

Mold Release Solutions Guide



Frekote®

Superior Mold Release every time

The Frekote® Line of Products is the Broadest Mold Release Line – Frekote® mold release agents, backed by over 40 years of research and development, are the global industry standard for performance, quality and value. By pioneering release solutions for many of the world’s largest manufacturing organizations, Henkel understands what it takes to release the most complex materials in the most demanding applications. Henkel has developed Frekote® mold release agents for virtually all types of composite and rubber molding operations. The Frekote® line offers the broadest product range in the industry. From jumbo jets to tennis racquets, truck tires to o-rings, from custom yachts to bathtubs, we have the release agent you need for most composite and rubber materials.

Lowest Cost per Release – Frekote® semi-permanent release agents minimize fouling and ensure the highest number of releases possible per application. Our customers realize higher productivity and profitability through reduced downtimes, lower reject rates, and higher quality products. Frekote® products are the industry standard replacement for sacrificial release agents. Unlike sacrificial waxes or silicones, Frekote® semi-permanent mold release agents do not transfer to your parts; instead they chemically bond to the mold surface, allowing the parts to release cleanly with no mold release transfer.

Frekote® products are designed to save you money. As an example, the following table represents how polyester molders minimize their molding cost with Frekote® semi-permanent mold release technology:

RELEASE PRODUCTS	TRADITIONAL	FREKOTE® BRAND		
	PASTE WAX	FRP-NC™	WOLO™	SOLO®
Labor time (hours)	10 to 15	6 to 7	4 to 5	0.5
Labor cost	\$100 to \$150	\$60 to \$70	\$40 to \$50	\$5
Material cost	\$25	\$95	\$95	\$120
Number of releases	5	20	25	30
Direct cost	\$25 to \$35	\$7.75 to \$8.25	\$5.40 to \$5.80	\$4.17

Values cited above represent approximated values as of July 2007.

World Standard Products for Release Application – Henkel has found “partnering” with customers is a highly effective way of finding solutions to tough molding and application problems. Customers around the globe turn to Frekote® products not just for our unique mold releases, but also for our expertise in developing “customized” solutions. We take pride in our knowledge, experience, and responsiveness in providing the best technical service to our customers around the globe.

Frekote® Product Selection

This comprehensive guide is designed to make it easy for you to select the right Frekote® mold release agent for a variety of markets and applications. Simply select a suitable release agent for demolding specific substrates and compare the characteristics of different products using the technical data. Choose the compatible dispensing equipment for your application and see the product list for ordering information. For additional assistance, visit www.frekode.com, or call **1-800-562-8483** in the U.S. or **1-800-263-5043** in Canada.

Advanced Composites Epoxy Systems	2
• <i>Aerospace - Aircraft, Helicopters...</i>	
• <i>Recreational - Bicycles, Skis, Racquets...</i>	
• <i>Specialty - Racing Parts, Medical, Electronics, Filament Windings...</i>	
FRP Composites Polyester, Vinyl Ester	4
• <i>Marine - FRP Boats, Yachts, Jet-skis...</i>	
• <i>Transportation - FRP Panels, Roofs, Spoilers...</i>	
• <i>Construction - FRP Wind Rotor Blades, Cultured Marble Sinks and Countertops, Bathtubs...</i>	
Rotational Molding	6
• <i>Recreational - Kayaks, Pedal Boats...</i>	
• <i>Construction - Containers, Tanks, Chains, Waste Bins...</i>	
Rubber Industry	8
• <i>Technical Rubber - Vibration Dampers, Roller Blade Wheels, Footwear, Custom Molding...</i>	
Sacrificial Mold Releases	10
Sealers & Cleaners, and Specialty Products	12
Dispensing Equipment	14
Product Information	16
• <i>Materials Application Guide and Trouble Shooting Guide</i>	
• <i>Ordering Information</i>	
• <i>Index</i>	

New Frekote® Wipes

Now Available!

Several Frekote® mold release agents are now available in easy-to-use, pre-packaged wipes, including Frekote® 44-NC™, 55-NC™ and 710-LV™. See page 16 for ordering information.



www.frekode.com



Frekote® Release Agents for

Advanced Composites Epoxy Systems

YOUR APPLICATION

PRODUCT TYPE

Solvent Based / Semi-Permanent

APPLICATION

Compression Molding / Casting / Vacuum Bagging

High-Slip

High Performance Composites

FINISH

Matte Finish

Satin Finish

Gloss Finish

Gloss Finish

FREKOTE® BRAND SEALER*

B-15™

B-15™

B-15™ or FMS™

B-15™ or FMS™

FREKOTE® BRAND SOLUTION

44-NC™

55-NC™

700™-NC

770-NC™

710-LV™

Description:

Release Agent

Release Agent

Release Agent

Release Agent

Release Agent

Appearance:

Clear liquid

Clear liquid

Clear liquid

Clear liquid

Clear liquid

Application Temperature:

59°F to 140°F
(15°C to 60°C)

59°F to 140°F
(15°C to 60°C)

59°F to 275°F
(15°C to 135°C)

59°F to 140°F
(15°C to 60°C)

59°F to 275°F
(15°C to 135°C)

Cure Time Between Coats at 70°F (21°C):

10 to 15 minutes

5 minutes

5 to 10 minutes

5 to 10 minutes

5 to 10 minutes

Final Cure Time at 70°F (21°C):

3 hours

30 minutes

15 to 20 minutes

5 to 10 minutes

15 to 20 minutes

Final Cure Time at 100°C:

15 minutes

5 minutes

15 to 20 minutes

5 minutes

15 to 20 minutes

Thermal Stability:

up to 752°F (400°C)

up to 752°F (400°C)

up to 752°F (400°C)

up to 752°F (400°C)

up to 750°F (399°C)

PRODUCT DESCRIPTION

Frekote® 44-NC™

- No mold build-up
- No contaminating transfer
- High thermal stability

Frekote® 44-NC™ is a semi-permanent release polymer designed to provide multiple release for most molding processes with no contaminating transfer. Apply 3 to 6 coats to clean mold surfaces by wiping, brushing or spraying a thin continuous wet film. Allow 15 minutes between coats to dry. Curing of the final coat takes 3 hours at RT and can be shortened by baking the mold for 15 minutes at 212°F to 302°F (100°C to 150°C).

