Technical Data Sheet

Contego High Solids Reactive Fire Barrier Intumescent (RFB)

DESCRIPTION:

Contego HS (RFB) is a full-bodied water-based acrylic latex, single component coating designed to protect a wide range of building materials including structural steel, aluminum, dimensional lumber, manufactured wood products, trusses, drywall, spray polyurethane foam insulation, HDPE wall panels, concrete, plaster, solid core doors and more. The product may also be used for conduit, decking and cladding. Refer to our architectural specification for more details.

FEATURES:

- Exceptional protection from heat and fire
- Smooth, thin, architectural grade finish
- Top coat with a wide range of paints including alkyds, acrylics, epoxy or polyurethane
- Big Plus- with HS apply half as many coats with the same coverage
- Nontoxic, non dermatic and non-carcinogenic acrylic latex
- Can be pre-applied to steel and other materials during fabrication and is easy to repair
- Designed specifically for spray application. No special equipment required. Simple to apply
- Interior or exterior application (use an exterior grade top coat for exterior applications)
- Economically priced
- Fast drying and curing times
- Cleans up with soap and water
- 24 month shelf life. Does not need to be periodically reapplied

COLORS:

White

STORAGE:

Twenty four months in factory delivered, unopened packages.
Store on pallets and keep away from extreme heat, freezing, and moisture.

TECHNICAL DATA (All values @ 77 ºF / 25 ºC)	US	Metric
Solids by volume (ASTM D2697)	66 +_ 2%	66 +_ 2%
Solids by weight	69 +_ 2%	69 +_ 2%
Volatile organic compounds (ASTM D2369)	0.0001 lb./gal	0.01 gm/ lit
Specific Gravity of materials (ASTM D792)	11.27 lbs./gal	1.35 kg/ liter
Viscosity	16 K cPs	16 K cPs
PH Range	8 – 8.5	8 – 8.5
Hazardous Ingredients	N/A	N/A
Flammability	Not Flammable	Not Flammable
Shelf Life	24 months	24 months

MIXING:

Product must be mixed thoroughly before application. Manufacturer recommends using a mixing paddle with power drill for a minimum of three 3 minutes at highest speed. Concentrate on bottom of bucket periodically moving to the middle and top areas.

Product is properly mixed when:

a. There are no solids attached to the paddle after mixing at the bottom.
b. Paint shows a uniform consistency when mixed at the surface.

Do not dilute or thin this product with any other liquid.

SURFACE PREPARATION:

Do not proceed with installation until substrates have been properly prepared and deviations from manufacturer's recommended tolerances are corrected. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions. Surfaces must be clean, dry, and free of any grease, oils or other contaminants. Previous layers of paint must be solidly adhered to the surface with no flaking, chipping, or cracks.

1. Remove hardware, hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

2. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

3. Cleaning: Before applying coatings or other surface treatments, clean substrates of substances that could impair bond of intumescent paint systems.

4. Schedule cleaning and painting application so dust and other contaminants will not fall on wet, newly painted surfaces.

5. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer’s written instructions for each particular substrate condition and as specified. Coordinating shop-applied primers with finish coats is critical. If compatibility problems develop, it may be necessary to provide barrier coats over shop-applied primers or to remove primer and re-prime substrate.

APPLICATION:

Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable paint film.

Priming Requirements:
Bare steel must always be primed with red oxide primer or manufacturer approved equivalent prior to applying the Contego product.

Installation:

Contego HS (RFB) is designed to be applied by spray application and should only be applied by brush or roller for touch up purposes. Use a spray gun with 3,600 psi with a 0.036 tip or bigger. In either case, spray a test patch to make sure the product is being properly atomized without clogging the nozzle or other parts of the spray gun.

