

The SILCOLEASE® emulsion technology range offers unique benefits for certain applications and is the only choice for on paper machine treatment to obtain silicone release coated paper. The SILCOLEASE® emulsion range is well adapted to both size press or bill blade type coating heads. On coating machines, with careful attention to wetting properties, solids levels and use of suitable thickening agents, simple techniques such as those used for solvent based silicones can be adapted for emulsion coating.

The use of water soluble organic polymers can be a critical factor to aid successful coating with emulsion silicones especially on more porous or lower cost substrates.

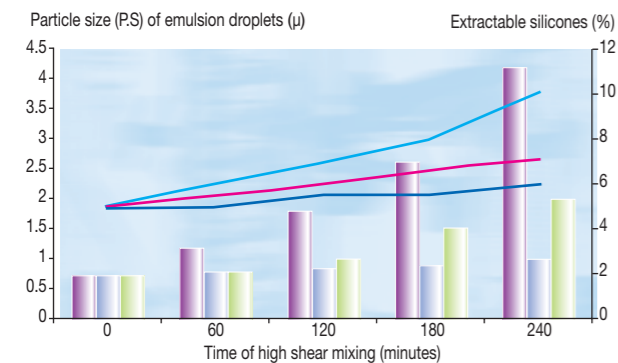
Continuous improvements in bath stability have been made which now allow these systems to run with amazing consistency and reliability over long production campaigns.

The cure speed of an emulsion system is very much defined by the evaporation of the diluting water. However, recent advances in our curing technology allow us to apply the SILCOLEASE® Optima concept to our emulsion range. In particular, with these new products, our customers can obtain a release coating with a significantly reduced Pt level on certain suitable substrates.

Silicone release coatings are most widely used in the label and tape industry but emulsion silicones are particularly used for hygiene, interleaving and high pressure release applications. Bluestar Silicones long history of success with emulsion chemistry is founded on our ability to adapt and modify system formulations to all machine conditions.

#### Improving the high shear stability of emulsion for systems

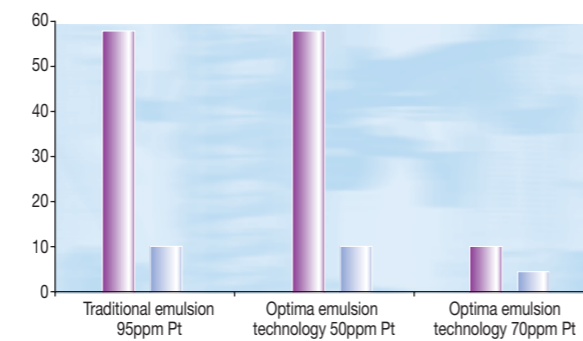
Coating head conditions often lead to degradation of emulsion particle size and application performance. Additives or reduced Pt can help improve physical or chemical stability of the bath.



- Extractables SILCOLEASE® system 902 / 903
- Extractables Optima 912 system with reduced Pt
- Extractables SILCOLEASE® system 902 / 903 + additive 702
- PS (μ) SILCOLEASE® system 902 / 903
- PS (μ) Optima 912 system with reduced Pt
- PS (μ) SILCOLEASE® system 902 / 903 + additive 702

#### Pt reduction with Optima concept emulsion

Paper machine application. Silicone Extractables (%) measured under conditions indicated.



- Sample taken directly from paper machine
- Sample taken from jumbo reel at slitting

#### Legal Disclaimer:

The information contained in this document is given in good faith and based on Bluestar Silicones current knowledge. Bluestar Silicones makes no representation or warranty as to the accuracy, completeness of such information or as to the compatibility of such information with the user's intended application: information is supplied on an "as-is" basis and is not binding on Bluestar Silicones. Nothing contained herein is intended as a recommendation to use the products so as to infringe any patent. Bluestar Silicones assumes no liability for users' violation of patent or other rights and disclaims any liability for loss, injury or damage which may result from the use of the products. Therefore, information contained herein must not be used as a substitute for necessary prior tests which are the sole responsibility of the user and which alone can ensure that a product is suitable for a given use.

#### Bluestar Silicones France SAS

21, avenue Georges Pompidou  
F-69486 Lyon Cedex 03 - France  
Tel: +33 (0)4 72 13 19 00 - Fax: +33 (0)4 72 13 19 88  
www.bluestarsilicones.com

**BLUESTAR**  
SILICONES

**BLUESTAR**  
SILICONES

# Emulsion Range

**SILCOLEASE®** release coatings  
...using science to a fine art

All the names mentioned are registered trademarks.