Frekote® 55-NC™

- Fast cure time
- No mold build-up
- Reduced odor

Frekote® 55-NC™ is a semi-permanent release polymer designed to provide multiple release for most molding processes with no contaminating transfer. Apply 3 to 6 coats to clean mold surfaces by wiping, brushing or spraying a thin continuous wet film. Allow 5 minutes between coats to dry. Curing of the final coat takes 30 minutes at RT and can be shortened by heating the mold for 5 minutes at 212°F to 302°F (100°C to 150°C).

Frekote® 700-NC™

- Mild odor
- Slower RT cure
- High slip

Frekote® 700-NC™ is a versatile release agent that provides a high slip where mold geometry problems are encountered. It cures at RT to give a high gloss finish to the molded parts. Apply to clean mold surfaces by spraying, brushing or wiping with a clean, lint-free, cotton cloth. Apply up to 4 coats, allowing 5 to 10 minutes between coats. Touch-up as necessary.

Frekote® 770-NC™

- Low odor
- Faster RT cure
- High slip

Frekote® 770-NC™ is a versatile release agent that provides a high slip where mold geometry problems are encountered. It cures rapidly at RT to give a high gloss finish to molded parts. Apply to clean mold surfaces by spraying, brushing or wiping with a clean, lint-free, cotton cloth. Apply up to 4 coats, allowing 5 to 10 minutes between coats. Touch-up as necessary.

Frekote® 710-LV™

- Fast RT cure
- Reduced VOC
- High slip
- Gloss finish

Frekote® 710-LV™ is a reduced VOC, semi-permanent release agent formulated specifically for release of high performance composite materials. Frekote® 710-LV™ will release thermoset and prepreg epoxies, polyester resins, and thermoplastic compounds. It cures quickly at room temperature giving a high gloss finish on molded parts. Frekote® 710-LV™ provides a non-contaminating transfer so that parts can be painted or bonded in other assemblies.



Water Based / Semi-Permanent		Sacrificial	
Filament Winding	Application Temp. 20°C to 30°C	Application Temp. 60°C to 205°C	Filament Winding
Gloss Finish	Matte Finish	Matte Finish	Gloss Finish
B-15™ or FMS™	B-15™	B-15™	N/A
720-NC™	901WB™	C-200™ Aqualine®	EXITT™
Release Agent	Release Agent	Release Agent	Release Agent
Clear liquid	White emulsion	White emulsion	Clear liquid
59°F to 110°F (15°C to 43°C)	68°F to 95°F (20°C to 35°C)	68°F to 400°F (20°C to 205°C)	68°F to 140°F (20°C to 60°C)
15 minutes	15 minutes	10 minutes	Solvent Evaporation (up to 60 seconds)
15 to 20 minutes	3 hours	40 minutes @ 60°C (140°F) 20 minutes @ 100°C 15 minutes @ 120°C 20 minutes	Solvent Evaporation (up to 60 seconds)
N/A*	10 minutes	20 minutes	N/A*
up to 752°F (400°C)	up to 536°F (280°C)	up to 600°F (315°C)	up to 500°F (260°C)

Helpful Hints

Frekote® B-15™ Mold Sealer is mostly used for metal and epoxy molds.

Frekote® FMS™ Mold Sealer is mostly used for polyester molds.

Frekote® PMC™ is a universal cleaner prior to application of Frekote® Release Agents.

Refer to page 12 for more info.

Frekote® 720-NC™

- Fast RT cure
- High slip
- Gloss finish

Frekote® 720-NC™ is a semi-permanent release agent formulated specifically for release of all cast polymer products and for releasing highly filled resins. It cures quickly at room temperature giving a gloss finish on finished parts. This product is also suitable for certain abrasive closed molding processes, such as RTM and filament winding, and is also ideal for use on highly porous mold surfaces.

Frekote® 901WB™

- Water based
- RT cure
- Multiple releases

Frekote® 901WB™ is a spray-on, water based emulsion developed for releasing high performance composite structures commonly found in the aerospace industry. It is cured at room temperature, allowing multiple releases and extremely low VOC content. This product, once cured, can be autoclaved at either 250°F (121°C) or 350°F (177°C). Apply a minimum of 4 thin box coats to a clean mold surface by spraying with a dry air source.

Frekote® C-200™ Aqualine®

- Water based
- No mold build-up
- No contaminating transfer

Frekote® C-200™ Aqualine® is a water based release agent which provides multiple release with no contaminating transfer. It gives no mold build-up and exhibits high thermal stability for all molding processes. Apply 4 coats to clean mold surfaces at a mold temperature $\geq 140^\circ\text{F}$ (60°C). Allow each coat to dry before applying subsequent coats. Dry time may be decreased by using a fan or infrared lamp. Post cure the final film for at least 40 minutes at 140°F (60°C) or 20 minutes at 212°F (100°C).

Frekote® EXITT™

- Sacrificial coating
- Silicone based
- High gloss finish

Frekote® EXITT™ provides a superior high gloss finish on molds. It is not recommended for use with parts that need to be painted, bonded, or stained. This product was developed for use with urethane elastomer systems but will also release urethane foams, organic rubber compounds, and most specialty molding resins. No mold build-up, precise retention of mold detail.



Visit www.frekote.com

Frekote® Release Agents for

FRP Composites

Polyester, Vinyl Ester

YOUR APPLICATION

PRODUCT TYPE

SUBSTRATE

FINISH

APPLICATION METHOD

FREKOTE® BRAND SEALER*

FREKOTE® BRAND SOLUTION

Solvent Based

Cast Polymer / Solid Surface

Gel-Coat

Gloss Finish

Gloss Finish

Wipe On/Buf Out

Wipe On/Leave On

Spray On/Leave On

Wipe On/Wipe Off

Wipe On/Leave On

FMS™

FMS™

SOLO®

FMS™

FMS™

Frewax®

WOLO®

SOLO®

FRP-NC™

WOLO®

Description:	Release Agent	Release Agent	Release Agent	Release Agent	Release Agent
Appearance:	Milky white liquid	Clear liquid	Clear liquid	Clear liquid	Clear liquid
Application Temperature:	59°F to 95°F (15°C to 35°C)	59°F to 104°F (15°C to 40°C)	59°F to 113°F (15°C to 45°C)	59°F to 104°F (15°C to 40°C)	59°F to 104°F (15°C to 40°C)
Cure Time Between Coats at 70°F (21°C):	5 to 10 minutes (allow to haze dry)	5 minutes	N/A*	15 to 20 minutes	5 minutes
Final Cure Time at RT‡:	5 to 10 minutes	15 minutes	20 to 30 minutes	15 to 20 minutes	15 minutes
Final Cure Time at 100°C:	N/A*	N/A*	N/A*	N/A*	N/A*
Thermal Stability:	up to 536°F (280°C)	up to 752°F (400°C)			

