

SPECIFICATION SHEET

CRETE-LEASE 20-VOC RELEASE AGENT

Crete-Lease 20-VOC is a water based release agent for use on any form or formliner. Use it for producing architectural concrete surfaces. Exceeds all state and federal EPA regulations. Updated March 2005.

Environmental Report Card

Non-toxic.....Yes
Non-flammable.....Yes
VOC compliant.....Yes
Biodegradable.....Yes
Solventless.....Yes
Water based.....Yes

1. PRODUCT

Crete-Lease 20-VOC Release Agent

2. MANUFACTURER

Cresset Chemical Company, Inc.
One Cresset Center, Box 367
Weston, OH 43569

3. PRODUCT DESCRIPTION

Basic Use: Crete-Lease 20-VOC Release Agent permits easy, stain-free removal of forms or formliners from hardened concrete. It:

- Reduces bugholes on the concrete surface
- Doesn't interfere with adhesion of caulk, architectural coatings, paint, sealers and curing compounds on cured concrete surfaces when properly applied
- Is biodegradable
- Permits empty container disposal in dumpsters and nonhazardous landfills
- Promotes longer life of plywood by acting as a water repellent from inside the wood
- Still produces architectural looking concrete surfaces if over-applied
- Is odorless
- Meets the most rigid OSHA and EPA regulations in any state
- Is a water based release agent
- Applies over residual form oils on used forms
- Helps prevent rusting of steel forms
- Eliminates bugholes even when applied 5 times thicker than needed:
 - No staining
 - Does not cause efflorescence

Limitations: Crete-Lease 20-VOC separates if frozen once or if stored for more than 8 months. Vigorous stirring renews it. Use Crete-Lease 727 where freezing occurs (except that Crete-Lease 727 is not usable on all of the same forms).

Ground Shipping in the USA: Containers holding 275 gallons or 55 gallons or 5 gallons or less (regardless of the number of containers)

are not federally regulated and shipping product in the Cresset package does not require following hazardous shipping requirements.

Applicable Standards: Exceeds California SCAQMD rule 1113-90: Corps of Engineers, "Civil Works Construction Guide Specifications," CW-03101, Section 5.3 and Section 8: and Corps of Engineers, "Guide Specification Military Construction," CEGS-03300, Section 10.8.

4. TECHNICAL DATA

Please see Tables.

TABLE OF PROPERTIES

		<u>Metric</u>
Chemically Active	Yes	Yes
Neutralized	Yes	Yes
Color	White	White
Opacity	Opaque	Opaque
Freeze Temperature	31° F	0° C
Freeze Damage	Yes	Yes
Flash Point	NA	NA
Viscosity (centipoises)	500 @ 68° F	500 @ 20° C
Odor	None	None
Type	Semi-drying	Semi-drying
Storage Life	8 months	8 months
Density	7.8 lbs/gal	933 g/L
VOC (Volatile Organic Compounds)	100 g/L	100 g/L
VOC (Volatile Organic Compounds)	0.83 lbs/gal	---

Composition: A proprietary emulsion of vegetable oils in water. Contains no waxes, no silicones...no carcinogens.

TABLE OF FORM AND FORMLINER COMPATIBILITY

Plywood	All Grades, Pre-oiled, Overlaid (LDO, MDO, HDO)
Plastics	Fiberglass Reinforced, Expanded Polystyrene Foam*, ABS, PVC
Coatings	Epoxy, Urethane, Latexes
Elastomerics	Silicone, SBR, Natural Rubber
Steel	
Aluminum	

Bead Board may require two coats

COVERAGE WITH CRETE-LEASE 20-VOC

<u>Form Surface</u>	<u>(sq ft/gal)</u>	<u>(m2/l)</u>
Hard & Smooth	1,000	25
Pre-oiled Plywood	900	22
Untreated Plywood	700	17

5. APPLICATION

Preparatory Work: Form surfaces should be clean, dry and free from contaminants. Apply Crete-Lease just minutes before concrete is placed or up to 14 days if treated surface is protected.

Methods: Your choice of application methods will determine the final appearance of the concrete. Use Release Method when a form release is the primary concern; use a Visual Guide Specification for concrete where both the visual impact and form reuse are primary concerns.

Release Method: Apply with any type applicator or technique. Use a sprayer, roller, brush, or mop.