SIGNATURE GRAPHIQUE - PHOTO: PHOTODISC

SIL107|004|3|1|Emulsion

# General Purpose range of polyaddition curing emulsion systems

PRODUCTS	PRODUCT REFERENCE	FEATURES
POLYMER	SILCOLEASE® Emulsion 902	<ul style="list-style-type: none"> <li>• Base for multi purpose 2 component system</li> <li>• Good cure and anchorage</li> <li>• Low release</li> </ul>
	SILCOLEASE® Emulsion 908	<ul style="list-style-type: none"> <li>• Base for high density network 2 component system</li> <li>• Good cure and anchorage</li> <li>• Low foaming/high bath stability</li> <li>• Excellent bakery release</li> </ul>
	SILCOLEASE® Emulsion 907 PEX*	<ul style="list-style-type: none"> <li>• Base for multi purpose 3 component system</li> <li>• Good cure and anchorage</li> <li>• Low release</li> <li>• Longer shelf life</li> </ul>
CATALYST	SILCOLEASE® Emulsion Catalyst 903	<ul style="list-style-type: none"> <li>• Standard Platinum catalyst</li> <li>• Stability additive</li> </ul>
	SILCOLEASE® Emulsion Catalyst 911	<ul style="list-style-type: none"> <li>• Lower Platinum catalyst for easy use (50:50 system)</li> <li>• Stability additive</li> </ul>
	SILCOLEASE® Emulsion Catalyst 909	<ul style="list-style-type: none"> <li>• Concentrated Platinum catalyst</li> <li>• Longer shelf life</li> </ul>
PERFORMANCE ENHANCEMENT	SILCOLEASE® Emulsion Crosslinker 966	<ul style="list-style-type: none"> <li>• Standard crosslinker</li> <li>• Good anchorage</li> </ul>
	SILCOLEASE® Emulsion RCA 954	<ul style="list-style-type: none"> <li>• Tight release modifier suitable for a wide range of adhesives</li> </ul>
	SILCOLEASE® Emulsion Additive 702	<ul style="list-style-type: none"> <li>• Rheology modifier</li> <li>• Reduces silicone penetration and consumption</li> <li>• Improves bath stability</li> </ul>
	SILCOLEASE® Emulsion 700	<ul style="list-style-type: none"> <li>• Latex-Silicone co-polymer</li> <li>• Improves holdout on porous papers</li> <li>• Suitable for very tight release applications</li> </ul>

\* Experimental Product (discuss availability with your technical or sales contact)

# Optima concept for polyaddition curing emulsion systems

PRODUCTS	PRODUCT REFERENCE	FEATURES
POLYMER	SILCOLEASE® Emulsion 912*	<ul style="list-style-type: none"> <li>• Base for multi purpose 2 component system</li> <li>• Lower catalyst level or faster cure</li> <li>• Low release</li> </ul>
	SILCOLEASE® Emulsion 918*	<ul style="list-style-type: none"> <li>• Base for high density network 2 component system</li> <li>• Lower catalyst level or faster cure</li> <li>• Low foaming/high bath stability</li> <li>• Excellent bakery release</li> </ul>
CROSSLINKER	SILCOLEASE® Emulsion XL 967*	<ul style="list-style-type: none"> <li>• High reactivity crosslinker</li> <li>• Lower catalyst level or faster cure</li> <li>• 40% emulsion with excellent physical bath stability</li> </ul>
	SILCOLEASE® Emulsion XL 968*	<ul style="list-style-type: none"> <li>• High reactivity crosslinker</li> <li>• Lower catalyst level or faster cure</li> <li>• 60% emulsion with excellent wetting properties</li> </ul>
CATALYST	SILCOLEASE® Emulsion CATA 913*	<ul style="list-style-type: none"> <li>• Standard Optima range catalyst</li> <li>• Stability additive</li> </ul>
	SILCOLEASE® Emulsion CATA 919*	<ul style="list-style-type: none"> <li>• Lower Pt catalyst for easy use (50:50 system)</li> <li>• Optima range catalyst</li> <li>• Stability additive</li> </ul>

\* Experimental Product (discuss availability with your technical or sales contact)

# Polycondensation curing emulsion system

PRODUCTS	PRODUCT REFERENCE	FEATURES
POLYCONDENSATION SYSTEM	SILCOLEASE® Emulsion 70840	<ul style="list-style-type: none"> <li>• Base for multi purpose 2 component system</li> <li>• Good performance on Pt cure inhibiting substrates</li> <li>• Low release (particularly against certain adhesives)</li> </ul>
	SILCOLEASE® Emulsion Catalyst 70827A	<ul style="list-style-type: none"> <li>• Standard dibutyl tin catalyst</li> <li>• Industrial applications only (no food contact approval)</li> </ul>