PRODUCT DESCRIPTION

Frekote® Frewax®

- Easy to use
- Visible release agent
- High gloss finish

Frekote® Frewax® is a combination of a wax and a polymer release agent. This combination provides the user with the advantages of an easy-to-apply liquid wax and the multiple release performance of a semi-permanent release. Shake Frekote® Frewax® well before and during use. Apply to clean mold surfaces with a clean, lint-free, cotton cloth. Allow Frekote® Frewax® 5 to 10 minutes to haze, then polish the coated mold until a high gloss is obtained. Change cloth frequently; apply a total of 4 coats.

Frekote® WOLO™

- Easy application
- Multiple releases
- High gloss finish

Frekote® WOLO™ is a unique polymer release agent that cures quickly and provides multiple release of all polyester resins. Application and use are simple – wipe it on and allow to evaporate to produce a high gloss finish. No polishing is needed. Apply Frekote® WOLO™ with a clean wiping cloth. Wipe a smooth, wet film over the mold surface. Continue to work the material into the mold by lightly wiping the wet film (10 to 30 seconds) until a thin and uniform coating is obtained and allow to evaporate.

Frekote® SOLO®

- High gloss finish
- Minimal mold build-up
- Fast curing/
Easy application

Frekote® SOLO® is a unique polymer release agent designed for all gel-coat fiberglass reinforced and filled polyester composites. Application of this product is spray on/leave on using a light and uniform spray pattern to obtain a high gloss finish without polishing. Apply a minimum of 7 coats to a clean mold surface; typically 1 gallon of Frekote® SOLO® will cover 150 square feet of mold surface.

Frekote® FRP-NC™

- Minimal mold build-up
- Maximum mold utilization
- High gloss finish

Frekote® FRP-NC™ is a semi-permanent release interface specifically formulated for reinforced polyester gel-coats. It provides minimal mold build-up thus eliminating buffing and cleaning between applications. Apply to clean mold surfaces with a clean cloth. Wipe on a smooth, wet film. Wait 10 to 20 seconds at RT after application. Gently wipe dry with a second dry, cotton cloth. Apply a maximum of 6 coats initially. Allow 15 to 20 minutes cure time between coats and after the final coat at RT.

Frekote® WOLO™ (See "Did You Know?")

- Easy application
- Multiple releases
- High gloss finish

Frekote® WOLO™ is a unique, polymer release agent that cures quickly and provides multiple release of all polyester resins. Application and use are simple – wipe it on and allow to evaporate to produce a high gloss finish. No polishing is needed. Apply Frekote® WOLO™ with a clean wiping cloth. Wipe a smooth, wet film over the mold surface. Continue to work the material into the mold by lightly wiping the wet film (10 to 30 seconds) until a thin and uniform coating is obtained and allow to evaporate.

Did You Know?

Frekote® WOLO™ is also available as a low VOC formulation: Frekote® WOLO-LV™. Visit us on the web at www.freko.com for more information.



Solvent Based

Low VOC Gel-Coat	Non Gel-Coat		
Gloss Finish	Matte Finish	Satin Finish	Gloss Finish
Wipe On/Leave On	Wipe On/Wipe Off	Wipe On/Wipe Off	Wipe On/Wipe Off
FMS™	B-15™	B-15™	B-15™ or FMS™
WOLO HS™	44-NC™	55-NC™	770-NC™
Release Agent	Release Agent	Release Agent	Release Agent
Clear liquid	Clear liquid	Clear liquid	Clear liquid
59°F to 113°F (15°C to 45°C)	59°F to 140°F (15°C to 60°C)	59°F to 140°F (15°C to 60°C)	59°F to 140°F (15°C to 60°C)
5 minutes	10 to 15 minutes	5 minutes	5 to 10 minutes
15 minutes	3 hours	30 minutes	5 to 10 minutes
N/A*	15 minutes	5 minutes	N/A*
up to 752°F (400°C)			

Helpful Hints

Frekote® B-15™ Mold Sealer is mostly used for metal and epoxy molds

Frekote® FMS™ Mold Sealer is mostly used for polyester molds

Frekote® PMC™ is a universal cleaner prior to application of Frekote® Release Agents.

Refer to page 12 for more info.

Frekote® WOLO HS™

- High gloss finish
- Minimal mold build-up
- High slip

Frekote® WOLO HS™ is a unique, polymer release agent with high slip characteristics developed for release of low VOC gel-coat and other tough releasing polyester structures. Application of this product is wipe on/leave on using a lint-free, cotton cloth to obtain a high gloss finish with no polishing needed. Continue to work the material into the mold by lightly wiping the surface until a thin uniform coat is obtained, then allow to evaporate. A minimum of 4 coats should be applied, allowing 5 minutes for cure between coats.

Frekote® 44-NC™

- No mold build-up
- No contaminating transfer
- High thermal stability

Frekote® 44-NC™ is a semi-permanent release polymer designed to provide multiple release for most molding processes with no contaminating transfer. Apply 3 to 6 coats to clean mold surfaces by wiping, brushing or spraying a thin continuous wet film. Allow 15 minutes between coats to dry. Curing of the final coat takes 3 hours at RT and can be shortened by baking the mold for 15 minutes at 212°F to 302°F (100°C to 150°C).

Frekote® 55-NC™

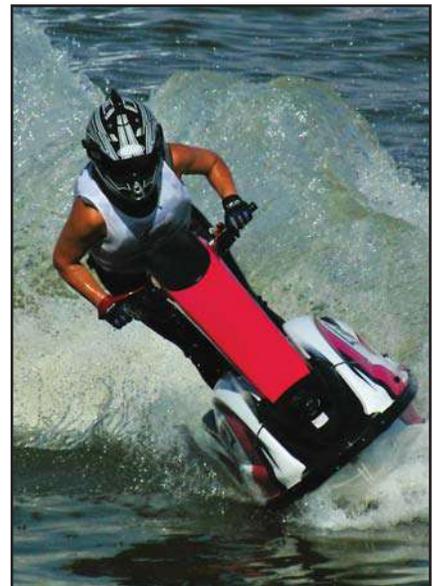
- Fast cure time
- No mold build-up
- Reduced odor

Frekote® 55-NC™ is a semi-permanent release polymer designed to provide multiple release for most molding processes with no contaminating transfer. Apply 3 to 6 coats to clean mold surfaces by wiping, brushing or spraying a thin continuous wet film. Allow 5 minutes between coats to dry. Curing of the final coat takes 30 minutes at RT and can be shortened by heating the mold for 5 minutes at 212°F to 302°F (100°C to 150°C).

