

# SILBREAK\* 321

## silicone demulsifier

SPECIALTY FLUIDS - OIL & GAS



Silbreak 321 silicone demulsifier is an excellent candidate to consider for use in effectively breaking water-in-oil emulsions, particularly those associated with crude oil production. It can also be effective in helping provide release and dust control when used on conveyor belts of sulfur recovery units.

Silbreak 321 silicone demulsifier is based on a modified polydimethylsiloxane that combines in a single molecule chemical group with different affinities for the water and oil phases thereby achieving remarkable interfacial activity that can result in efficient demulsification. Further, the balance of silicone moieties and organic groups can assist with release and dust control during pelletization and use of sulfur.

### Key Features and Typical Benefits

- powerful demulsification effect, particularly when combined with polyols
- helps provide foam control to oil based systems
- release and antidusting effect
- effective at low dosage levels

### Typical Physical Properties

Property	Unit	Value
Appearance	–	Clear, pale
RSN <sup>(1)</sup>	–	13.2
Density at 25°C	g·cm <sup>-3</sup>	1.03
Viscosity at 20°C	mm <sup>2</sup> ·s <sup>-1</sup>	2000
Flash Point Pensky-Martens Closed Cup ASTM D-93	°C	135
Solubility	–	Aromatic hydrocarbons, higher alcohols and water (steam condensate)

The RSN value was determined experimentally.

1) Established using toluene/dimethoxyethane solution as described in the reference J. Wu *et al.* Colloids and Surfaces A: 232 (2004) 229-237.

Typical data are average data and actual values may vary. Typical data shall not be used as product specifications.

## SILBREAK\* 321 silicone demulsifier

### How to Use

#### Demulsification

As with many Silbreak demulsifiers, Silbreak 321 silicone demulsifier is not intended to replace organic demulsifiers. Rather it should be blended with organic demulsifiers at levels ranging from 2 to 25% to boost the effect or clean up the separated water.

Silbreak 321 silicone demulsifier generally shows strong synergies with organic polyols. At levels as low as 2%, it can contribute to the clarity of the separated water. It is particularly effective on medium and heavy crudes and, when combined with polyols, it generally shows demulsification activity at lower temperatures.

#### Release / Antidusting

Silbreak 321 silicone demulsifier can typically act as a release and antidusting agent during sulfur pelletization or pastillation to prevent pastille damage during discharge and hence produce premium quality pastilles. It may also contribute to a better slurry formation during the Sul-Flow process.

Silbreak 321 silicone demulsifier is soluble in water at temperatures below 40°C. It is recommended that a 5-8 weight % solution of Silbreak 321 silicone demulsifier be prepared in water or steam condensate and applied continuously, best as a thin film, by means of a roller system or spray, onto the steel belt coolers before the dropper. Effective release, better pellet shape and improved separation from the conveyor belt may be observed even at high belt speeds, with low and medium viscosity molten sulfur liquids. If the Silbreak 321 silicone demulsifier solution is to be stored for a period longer than two days, it is recommended that a biocide be added to prevent loss of performance.

### Patent Status

Technical subject matter in this publication is described and protected by one or more of the following U.S. Patents and their foreign counterpart patents and/or patent applications: U.S. Patent Nos. 6,001,140 and 6,221,815. Other U.S. and foreign patents and/or patent applications not listed covering the subject matter may be relevant.

### Product Safety, Handling and Storage

Silbreak 321 silicone demulsifier is best stored at temperatures between 0° and 35°C to facilitate ease of handling, but storage at lower or higher temperatures will not typically affect its subsequent performance.

Customers considering the use of this product should review the latest Material Safety Data Sheet and label for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. Material Safety Data Sheets are available at [www.momentive.com](http://www.momentive.com) or, upon request, from any Momentive Performance Materials representative. Use of other materials in conjunction with Momentive Performance Materials products may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

### Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

## SILBREAK\* 321 silicone demulsifier

### Emergency Service

---

Momentive Performance Materials maintains an around-the-clock emergency service for its products. The American Chemistry Council (CHEMTREC) and CareChem24 International also maintain an around-the-clock emergency service for all chemical products:

<u>Location</u>	<u>Momentive Performance Materials Products</u>	<u>All Chemical Products</u>
Mainland U.S., Puerto Rico	518.233.2500	CHEMTREC: 800.424.9300
Alaska, Hawaii	518.233.2500	CHEMTREC: 800.424.9300
Canada	518.233.2500	CHEMTREC: 800.424.9300
Europe	+518.233.2500 (Albanian, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Lithuanian, Norwegian, Polish, Portuguese, Romanian, Russian, Serbo-Croatian, Slovak, Spanish, Swedish, Turkish, Ukrainian)	+44.(0)208.762.8322 (UK)
Middle East, All countries, except Israel	+518.233.2500	+961.3.487.287 (Lebanon)
Middle East, Israel	+518.233.2500	+44.(0)208.762.8322 (UK)
Latin America, Asia/Pacific, all other locations worldwide	+518.233.2500	CHEMTREC: +1-703.527.3887 (collect)
At sea	Radio U.S. Coast Guard, which can directly contact Momentive Performance Materials at 518.233.2500 or CHEMTREC at 800.424.9300.	

---

DO NOT WAIT. Phone if in doubt. You will be referred to a specialist for advice.

## CUSTOMER SERVICE CENTERS

North America	E cs-na.silicones@momentive.com		
	• Specialty Fluids	T +1.800.523.5862	F +1.304.746.1654
	• UA, Silanes and Specialty Coatings	T +1.800.334.4674	F +1.304.746.1623
	• RTVs and Elastomers	T +1.800.332.3390	F +1.304.746.1623
	• Consumer Sealants & Construction Sealants and Adhesives	T +1.877.943.7325	F +1.304.746.1654
Latin America	E cs-la.silicones@momentive.com		
	• Argentina & Chile	T +54.11.4862.9544	F +54.11.4862.9544
	• Brazil	T +55.11.4534.9650	F +55.11.4534.9660
	• Mexico & Central America	T +52.55.2169.7670	F +52.55.2169.7699
	• Venezuela, Ecuador, Peru, Colombia & Caribbean	T +58.212.285.2149	F +58.212.285.2149
Europe, Middle East, Africa and India	E cs-eur.silicones@momentive.com	T +00.800.4321.1000	
		T +40.21.3111848	
Pacific	E cs-ap.silicones@momentive.com		
	• China	T +1.800.820.0202 or T +86.21.3860.4892	F +86.21.5079.3725
	• Japan	T +0120.975.400 or T +81.276.20.6182	F +81.276.31.6259
	• Korea	T +82.2.6201.4600	F +82.2.6201.4601
	• Malaysia	T +60.3.9206.1532	F +60.3.9206.1533
	• Thailand	T +662.207.3456	F +66.2207.3488
Worldwide Hotline		T +1.607.786.8131	F +1.607.786.8309
		T +1.800.295.2392	

Visit us at [Momentive.com](http://Momentive.com)



Momentive Performance Materials  
22 Corporate Woods Boulevard  
Albany, NY 12211

\*Silbreak is a trademark of Momentive Performance Materials Inc.  
Momentive is a trademark of Momentive Performance Materials Holdings LLC.  
Copyright 2009-2011 Momentive Performance Materials Inc. All rights reserved.

MOM-134-140-10E-GL 04/11 Printed in U.S.A.

THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC., MOMENTIVE PERFORMANCE MATERIALS USA INC., MOMENTIVE PERFORMANCE MATERIALS ASIA PACIFIC PTE. LTD., MOMENTIVE PERFORMANCE MATERIALS WORLDWIDE INC., MOMENTIVE PERFORMANCE MATERIALS GmbH, THEIR SUBSIDIARIES AND AFFILIATES DOING BUSINESS IN LOCAL JURISDICTIONS (collectively "SUPPLIERS"), ARE SOLD BY THE RESPECTIVE LEGAL ENTITY OF THE SUPPLIER SUBJECT TO SUPPLIERS' STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SUPPLIERS MAKE NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING SUPPLIERS' PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. AFOREMENTIONED EXCLUSIONS OR LIMITATION OF LIABILITY ARE NOT APPLICABLE TO THE EXTENT THAT THE END-USE CONDITIONS AND/OR INCORPORATION CONDITIONS CORRESPOND TO THE RECOMMENDED CONDITIONS OF USE AND/OR OF INCORPORATION AS DESCRIBED BY SUPPLIER IN ITS PRODUCT DATA SHEET AND/OR PRODUCT SPECIFICATIONS. EXCEPT AS PROVIDED IN SUPPLIERS' STANDARD CONDITIONS OF SALE, SUPPLIERS AND THEIR REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN.

Each user bears full responsibility for making its own determination as to the suitability of Suppliers' materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating Suppliers' products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of Suppliers' Standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Suppliers. No statement contained herein concerning a possible or suggested use of any material, product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Suppliers or any of its subsidiaries or affiliates covering such use or design, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right.