Contego HS (RFB) should not be applied when the relative humidity exceeds 80% or the surface to be coated is less than 50 °F (10 °C) or less than 15 F (9 °C) above the current or forecasted dew point. The product is best applied when ambient temperatures are between 50 °F (10 °C) and 95 °F (35 °C). Once applied and cured, lower or higher temperatures should not be a problem. On combustible substrates such as dimensional lumber, manufactured wood (Oriented Strand Board, Particle Board, Plywood, etc.), Polyurethane foam, and drywall (GWB) a primer is not required but may be useful if:

Dimensional Lumber The wood is very old and/or dry and would likely absorb too much of the Contego coating.
Manufactured Wood The substrate is very old and/or dry or if the resin content is unusually high.
Polyurethane Foam The foam is soy-based or made from other organics that emit a vegetable oil.
Drywall (GWB) The drywall has been previously painted with oil-based (alkyd) paint or if you're not sure.
On structural steel and other metals such as aluminum, copper, brass, or composites, a primer is always required. No exceptions have been observed regarding what kind or brand of primer can be used. Even inexpensive shop primer has shown no incompatibilities. However, doing a test patch is always recommended with any new combinations of primer and our product since it is impossible to have tested every product from every manufacturer.

Drying & Cure Times at Standard Ambient Temperature and Humidity:

NEVER allow the Contego coating to be exposed to rain, dew, snow, heavy settling fog, water spray or other forms or condensation until completely dry to protected with a suitable top coat. ALL exterior applications must be top coated. The Contego finish must be protected until a suitable top coat has been applied and allowed to dry.

As with any water-based acrylic latex coating, drying time is always a function of ambient temperature, ambient humidity and how thickly the coating was applied. However, at 60 °F (15 °C) with a relative humidity of 70%, a 20mil (500µ) wet coat should be dry to touch within 3 hours, completely dry in 6 hours and dried hard enough to handle in 8 hours. While our specifications call for a 72 hour cure time, the product is active as soon as it is hard dried.

DO NOT apply additional coats until you are sure the underlying coats are completely dry. Applying additional coats on top of product that still has moisture may cause the finish to crack and, if enough moisture is trapped under a surface film, the entire finish may delaminate and fall off. Top coating is recommended and permitted after the total number of required thickness of Contego has been applied and completely dried.

Required Coating Thickness:

Current recommendations are a maximum wet film thickness of 35 mils (885µ), drying to 28 mils (710µ). The big advantage is impressive savings in application and labor costs and time. For structural steel applications, refer to our Product Planner to determine required thickness for various substrates, densities and required ratings. Contact a qualified Nukote representative with further questions.

General Guidelines for Coating Thickness Requirements:
Dimensional Lumber - Up to 2 hours depending on the size of the wood and the thickness of Contego applied. (20 mils/500µ dft)
Manufactured Wood - Up to 2 hours depending on the size of the wood and the thickness of Contego applied. (20 mils/500µ dft)
Polyurethane Foam - Meets the 15 minute thermal barrier requirements of IBC-2603 (15 - 20 mils/380-500µ dft)
Drywall (GWB) - Contego adds 55 minutes to any type of GWB. (15 mils/380µ dft)

Structural Steel - Contego provides up to 3 hours restrained depending on the W/D, Hp/A or A/P of the steel and the thickness of Contego applied. (8 - 200 mils /200-5000µ dft refer to our steel calculator)
Aluminum Columns have been tested for 2 hours. Aviation grade .025 panels for an estimated 4+ hours. (20 - 50 mils/500 - 1270µ dft)

All applications are enhanced by 25% to 32% when top coated with a finish coat of your preference. Test results are based on comparative performance with an oil-based alkyd top coat.

WARNING:

Do not mix, thin or dilute the Contego product with water or other materials.
Do not allow the product to freeze. If frozen, the texture will be obviously different. Discard it.
Do not store at temperatures above 105 F (40°C) for extended periods of time.
Do not expose the product to rain, snow, dew or extreme humidity until a top coat is applied.

Testing:

Contego products are tested to a variety of standards including UL, ULc, EN, BS, ASTM, NFPA, UBC, CEN, ISO, and others by the best independent fire testing laboratories available. Contego uses Underwriters Laboratories (UL), Exova/Warrington, Intertek, Western Fire Center, Southwest Research Institute (SwRI), Guardian Laboratories, SGS/USTesting, KTA, Materials Analytical Services, MAGI and more. All labs are certified, accredited and audited.

WARRANTIES AND DISCLAIMERS:

Nukote Contego products are warranted for ten years from date of application against material defects. Proof of purchase (store receipt and bar code from container) is required for warranty claims. Claims are limited to replacement of product only. The manufacturer accepts no responsibility for other losses or claims and the user waives such claims by breaking the seal on the container.