

# **RELEASE AGENT GUIDELINES**

Custom Rock International

**1 of 2 pgs**

## **General Notes: Release Agents**

The best release agents are ineffective if not properly used. Furthermore, if used properly, some release agents will provide a better release 'residue' on the surface than others. The bottom line is, if the formliner feels dry on the surface, i.e., lack of liquid or oily residue feel on the surface at the time concrete is placed, the formliner will be extremely difficult to remove. Even with the best release agents, the challenge is to properly apply a release agent over the entire formliner surface without the release 'residue' dissipating. Because of V.O.C restrictions, many release agents do not have the solvent and oil content needed to prevent the residue from dissipating so quickly. Every state has different V.O.C restrictions. Typically, the higher the V.O.C., the more solvent and oily ingredients are permitted.

## **Release Agent Types and Formliner Material**

The rule of thumb when calling a distributor is to ask for a liquid release agent's base product, i.e., water, mineral oil, vegetable oil, etc, V.O.C. level and recommended material uses. Most release agents are generic and compatible with most urethanes. Some stronger release agents (higher V.O.C) cannot be used on Polystyrene or very soft rubber such as latex. These stronger release agents are often used on steel forms, but can also be used on a durable urethane. EPS (Expanded Polystyrene) Foam can only use a water base release agent that specifically has been approved for EPS foam. V.O.C limit in California is 250 g/L. Other states permit a V.O.C. level of 450 g/L. Release agents can also be found to have a V.O.C. level over 600 g/L.

## **Release Agents & Surfaces to be Stained or Painted**

Although water base (lower V.O.C.) release agents are not as effective, they typically are the only recommended release agents for concrete surfaces to be painted. Solvent, petroleum, mineral or vegetable base oils leave a residue that is not compatible with architectural coatings. Dry release powder/agent (used for 'stamped' concrete mats), can provide an additional release agent system for concrete formliners, but can cause even more surface problems for stain or paint coatings. However, a high powered pressure washer used slowly and thoroughly over the entire surface usually removes most all liquid and dry release powder/agents, if done properly. Contractor is cautioned to select the best release agent system at their own risk. A release agent must state that it is paintable in order to be compatible.

## **Liquid Release Agent and Powder (Dry) Release Agent**

The dry release agent used by concrete contractors to 'stamp' or texture horizontal concrete surfaces use a powder or dry release agent found at most concrete supply stores. The dry release agent comes in a variety of colors, including natural gray. When properly used with a liquid release agent on formliners, it provides an additional release 'residue' on the formliner surface and minimizes the dissipation of the liquid release agent. Dry release agents typically do not work as well with some 'paintable' water base, opaque white milky or fatty acid type liquid release agents. Release agents that are straw in color, oily with a higher V.O.C. level usually provides a better system. After the liquid release agent is applied, the dry release powder is then 'dusted' over with a 'healthy' or medium amount over the entire surface using either a burlap sack or 'flour-sifting' type device. If the dry release powder feels dry and flaky on the surface, then spray a light final coat of liquid release agent to create a moist and 'muddy-like' surface. Caution: Release powder is very difficult to apply with any type of wind present. Also, if used, extra pressure washing or light sandblasting will be required to remove some 'gray' coloration and release agent residue left on the wall. Contractor to use dry release powder at their own risk. Coverage rate: Approximately 30# pail covers 1,500 – 2,000 sq.ft. plus.

**Other General Notes: Release Agents**

The chemical used by release agent manufacturers often change because of supply, pricing, and government regulations. A successful brand name one year may have an entirely different chemical formula the next year. Recommendation for contractor to research current product bulletins for chemical ingredients, uses and V.O.C. rates. Most release agents can be applied with a Chapin sprayer, mop, or brush. Contractor to follow release agent manufacturer's recommendations for formliner compatibility.

**Release Agent Sources**

<b>Company</b>	<b>Phone</b>	<b>Product</b>	<b>Notes</b>
Kaufman Products	800-637-6372	Kleenlease 28 OTC	paintable; meets VOC
Cresset Chemical	800-367-2020	Crete-Lease 20 VOC Crete-Lease 880 VOC Crete-Lease 880	paintable combustible combustible
Edoco (Burke)	877-416-3439	Burke Release #1 VOC Burke Form Oil VOC Burke Crystal Release	fatty acid base, paintable 450 g/L, petroleum base petroleum base
W.R. Meadows	909-469-2606	Duogard II VOC	paintable
Dayton Superior	562-946-5504	J3	oil base
Symons	847-298-3200	Magic Kote, WB Magic Kote 450 Action Kote	water base 611 g/L voc mineral oil 250 g/L voc
Atlas	858-277-2100	Bio-Guard 2000	vegetable oil – 0 voc

Contractor responsible to consult with release agent manufacturer for proper selection, current and correct chemical information

**Technical Sales: Tom or Isaac 410-356-9777**