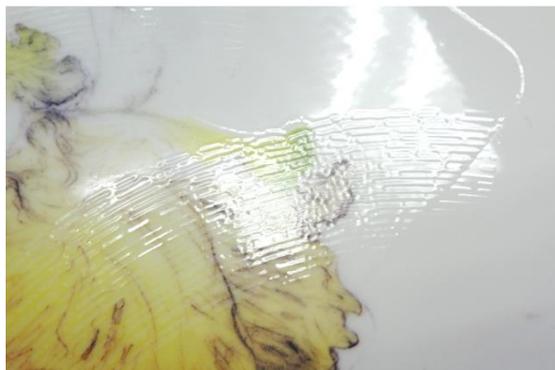
35192 Onglaze reactive flux 780–900°C

Lead–and cadmium–free onglaze reactive flux

1. General Information

Features!

- New onglaze reactive effect concept.
- Strong and attractive embossing effect.
- Creates a unique effect on enamel glaze.
- Lead and cadmium free.



35192 is a lead–and cadmium–free, intermixable, onglaze reactive flux for porcelain, bone china, earthenware, vitreous china and enamel ware.

It is suitable for screen–transfer printing, direct printing, spraying, pad printing and hand painting.

2. Firing Conditions

Type of ware	Firing range
Porcelain	820–900°C
Vitreous china	800–900°C
Bone china	780–900°C
Earthenware	760–840°C
Enamel ware	800–830°C

35192 is suitable for both normal firing of 3–10 hours and fast–firing of 60–120 minutes, cold–to–cold conditions. It is also suitable for enamel ware flash firing of 15–60 minutes.

We recommend to use **35192** only with lead–free colors and glazes to avoid heavy metal release, but it can be also used with lead and cadmium containing colors depending on requirements. In this case it is necessary to

be tested as per required regulations.

3. Application

35192 is suitable for screen-transfer printing, direct printing, spraying, pad printing and hand painting.

To achieve a high emboss effect, it is necessary to be fired to match the thickness of under materials such as relief flux and white. On enamel ware glaze, these under materials are not necessary, as enamel glaze is soft enough to attain an emboss effect. Please refer to the recommendations for underlay materials below.

Product		Substrate	Mesh and printing times
32185	Low lead relief flux	Porcelain/ bone china	70-123 mesh/inch, (27-48 tread/cm), 2-3 times
32285	Low lead relief white	Porcelain/ bone china	70-123 mesh/inch, (27-48 tread/cm), 2-3 times
35180	Lead free relief flux	Porcelain/ bone china	70-123 mesh/inch, (27-48 tread cm), 2-3 times
35286	Lead free relief white	Porcelain/ bone china	70-123 mesh/inch, (27-48 tread/cm), 2-3 times
35101	Lead free flux	Bone china	70-123 mesh/inch, (27-48 tread/cm), 2-3 times

4. Particle size of Distribution (P.S.D.)

Product	D ₅₀ average	D ₁₀₀ biggest
35192 reactive flux	4.5 μm (±1.0)	18 μm (±5.0)

5. Printing

【5.1 Mesh size】

We recommend one time printing by mesh sizes that are 175-260 mesh/inch (68-100 therad/cm) for all screen applications. Normally thicker printing produces a more obvious reactive effect.

【5.2 Medium ratio】

35192 reactive flux : Medium PM2	10 : 7-8
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Lead-and-cadmium free onglaze colors absorb any moisture easily. Therefore, keep powder colors in a dry place. We recommend drying the color powder before using.

6. Mixability

Mixing with other colors: 35192 can be mixed with all of SECTION 32, 34, 35 and 36 onglaze colors in any proportions. However, it shows less reactive effect after mixing with other colors.

Mixing flux: 35101 flux is suitable for mixing with 35192 to lighten and to reduce the reactive effect if necessary.

7. Chemical durability

Chemical durability of 35192 depends on type of ware, under materials, kiln, color deposit and firing conditions. The following are the results of tests on enamel ware fired at 820°C, with 5 minutes of soaking time and 60 minutes of cold-to-cold firing conditions of gas kiln in production.

【7.1 Residual lead and cadmium content】

35192 contains less than 90 ppm residual lead and less than 40 ppm residual cadmium, and therefore complies with Californian Proposition 65, FDA, CPSIA, EU, and Japanese requirements.

【7.2 Lead and cadmium release】

According to the DI EN 1388-1-2 test, 35192 itself show lead and cadmium releases are below AAS limits.

【7.3 Acid resistance】

According to the DI EN 1388-1-2 test, 35192 does not show any visible attack after immersion in a 4% acetic acid solution for 24 hours at a room temperature $22 \pm 2^\circ\text{C}$.

【7.4 Alkali resistance】

According to the ASTM C556-88 test, 35192 does not show visible attack for up to 6 hours.

8. Safety Data Sheet (SDS)

Safety data sheet (SDS) of 35192 is available on request.

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