

**Description**

TrueKote CS-150S is a two component low VOC urethane coating designed for application over wood metal and other urethane surfaces. It provides excellent impact and abrasion resistance on metal surfaces and can be sprayed by pressure pot or airless spraying equipment and can be built up in multiple spray passes to a thick coating. It cures to a high performance urethane elastomer that has high physical properties. TrueKote CS-150S is used on Industrial equipment applications and in amusement parks where a smooth flexible, high durability abrasion resistant coating is required.

TrueKote CS-150S has been successful at temperatures up to 180° F. Under wet or humid conditions at elevated temperatures, TrueKote CS-150S is superior to most other urethanes. Although TrueKote CS-150S becomes stiffer at lower temperatures, it still remains flexible at temperatures as low as -70° F.

TrueKote CS-150S has excellent chemical resistance in the pH range of 2 to 12. Resistance to most oils at room temperature is good, but resistance to solvents is generally poor. The table below gives an indication of resistance to some chemicals; however, users should conduct their own tests.

Chemical Resistance	
Chlorinated water	E
Nitric acid, 5%	P
Hydrochloric acid 5%	P
Phosphoric acid, 10%	G
Sodium Hydroxide, 10%	G
Sea water	E
Toluene	P
M.E.K.	P
Ammonia	F
Kerosene	P

- G – Good
- E – Excellent
- F – Fair
- P – Poor

**Application**

TrueKote CS-150S should only be applied to surfaces that have been properly prepared. Most common materials such as steel, aluminum, fiberglass, rubber, urethane, brick, concrete and wood can be coated with TrueKote CS-150S. To obtain maximum adhesion most substrates must be grit-blasted, abraded or etched before applying primer and TrueKote CS-150S. Metal surfaces should be grit-blasted to SSPC-SP-10 “Near White Metal Blast” and should exhibit a 2 to 4 mil surface profile. Metallic substrates must always be dry and primed with Primer 450 before TrueKote CS-150S is applied. A single component airless spray machine with a minimum air, fluid pressure ratio of 20:1 will provide a good spray pattern with .015 to .026 inch orifice spray tip. When using larger spray tips or long hose lengths, it is advisable to use a machine with a 30:1 air fluid pressure ratio. The spray machine should be equipped with Teflon packing, Teflon or Nylon hose and a 100-mesh outlet filter. A tip filter may be required for small tips. The spray hose should be conductive and the spray machine should be grounded to an earth ground when spraying.

A jiffy mixer or other propeller-type mixer used on air drill can be used to mix the urethane components.

Standard techniques used in airless paint spraying work well with TrueKote CS-150S. The proper spray tip should be selected for the job and the pressure of the pump should be adjusted to obtain an even spray pattern at the lowest pattern. The initial coat of TrueKote CS-150S should be a thin coat and should be applied from the bottom up so as to prevent over spray from depositing on the primed surface. On surfaces having a nap or rough texture, such as abraded rubber, optimum adhesive coats may be applied to a thickness of 5 to 20 wet mils, depending upon the position of the article being coated, the temperature and the elapsed time in the pot life. Each coat should be allowed to gel or dry to the touch, usually a period of 5 to 15 minutes, depending upon ambient temperatures, before the next coat is applied.

Equipment must be cleaned immediately after use to prevent build up of cured urethane on internal parts of equipment. Solvents such as toluene or M.E.K. works well for cleaning soiled spray equipment. As soon as urethane spraying is completed, solvent should be pumped through the pump, hose and spray gun until solvent comes out clear. The spray gun should then be removed from the hose and the end of the hose put in the solvent container near the pump suction and solvent should be circulated through the system for 15 to 20 minutes. The spray gun should then be attached to the hose and the system purged with fresh solvent.

Dispose of all empty TrueKote CS-150S component containers in accordance with local, state and federal regulations. Empty component containers can be rendered non-hazardous by rinsing the containers with a small amount of mixed material and allowing the solvents to evaporate. The containers will then contain non-hazardous cured urethane.