Frekote® 770-NC™

- Fast RT cure
- High gloss and high slip
- Releases most polymers

Frekote® 770-NC™ is a versatile, semi-permanent release agent which provides high slip where mold geometry problems are encountered. It cures rapidly at RT to give a high gloss finish to the molded parts. Apply to clean mold surfaces by spraying, brushing or wiping with a clean, lint-free cotton cloth. Apply up to 4 coats, allowing 5 to 10 minutes between coats. Touch-up as necessary.



Visit www.frekote.com

Frekote® Release Agents for

Rotational Molding

YOUR APPLICATION

SUBSTRATE	Polyamide (PA / Nylon)			Polyethylene (PE)	
	Water Based		Solvent Based	Water Based	
PRODUCT TYPE	Water Based		Solvent Based	Water Based	
APPLICATION METHOD	Low Temperature Application	High Temperature Application		Low Temperature Application	High Temperature Application
FREKOTE® BRAND SEALER*			B-15™		
FREKOTE® BRAND SOLUTION	901WB™	C-200™ Aqualine®	55-NC™	901WB™	C-200™ Aqualine®
Description:	Release Agent	Release Agent	Release Agent	Release Agent	Release Agent
Appearance:	White emulsion	White emulsion	Clear liquid	White emulsion	White emulsion
Application Temperature:	68°F to 95°F (20°C to 35°C)	68°F to 400°F (20°C to 205°C)	59°F to 140°F (15°C to 60°C)	68°F to 95°F (20°C to 35°C)	68°F to 400°F (20°C to 205°C)
Cure Time Between Coats at 70°F (21°C):	15 minutes	10 minutes	5 minutes	15 minutes	10 minutes
Final Cure Time at RT‡:	3 hours	40 minutes @ 60°C (140°F) 20 minutes @ 100°C 15 minutes @ 120°C	30 minutes	3 hours	40 minutes @ 60°C (140°F) 20 minutes @ 100°C 15 minutes @ 120°C
Final Cure Time at 100°C:	10 minutes	20 minutes	5 minutes	10 minutes	20 minutes
Thermal Stability:	up to 536°F (280°C)	up to 599°F (315°C)	up to 752°F (400°C)	up to 536°F (280°C)	up to 599°F (315°C)

PRODUCT DESCRIPTION

Frekote® 901WB™

- Water based
- RT cure
- Multiple releases

Frekote® 901WB™ is a spray-on, water based emulsion developed for releasing high performance composite structures commonly found in the aerospace industry. It is cured at room temperature, allowing multiple releases and extremely low VOC content. This product, once cured, can be autoclaved at either 250°C or 350°F (121°C or 177°C). Apply a minimum of 4 thin box coats to a clean mold surface by spraying with a dry air source.

Frekote® C-200™ Aqualine®

- Water based
- No mold build-up
- No contaminating transfer

Frekote® C-200™ Aqualine® is a water based release agent which provides multiple release with no contaminating transfer. It gives no mold build-up and exhibits high thermal stability for all molding processes. Apply 4 coats to clean mold surfaces at a mold temperature \geq 140°F (60°C). Allow each coat to dry before applying subsequent coats. Dry time may be decreased by using a fan or infrared lamp. Post cure the final film for at least 40 minutes at 140°F (60°C) or 20 minutes at 212°F (100°C).

Frekote® 55-NC™

- Fast cure time
- No mold build-up
- Reduced odor

Frekote® 55-NC™ is a semi-permanent release polymer designed to provide multiple release for most molding processes with no contaminating transfer. Apply 3 to 6 coats to clean mold surfaces by wiping, brushing or spraying a thin continuous wet film. Allow 5 minutes between coats to dry. Curing of the final coat takes 30 minutes at RT and can be shortened by heating the mold for 5 minutes at 212°F to 302°F (100°C to 150°C).

Frekote® 901WB™

- Water based
- RT cure
- Multiple releases

Frekote® 901WB™ is a spray-on, water based emulsion developed for releasing high performance composite structures commonly found in the aerospace industry. It is cured at room temperature, allowing multiple releases and extremely low VOC content. This product, once cured, can be autoclaved at either 250°F or 350°F (121°C or 177°C). Apply a minimum of 4 thin box coats to a clean mold surface by spraying with a dry air source.

Frekote® C-200™ Aqualine®

- Water based
- No mold build-up
- No contaminating transfer

Frekote® C-200™ Aqualine® is a water based release agent which provides multiple release with no contaminating transfer. It gives no mold build-up and exhibits high thermal stability for all molding processes. Apply 4 coats to clean mold surfaces at a mold temperature \geq 140°F (60°C). Allow each coat to dry before applying subsequent coats. Dry time may be decreased by using a fan or infrared lamp. Post cure the final film for at least 40 minutes at 140°F (60°C) or 20 minutes at 212°F (100°C).



Polypropylene (PP)

Solvent Based

Water Based

Solvent Based

Low Temperature Applications

High Temperature Applications

B-15™

B-15™

770-NC™

901WB™

C-200™
Aqualine®

770-NC™

Release Agent
Clear liquid

Release Agent
White emulsion

Release Agent
White emulsion

Release Agent
Clear liquid

59°F to 140°F
(15°C to 60°C)

68°F to 95°F
(20°C to 35°C)

68°F to 400°F
(20°C to 205°C)

59°F to 140°F
(15°C to 60°C)

5 to 10 minutes

15 minutes

10 minutes

5 to 10 minutes

5 to 10 minutes

3 hours

40 minutes @ 60°C (140°F)
20 minutes @ 100°C
15 minutes @ 120°C

5 minutes

N/A*

10 minutes

20 minutes

N/A*

up to 752°F (400°C)

up to 536°F (280°C)

up to 599°F (315°C)

up to 752°F (400°C)

Frekote® 770-NC™

- Fast RT cure
- High gloss and high slip
- Releases most polymers

Frekote® 770-NC™ is a versatile, semi-permanent release agent which provides high slip where mold geometry problems are encountered. It cures rapidly at RT to give a high gloss finish to molded parts. Apply to clean mold surfaces by spraying, brushing or wiping with a clean, lint-free cotton cloth. Apply up to 4 coats, allowing 5 to 10 minutes between coats. Touch-up as necessary.

