

SILBIONE® DISPERSIONS CAF 70004, 71528 and 71550

Food release

Description

SILBIONE DISPERSIONS CAF 70004, 71528 and 71550 are one component silicone elastomers crosslinking at room temperature by reacting with the moisture in the air.

These SILBIONE products, containing reactive polydimethyl siloxane oils and inert fillers, are supplied in dispersion in a solvent.

They can be used as non-stick coatings for materials in contact with foodstuffs.

The product obtained after crosslinking of SILBIONE CAF contains only substances permitted by the regulations currently in force in the following countries :

- **France** : Brochure n° 1227 of the Journal Officiel de la R épublique Française.
- **Germany**: Bundesgesundheitsamt (BGA) recommendations - Chapter XV A « Silicones ».
- **USA**: FDA Code of Federal Regulations, part 21, paragraphs 175.300 on « Resinous and polymeric coatings » and 177.2600 on « Rubber articles intended for repeated use ».

Important remarks:

All the constituents of the lining must be authorised, i.e. they must appear in the positive lists of materials for contact with foodstuffs. In addition, the finished lining, after application and curing must pass migration tests in the conditions stipulated by the regulations.

Moreover, manufacturers of paints, varnishes or coatings must naturally make sure that the other constituents in their formulas (solvents, pigments, additives, etc.) also comply with the regulations. They must also check that the coating obtained have been correctly applied, in particular to avoid any risk of migration of constituents.

Properties

- Specially formulated for use in THIN PAINT-TYPE COATINGS (high covering capacity, easy application, quick drying).
- Excellent heat stability.
- Very good non-stick properties.
- High mechanical strength.
- Waterproof and damp-proof.
- Harmless.

Examples of applications

- Coatings for stainless steel mesh and perforated aluminium trays used in bakeries.
- Linings for baking tins for cakes, confectionery and meat products.
- Coatings for conveyors belts, etc. in the food industry.

SILBIONE® DISPERSIONS CAF 70004, 71528 and 71550**Characteristics**

	SILBIONE DISPERSIONS CAF		
	70004	71528	71550
Appearance	fluid paste		
Colour	white	black	red
Odour	acetic		
Specific gravity at 25 °C, approx.	1.0		
Solids content, %, approx.	73	70	70
Viscosity at 25 °C, mPa.s, approx.	7000	10000	10000
Dispersant	cyclohexane		
Flash point (closed cup), °C	< 0		
Thinners	cycloaliphatic and aromatic hydrocarbons (1)		

(1) Users must ensure that the thinners used comply with the regulations

Mechanical properties

Properties measured on film 2 mm thick after 7 days' drying at 23 °C and 50 % RH.

	SILBIONE DISPERSIONS CAF		
	70004	71528	71555
Shore A hardness, points, approx.	30	60	60
Tensile strength, MPa, approx...	3	5	5
Elongation at break, %, approx. ..	250	150	150

Processing**Treatment of baking tins and trays**

Certain precautions must be taken to ensure a satisfactory non-stick coating.

CLEANING THE SURFACES

The materials treated are generally ordinary or stainless steel, aluminium or light alloys.

- For new material, the most satisfactory method is to degrease the metal with trichlorethane, trichloroethylene or perchlorethylene (by dipping or in vapour phase), followed if possible by careful sandblasting, except in the case of aluminium.
- For material for reconditioning, the silicone coating can be removed either by pyrolysis or by soaking in concentrated sulphuric acid. In the latter case, rinse thoroughly and dry.

SILBIONE® DISPERSIONS CAF 70004, 71528 and 71550

APPLYING SILBIONE DISPERSIONS CAF

Primer

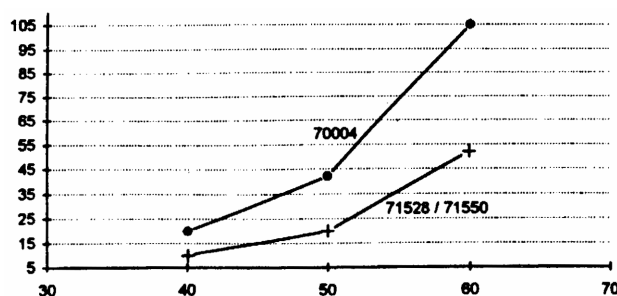
On large flat surfaces such as steel or aluminium trays, a thin coat of primer (a few microns) should be sprayed to improve adherence of the dispersions. Please consult us about suitable primers.

Applying a one-coat system

This coat is preferably applied using an AIRLESS type spray system with the previously diluted dispersions. For easy application, **SILBIONE CAF DISPERSIONS 71528** and **71550** should be diluted with cycloaliphatic or aromatic hydrocarbons (e.g. anhydrous cyclohexane) to a dry matter content of approximately 50 %, this corresponding to a viscosity of approximately 20 seconds with AFNOR cup n°6. **SILBIONE CAF DISPERSION 70004** should be diluted to 45 % dry matter content and a corresponding viscosity of approximately 30 seconds with AFNOR cup n°6.

The following graph allows calculation of the 3 diluted products' final dry matter content as a function of the required AFNOR cup n° 6 viscosity.

**COMPARED VISCOSITY
MEASURED WITH AFNOR CUP 6 A 23 °C**
Viscosity (sec)



Dry matter content (%)

Disp. CAF 70004

Disp. CAF 71528 / 71550

The effective surface is usually coated with a deposit of around 80 microns.

Once applied, leave the film to dry for between 30 minutes and several hours (in a dust free environment); curing is complete after approximately 24 hours.

Applying a two-coat system

a) Introduction

This method offers the advantage of combining the very good heat stability of **SILBIONE CAF DISPERSION 71550** and the excellent release properties of **SILBIONE CAF DISPERSION 70004**. However, our tests have shown that in a confined environment and at high temperatures, there could be an increased risk of reversion, well known with elastomers, for **SILBIONE CAF DISPERSION 70004**. When coating deep, parallel sided moulds, such as cake or French toast moulds, we would therefore recommend use of a one-coat system such as **SILBIONE CAF DISPERSION 71550**.

SILBIONE® DISPERSIONS CAF 70004, 71528 and 71550**b) Processing**

We recommend:

- A first coat of **SILBIONE CAF DISPERSION 71528 or 71550**.
- A second coat of **SILBIONE CAF DISPERSION 70004**.

It can be noted that the white colour of the second coat allows easy visualisation of its application, thus avoiding any access.

Both coats are applied using a spray gun with previously diluted **SILBIONE CAF DISPERSIONS**, as before. The overall deposit is approximately 80 microns and 15 to 30 minutes should be allowed for drying between two coats. However, we have observed that longer drying times (24 to 48 hours) do not detract from the inter-layer adhesion.

Packaging

SILBIONE CAF DISPERSION 70004 is available in 1 litre cans and 25 kg fully opening drums with plug and bleeder-hole.

SILBIONE CAF DISPERSIONS 71528 and 71550 are available in 25 kg fully opening drums with plug and bleeder-hole.

Storage and shelf life

When stored in their original unopened packaging at a temperature of between + 2 and + 30 °C, **SILBIONE DISPERSIONS CAF 70004, 71528 and 71550** may be stored for up to 18 months from the date of manufacture (expiry date). Comply with the storage instructions and expiry date marked on the packaging.

Past this date Bluestar Silicones no longer guarantees that the product meets the sales specifications.

Safety

Consult the Safety Data Sheet for **SILBIONE DISPERSIONS CAF 70004, 71528 and 71550**.

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