TrueKote CS-150S may be repaired by priming surface with Primer 450 and the application of more TrueKote CS-150S.

Vapors from TrueKote CS-150S contain isocyanates and solvents. Forced air ventilation must be used for all indoor applications. When working in tanks and other closed vessels or downstream from spray gun, fresh air breathing equipment should be worn. Chemical cartridge masks suitable for organic vapors may be used under some conditions with adequate ventilation. Protective clothing should be worn at all times. Both resin and curative components contain flammable solvents and should be protected from sparks and open flames. Avoid contact of components with skin and clothing as both resin and curative can cause skin and eye burns. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. If swallowed, **do not** induce vomiting. Call a physician at once. Keep out of reach of children.

### **Mix Ratio**

TrueKote CS-150S consists of a resin component, which provides the basic chemical backbone of the urethane, and a curative component, which promotes cross-linking of the resin, which results in the cured urethane elastomer.

The resin portion of TrueKote CS-150S will crystallize when exposed to temperatures below 40° F and the curative portion may crystallize when exposed to temperatures below 20° F. This does not harm the components, however, the resin component should be warmed to between 90° F and 100° F and the curative component to room temperature and each component mixed well before using. The components should not be overheated and should be cooled to room temperature before mixing together. After long-term storage it is a good policy to stir each component before adding them together.

**Do not** mix resin and curative components until ready to use. The correct mixing ratio is three parts component A to one part component B by weight. TrueKote CS-150S will not cure properly if the correct component-mixing ratio is not used.

Mix the components together in a clean container using a power drill and Jiffy mixer until a uniform blend is achieved. Scrape the sides and bottom of the container with a straight edge several times during the mixing operation to prevent unmixed material from sticking to the container. The total time required to mix the components should be about five minutes.

The pot life of TrueKote CS-150S is approximately 45-minutes at 75° F, 20-minutes at 100° F and 1-hour at 50° F. After these times are exceeded for some additional time the material can still be sprayed using increased pressure or may be brushed or rolled on the substrate.

### Typical Properties

	Viscosity	Specific Gravity	Weight Per Gallon
Component A	2500	0.99	8.22
Component B	20	0.94	7.82
Mixed	1000	0.97	8.12

Mixing Ratio	
By volume	3 parts A to 1 part B
By weight	3 parts A to 1 part B

The time required for TrueKote CS-150S to cure is dependent upon temperature. A 75% cure is generally sufficient for mild abrasion and submersion. The cure times shown are for a 100-mil thick coating. Cure times should be increased by 50% for a 250-mil thick coating. A 95% cure can be considered a complete cure for practical purposes, although all urethanes, including heat cured urethanes, show improved physical properties after aging several weeks or months.

	50° F	75° F	100° F
75% Cure	6 Days	3 Days	1 Day
95% Cure	15 Days	7 Days	3 Days

### Physical Properties

	Test Method	Value
Hardness	ASTM 2240-85	90 Shore A
Tensile strength	ASTM D412	5240
Elongation	ASTM D412	490%

**Color**

Clear

**Storage  
Shelf Life**

TrueKote CS-150S components are shipped from the factory in sealed containers that are purged with dry nitrogen. The containers should be kept tightly sealed and stored in a cool and dry area that is protected from direct sunlight and moisture. Storage temperature should not exceed 80° F. The shelf life of factory sealed containers stored under these conditions is one year. Containers that have been opened should be resealed immediately after material has been removed in order to prevent moisture contamination and solvent evaporation. Resin component containers should be purged with dry nitrogen if the contents are not used within 24 hours after opening.

**Packaging**

TrueKote CS-150S is available in:  
1-gallon kit ( (1) gallon can & (1) quart can)  
20-gallon kits ( (4) 5 gallon pails)  
TrueKote CS-150S has a hazardous rating for shipping.