Frekote® 901WB™

- Water based
- RT cure
- Multiple releases

Frekote® 901WB™ is a spray-on, water based emulsion developed for releasing high performance composite structures commonly found in the aerospace industry. It is cured at room temperature, allowing multiple releases and extremely low VOC content. This product, once cured, can be autoclaved at either 250°F or 350°F (121°C or 177°C). Apply a minimum of 4 thin box coats to a clean mold surface by spraying with a dry air source.

Frekote® C-200™ Aqualine®

- Water based
- No mold build-up
- No contaminating transfer

Frekote® C-200™ Aqualine® is a water based release agent which provides multiple release with no contaminating transfer. It gives no mold build-up and exhibits high thermal stability for all molding processes. Apply 4 coats to clean mold surfaces at a mold temperature $\geq 140^\circ\text{F}$ (60°C). Allow each coat to dry before applying subsequent coats. Dry time may be decreased by using a fan or infrared lamp. Post cure the final film for at least 40 minutes at 140°F (60°C) or 20 minutes at 212°F (100°C).

Frekote® 770-NC™

- Fast RT cure
- High gloss and high slip
- Releases most polymers

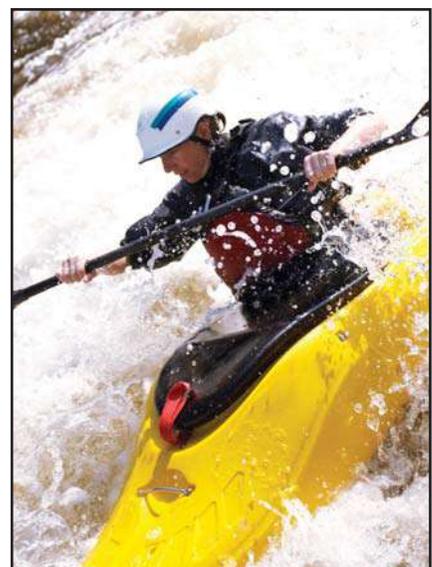
Frekote® 770-NC™ is a versatile, semi-permanent release agent which provides high slip where mold geometry problems are encountered. It cures rapidly at RT to give a high gloss finish to molded parts. Apply to clean mold surfaces by spraying, brushing or wiping with a clean, lint-free cotton cloth. Apply up to 4 coats, allowing 5 to 10 minutes between coats. Touch-up as necessary.

Helpful Hints

Frekote® B-15™ Mold Sealer is mostly used for metal and epoxy molds.

Frekote® PMC™ is a universal cleaner prior to application of Frekote® Release Agents.

Refer to page 12 for more info.



Visit www.frekote.com

Frekote® Release Agents for

Rubber Industry

YOUR APPLICATION

SUBSTRATE	General Rubber Goods			Technical Rubber (i.e. Neoprene, Nitrile)	
PRODUCT TYPE	Solvent Based		Water Based	Water Based	
APPLICATION METHOD	Low Temperature Application	High Temperature Application		Highly Filled Elastomers	High Slip
FREKOTE® BRAND SOLUTION	815-NC™ (or 810-NC™ Aerosol)	800-NC™	R-150™ Aqualine® or R-180™ Aqualine®	R-220™ Aqualine®	R-180™ Aqualine®

Description:	Release Agent	Release Agent	Release Agent	Release Agent	Release Agent
Appearance:	Clear liquid	Clear liquid	White emulsion	White emulsion	White emulsion
Application Temperature:	68°F to 275°F (20°C to 135°C)	275°F to 446°F (135°C to 230°C)	140°F to 401°F (60°C to 205°C)	140°F to 401°F (60°C to 205°C)	140°F to 401°F (60°C to 205°C)
Final Cure Time at 60°C:	15 minutes	N/A*	30 minutes	25 minutes	30 minutes
Final Cure Time at 150°C:	N/A*	30 seconds	4 minutes	4 minutes	4 minutes
Thermal Stability:	up to 752°F (400°C)	up to 752°F (400°C)	up to 599°F (315°C)	up to 599°F (315°C)	up to 599°F (315°C)

PRODUCT DESCRIPTION

Frekote® 815-NC™ (or 810-NC™ Aerosol)

- RT cure
- Multiple releases
- No chlorinated solvents

Frekote® 815-NC™ and Frekote® 810-NC™ are semi-permanent release interfaces for molding rubber compounds. The multiple release, non-migratory system bonds to the mold surface to form micro-thin coatings. Spray apply 3 to 4 light, smooth uniform coats to clean mold surfaces. Use only a dry air source and ensure a continuous smooth wet film is achieved. Allow film to dry and cure prior to commencing molding.

Frekote® 800-NC™

- No chlorinated solvents
- Maximum mold usage
- Reduced reject rates

Frekote® 800-NC™ is a semi-permanent release interface for molding rubber compounds. The multiple release, non-migratory system bonds to the mold surface to form micro-thin coatings. Spray apply 3 to 4 light, smooth uniform coats to clean mold surfaces. Use only a dry air source and ensure a continuous smooth wet film is achieved. Allow film to dry and cure prior to commencing molding.

Frekote® R-150™ or R-180™ Aqualine®

- Fast curing
- High slip
- Minimum reject rates

Frekote® R-150™ Aqualine® and Frekote® R-180™ Aqualine® are both water based release agents which provide excellent slip properties. Recommended for the most difficult molding applications, especially for highly abrasive compounds. Apply by spraying to clean molds, pre-heated to ≥ 140°F (60°C). For warm molds 140°C to 248°F (60°C to 120°C), a minimum of 4 coats should be applied. For hot 248°F to 401°F (120°C to 205°C), new or porous molds, apply a minimum of 6 coats. Allow curing prior to production.