Too much release agent will cause bugholes and "wormtracks" (as seen in CCS 6), and an increased difficulty in stripping.

Visual Guide Specifications: CCS 2 (Cresset Concrete Standards 2) is attainable when coverage rates are carefully followed. See Spray Coverage Rate Chart.

Visual Guide Specification Notes:

1. A properly applied film of Crete-Lease 20-VOC appears as many white spots very closely spaced. Clear "oily looking" patches appear as the water evaporates. Frequently the application appears not very uniform.
2. With Crete-Lease 20-VOC, the thinner the film the better the appearance, plus the forms strip easier.
3. Form surfaces used in producing CCS 1 and CCS 2 must be as clean as the hood on a showroom car before the release agent is applied. Protect treated surfaces from precipitation, dust and debris.
4. Non-porous form surfaces are required to uniformly produce [CCS1](#), and CCS 2. Examples include HDO plywood, elastomerics, all plastics, metals and coatings.
5. When producing CCS 4, CCS 5 or CCS 6 concrete surfaces, you may use pre-oiled or untreated plywood, or LDO or MDO overlaid plywood.
6. Sprayers designed for applying sealers and curing compounds typically apply 10 times the needed Crete-Lease. They are not usable for producing CCS 1, or CCS2.

7. Produce CCS 2 with Crete-Lease 727, 880-VOC, 880 and 20-VOC. Use Crete-Lease 727 when form reuse is more important than visual impact. When superplasticizers are used in the concrete mixture or visual impact is especially important use Crete-Lease 880 or Crete-Lease 880-VOC. Use Crete-Lease 20-VOC to meet air quality (VOC), hazard and/or pollution regulations.

Storage: Factory sealed containers will keep up to 8 months at temperatures from 40° F to 100° F (1° C to 40° C). As a class 3B liquid, Section 1910.106 of OSHA Standards does not apply for storage purposes. Must be stored at temperatures above 35° F.

Precautions: Fewer precautions than with oil based release agents. See Material Safety Data Sheet for complete detail

SPRAY COVERAGE RATES TO OBTAIN HIGH VISUAL IMPACT CONCRETE

<u>Flat Spray Tip</u>	<u>Pressure</u>	Optimum Coverage For CCS 2	Optimum Coverage For CCS 3
80015LP tip	30-40 psi	70 sq ft/10 sec	Not very
80015 tip	30-40 psi	60 sq ft/10 sec	sensitive to
800067 fine tip	70-80 psi	35 sq ft/10 sec	applied thickness.

Notes:

1. The coverage rates are for smooth non-porous forms.
2. Distance between form and spray tip is constant; typically between 12 and 18 inches.

SPRAY COVERAGE RATES TO OBTAIN HIGH VISUAL IMPACT CONCRETE

(nominal conversion to metric)

<u>Flat Spray Tip</u>	<u>Pressure</u>	Optimum Coverage For CCS 2	Optimum Coverage For CCS 3
80015LP tip	205-275 kPa	6.5 m ² /10 sec	Not very
80015 tip	205-275 kPa	6 m ² /10 sec	sensitive to
800067 fine tip	485-550 kPa	3 m ² /10 sec	applied thickness.

Notes:

1. The coverage rates are for smooth non-porous forms.
2. Distance between form and spray tip is constant; typically between 300 mm and 455 mm.

6. AVAILABILITY AND COST

Availability: Crete-Lease 20-VOC Release Agent is available in 1 and 5 gallon containers; orange and white striped 55 gallon drums and 275 gallon MegaPaks.

Cost: The cost on hard, smooth surfaces is about \$0.006 per square foot (January 2001).

7. LIMITED WARRANTY

Cresset Chemical Company warrants the product against defects in

materials for a period of 8 months from purchase. If Cresset receives notice of such defects during the warranty period, Cresset at its option will either replace the product or refund the purchase price. THE WARRANTY SET FORTH ABOVE IS EXCLUSIVE AND NO OTHER WARRANTY, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED. CRESSET SPECIFICALLY DISCLAIMS THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE REMEDIES PROVIDED HEREIN ARE BUYER'S SOLE AND EXCLUSIVE REMEDIES. IN NO EVENT SHALL CRESSET CHEMICAL COMPANY BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFIT) WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY.

8. MAINTENANCE

Not required.