Frekote® R-220™ Aqualine®

- Fast curing
- Excellent slip
- Releases most compounds

Frekote® R-220™ Aqualine® is a water based release agent. It offers excellent release and slip properties and is recommended for the most difficult molding applications, especially for high aspect ratio parts. Apply by spraying to clean molds pre-heated to ≥ 140°F (60°C). For warm molds, 140°F to 248°F (60°C to 120°C), a minimum of 4 coats should be applied. For hot 248°F to 401°F (120°C to 205°C), new or porous molds, apply a minimum of 6 coats. Allow curing prior to production.

Frekote® R-180™ Aqualine®

- Fast curing
- High slip
- Minimum reject rates

Frekote® R-180™ Aqualine® is a water based release agent, which provides excellent slip properties. Recommended for the most difficult molding applications, especially for highly abrasive compounds. Apply by spraying to clean molds pre-heated to ≥ 140°F (60°C). For warm molds, 140°F to 248°F (60°C to 120°C), a minimum of 4 coats should be applied. For hot 248°F to 401°F (120°C to 205°C), new or porous molds, apply a minimum of 6 coats. Allow curing prior to production.



Rubber-to-Metal Bonding

Silicone Elastomer

Water Based

Solvent Based

Water Based

Highly Filled Elastomers

Ready to Use

R-220™ Aqualine®

R-120™ Aqualine®

HMT™ or HMT-2™

S-50™

Release Agent

Release Agent

Release Agent

Release Agent

White emulsion

White emulsion

Clear liquid

Yellowish liquid

140°F to 401°F
(60°C to 205°C)

140°F to 401°F
(60°C to 205°C)

140°F to 374°F
(60°C to 190°C)

221°F to 401°F
(105°C to 205°C)

25 minutes

30 minutes

5 minutes

N/A*

4 minutes

4 minutes

1 minute

Instantly

up to 599°F (315°C)

up to 599°F (315°C)

up to 752°F (400°C)

up to 401°F (205°C)

Frekote® R-220™ Aqualine®

- Fast curing
- Excellent slip
- Releases most compounds

Frekote® R-220™ Aqualine® is a water based release agent. It offers excellent release and slip properties and is recommended for the most difficult molding applications, especially for high aspect ratio parts. Apply by spraying to clean molds pre-heated to $\geq 140^\circ\text{F}$ (60°C). For warm molds, 140°F to 248°F (60°C to 120°C), a minimum of 4 coats should be applied. For hot (120°C to 205°C), new or porous molds, apply a minimum of 6 coats. Allow curing prior to production.

Frekote® R-120™ Aqualine®

- Fast curing
- No transfer
- High thermal stability

Frekote® R-120™ Aqualine® is a semi-permanent water based release agent which provides maximum release performance with high slip properties. Apply by spraying to clean molds, pre-heated to $\geq 140^\circ\text{F}$ (60°C). For warm molds, 140°F to 248°F (60°C to 120°C), a minimum of 4 coats should be applied. For hot (120°C to 205°C), new or porous molds, apply a minimum of 6 coats. Allow curing prior to production.

Frekote® HMT™ or HMT-2™

- Multiple releases
- Minimum reject rates
- No contaminating transfer

Frekote® HMT™ and Frekote® HMT-2™ are both excellent solvent based release products designed for multiple release applications to hot molds $\geq 140^\circ\text{F}$ (60°C). Frekote® HMT-2™ is less moisture sensitive than Frekote® HMT™. Brush or spray apply (ensure dry air source) 4 to 6 wet film coatings to clean mold surfaces. Allow a few minutes between coats for solvent evaporation. Cure is completed during solvent evaporation. Molding can commence immediately.

Frekote® S-50™

- Instant cure at elevated temperatures
- Excellent slip
- Maximum multiple releases

Frekote® S-50™ is a unique water based release agent which cures rapidly at elevated temperatures. It offers excellent slip properties and is suitable for the most demanding silicone rubber molding applications. Apply to clean mold surfaces by spraying and ensure a dry air source or airless spray system. Initially, 2 to 3 coats of full strength Frekote® S-50™ should be applied to condition the mold. Touch-up coats should only be applied to areas where poorer release is noticed.

Helpful Hints

Frekote® PMC™ is a universal cleaner prior to application of Frekote® Release Agents.

Refer to page 12 for more info.



Visit www.frekote.com

Frekote®

Sacrificial Mold Releases

YOUR APPLICATION

SUBSTRATE

General Purpose

Phenolic

Silicone

Epoxies and Thermoset Resins

PRODUCT TYPE

Water Based

Solvent Based

APPLICATION REQUIREMENT

General Purpose

FREKOTE® BRAND SOLUTION

EXITT-EM™

1450™

S-50™

1711™ or 1711-I™

Description:	Release Agent	Release Agent	Release Agent	Release Agent
Appearance:	White emulsion	Light Amber	Yellowish liquid	Clear liquid
Application Temperature:	140°F to 355°F (60°C to 180°C)	140°F to 355°F (60°C to 180°C)	220°F to 390°F (104°C to 200°C)	68°F to 140°F (20°C to 60°C)
Cure Time Between Coats at 70°F (21°C):	Liquid Evaporation (up to 10 min. at RT)	Liquid Evaporation (up to 10 min. at RT)	Liquid Evaporation (up to 10 min. at RT)	Solvent Evaporation (up to 60 seconds)
Final Cure Time at 70°F (21°C):	Liquid Evaporation (up to 10 min. at RT)	Liquid Evaporation (up to 10 min. at RT)	Liquid Evaporation (up to 10 min. at RT)	Solvent Evaporation (up to 60 seconds)
Final Cure Time at 100°C:	Liquid Evaporation	Liquid Evaporation	Liquid Evaporation	N/A*
Thermal Stability:	up to 500°F (260°C)	N/A*	< 392°F (200°C)	up to 500°F (260°C)

PRODUCT DESCRIPTION

Frekote® EXITT-EM™

- High gloss finish
- No mold build-up
- Precision retention of mold detail

Frekote® EXITT-EM™ is a water based silicone emulsion that offers superb release properties, excellent part detail, and provides a water based alternative to solvent based products to meet your specific molding requirements. Frekote® EXITT-EM™ is capable of releasing most thermoset and thermoplastic resins, including polyurethanes and can be applied to steel, aluminum, epoxy, urethane, and ceramic mold surfaces.

Frekote® 1450™

- Economical use
- Minimal build-up
- Easy to clean molds

Frekote® 1450™ is a water based solution, specifically formulated for use with resin/asbestos products. It has been extremely effective in releasing resin/asbestos mixtures molded at 302°F to 329°F (150°C to 165°C) as well as automotive disc brake linings. This product can be diluted from 10:1 to 20:1 which makes it an economical choice for use when a sacrificial product is desired.

Frekote® S-50™

- Instant cure at elevated temperature
- Excellent slip

Frekote® S-50™ is a water based material designed for excellent slip in the most difficult-to-release silicone rubber applications. Frekote® S-50™ has no required cure time, low VOC, excellent slip, and low mold build-up. This product forms a thin, inert, thermally stable coating capable of releasing many types of silicone rubbers and is capable of being diluted to a wide range of ratios.

Frekote® 1711™

- Aerosol
- General purpose
- High gloss
- Stable at 500°F (260°C)

Frekote® 1711™ and Frekote® 1711-I™ are silicone, solvent based mold release agents that offer a high gloss finish with excellent part detail and mold geometry retention. These products can be applied to steel, aluminum, epoxy, ceramic, and flexible mold surfaces, and are stable up to 500°F (260°C).

Frekote® 1711-I™

- Non-aerosol liquid
- General purpose
- High gloss
- Stable at 500°F (260°C)



Urethanes			
Solvent Based	Solvent Based		
High Slip	High Gloss	Semi-Gloss, Easy Clean	Reaction Injection Molding
AC-4368™	EXITT™ or EXITT-I™	LIFFT™ or LIFFT-I™	Rimlease 8™
Release Agents Clear liquid 68°F to 140°F (20°C to 60°C)	Release Agents Clear liquid 68°F to 140°F (20°C to 60°C)	Release Agents Clear liquid 68°F to 140°F (20°C to 60°C)	Release Agent Clear liquid 68°F to 140°F (20°C to 60°C)
Solvent Evaporation (5 to 10 minutes)	Solvent Evaporation (up to 60 seconds)	Solvent Evaporation (up to 60 seconds)	Solvent Evaporation (up to 60 seconds)
Solvent Evaporation (5 to 10 minutes)	Solvent Evaporation (up to 60 seconds)	Solvent Evaporation (up to 60 seconds)	Solvent Evaporation (up to 60 seconds)
N/A*	N/A*	N/A*	N/A*
up to 500°F (260°C)	up to 500°F (260°C)	up to 500°F (260°C)	up to 599°F (315°C)

Frekote® AC-4368™

- Excellent slip
- Multi-purpose release

Frekote® AC-4368™ is an all-purpose, silicone based release agent. This product contains a special lubricant which provides optimum release along with surface conditioning on any metal or plastic mold. Frekote® AC-4368™ works equally well releasing epoxies, polyurethanes, and polyesters in room temperature and elevated cure systems.

Frekote® EXITT™

- Aerosol
- Silicone based
- High gloss finish

Frekote® EXITT™ and Frekote® EXITT-I™ are sacrificial mold releases, developed specifically for urethane elastomer systems. They give a high gloss finish with a precise retention of the mold detail and no build-up. These products will also release urethane foams, organic rubber compounds, and most specialty molding resins but are not recommended where parts are to be painted, bonded, or stained. Ideally applied at room temperature. Once the solvents have flashed, these coatings are stable up to 482°F (250°C).

Frekote® EXITT-I™

- Non-aerosol liquid
- Silicone based
- High gloss finish

Frekote® LIFFT™

- Aerosol
- Silicone based
- High gloss finish

Frekote® LIFFT™ and Frekote® LIFFT-I™ provide a semi-gloss finish on molds and allow for easy part clean-up. These products were developed for use with urethane foams and cast elastomers and are recommended for use with parts that need to be painted or bonded.

Frekote® LIFFT-I™

- Non-aerosol liquid
- Silicone based
- High gloss finish

Frekote® Rimlease 8™

- Semi-gloss finish
- Excellent slip
- Minimal transfer

Frekote® Rimlease 8™ was specifically formulated for use as a release interface for RIM and R/RIM polyurethane processes. Frekote® Rimlease 8™ offers a high slip, semi-gloss finish and transfers to the part slightly but can be easily cleaned using warm water prior to painting or any other post-molding process.

Frekote®

Sealers & Cleaners, and Specialty Products

YOUR APPLICATION	Sealers and Cleaners				
PRODUCT TYPE	Sealers		Cleaners		Cleaner Mold Release
SUBSTRATE	Metal Molds	Polyester and Fiberglass Molds	Polyester, Epoxy, and Metal Molds	Polyester, Epoxy, and Composite Molds	Polyester, Epoxy, and Metal Molds
APPLICATION REQUIREMENT	Solvent Based	Solvent Based	Solvent Based	Water Based	Solvent Based
FREKOTE® BRAND SOLUTION	B-15™	FMS™	PMC™	915WB™	CMR™
Description:	Mold Sealer	Mold Sealer	Mold Cleaner	Mold Cleaner	Cleaner / Mold Release
Appearance:	Clear liquid	Clear liquid	Clear liquid	Beige, pasty liquid	Clear liquid
Application Temperature:	59°F to 140°F (15°C to 60°C)	59°F to 95°F (15°C to 35°C)	68°F to 86°F (20°C to 30°C)	68°F to 104°F (20°C to 40°C)	55°F to 105°F (13°C to 41°C)
Cure Time Between Coats at 70°F (21°C):	30 minutes	15 minutes	N/A*	N/A*	N/A*
Final Cure Time at 70°F (21°C):	24 hours [60 min. at 212°F (100°C)]	15 to 20 minutes	N/A*	N/A*	15 minutes
Thermal Stability:	up to 750°F (400°C)	up to 750°F (400°C)	N/A*	N/A*	up to 750°F (400°C)

PRODUCT DESCRIPTION

Frekote® B-15™

- Easy to apply
- Seals mold porosity
- High thermal stability

Frekote® B-15™ mold sealer is formulated to seal mold micro-porosity and light surface scratches. Used in conjunction with other Frekote® products, Frekote® B-15™ provides an excellent base coat, enhancing the release advantages offered. Apply light uniform coats to clean mold surfaces by spraying, brushing, dipping or wiping with a clean, lint-free cotton cloth. Apply a minimum of 2 coats, allowing 30 minutes between coats. The final coating will cure within 24 hours at RT.

Frekote® FMS™

- Easy to apply
- Fast cure
- Seals mold porosity

Frekote® FMS™ Mold Sealer for fiberglass reinforced polyester, epoxy and other resin-type molds. Use to seal new molds and older molds with micro-porosity and light surface blemishes. An excellent base coat, enhancing the release advantages of all Frekote® products. Apply at RT by wiping on with a clean, dry, lint-free cotton cloth. Wipe on a smooth, wet film; wait 15 to 20 seconds, then gently wipe dry. Apply 1 to 3 coats, allowing 15 to 20 minutes between coats and after the final coat.

Frekote® PMC™

- Easy to use
- Eliminates contaminants
- Enhances release effectiveness

Frekote® PMC™ is a special blend of solvents that dissolves and removes wax from composite molds without dulling the surface. Excellent for epoxy and metal mold surfaces as well as brushes and equipment. Apply Frekote® PMC™ to mold surfaces with a clean, cotton cloth. Wax (or other surface contamination) will immediately begin to dissolve and should be removed from the surface with a second clean cloth while the wax is still dissolved in the Frekote® PMC™.

Frekote® 915WB™

- High gloss finish
- Minimal mold build-up
- Fast curing/easy application

Frekote® 915WB™ is a water based cleaner, developed for removing residue from mold surfaces. The high grade surfactants and emulsifiers, along with the combination of fine abrasives, give excellent results without dulling the mold surface. This product is wiped on and allowed to haze dry, much like a conventional wax, then buffed out to a high gloss finish. Frekote® 915WB™ is designed to be applied and buffed at room temperature but the temperature should not exceed 105°F (40°C).

Frekote® CMR™

- Easy application
- Fast curing
- High gloss
- No touch-up needed after cleaning

Frekote® CMR™ is a unique polymer release agent containing a special blend of resins and cleaning solvents designed to dissolve and remove polymer, composite, and other residues from polyester molds without dulling the surface. Frekote® CMR™ is highly recommended for cleaning polyester mold surfaces with mold build-up resulting from repeated releases using Frekote® WOLO™. Additional releases can be obtained after cleaning the mold surface without touching up with a traditional mold release agent.



Specialty Products

Semi-Permanent Release

Rotomolding	FRP	Organic Rubber	Highly Filled Polymer	Cast Urethane	Polyurethane
Water Based	Solvent Based	Water Based	Solvent Based	Solvent Based	Water Based
Rotolease® Aqualine®	Frewax®	RC-321™	EFR™	CUR™	PUR-100™
Release Agent	Release Agent	Release Agent	Release Agent	Cleaner / Mold Release	Release Agent
White emulsion	Milky, white suspension	White emulsion	Clear liquid	Clear liquid	Milky, white emulsion
140°F to 399°F (60°C to 204°C)	59°F to 95°F (15°C to 35°C)	140°F to 400° (60°C to 205°C)	55°F to 109°F (13°C to 43°C)	55°F to 105°F (13°C to 41°C)	Above 120°F (48°C)
10 minutes	5 to 10 minutes (allow to haze dry)	Liquid Evaporation	5 minutes	5 minutes	Liquid Evaporation [Instant at 302°F (150°C)]
5 min. at 302°F (150°C) 15 min. 248°F (120°C) 35 min. at 149°F (65°C)	5 to 10 minutes (allow to haze dry)	5 min. at 302°F (150°C) 10 min. 212°F (100°C) 30 min. at 140°F (60°C)	15 minutes	15 minutes	5 min. at 302°F (150°C) 10 min. 212°F (100°C) 30 min. at 140°F (60°C)
up to 750°F (400°C)	up to 500°F (260°C)	up to 600°F (315°C)	up to 750°F (400°C)	up to 750°F (400°C)	up to 600°F (315°C)

Frekote® Rotolease® Aqualine®

- No mold build-up
- High thermal stability

Frekote® Rotolease® Aqualine® is a water based, semi-permanent release agent formulated for a multiple release system when used with rotationally molded resins. When applied correctly, this product offers no mold build-up, room temperature application, no contaminating transfer, and high thermal stability. When Frekote® Rotolease® is applied at room temperature, the mold surface should be post cured at 149°F (65°C). If molds are >104°F (40°C), apply a minimum of three coats, allowing each to dry before subsequent coats are applied.

Frekote® Frewax®

- Easy to use
- Visible release agent
- High gloss finish

Frekote® Frewax® is a combination of a wax and a polymer release agent. This combination provides the user with the advantages of an easy-to-apply liquid wax and the multiple release performance of a semi-permanent release. Shake Frekote® Frewax® well before and during use. Apply to clean mold surfaces with a clean, lint-free, cotton cloth. Allow Frekote® Frewax® 5 to 10 minutes to haze, then polish the coated mold until a high gloss is obtained. Change cloth frequently; apply a total of 4 coats.

Frekote® RC-321™

- Fast curing
- No contaminating transfer
- Dilutable (3:1)
- Freeze/thaw stable

Frekote® RC-321™ is a water dilutable concentrate that provides a durable release film for most rubber molding applications. Frekote® RC-321™ chemically bonds to the mold surface to provide a non-transferring film capable of releasing all natural and synthetic polymers (except silicone elastomers). This product cures in 5 minutes at 300°F (149°C), provides minimal mold build-up, and does not transfer to the molded parts.

Frekote® EFR™

- Fast curing
- Easy application
- Seals porous flanges

Frekote® EFR™ is designed specifically as a semi-permanent, polymeric release agent for flange sealing on composite molds. Frekote® EFR™ chemically bonds to the mold surface and is ideal for use with highly abrasive processes, such as polymer concrete molding.

Frekote® CUR™

- Fast cure
- No transfer
- Minimal mold build-up
- Multiple releases

Frekote® CUR™ was formulated to form a semi-permanent release coating on the mold surface for rigid, cast polyurethane products. Frekote® CUR™ was designed to be applied to mold surfaces at 68°F to 302°F (20°C to 150°C). The multiple release, non-transferring system chemically bonds to the mold surface to form a micro-thin chemically resistant coating. Cures very rapidly on the mold surface, has minimal mold build-up, and high thermal and chemical stability.

Frekote® PUR-100™

- Non-toxic, water based system
- Freeze-thaw stable
- Multiple releases
- Parts can be painted after molding without preparation

Frekote® PUR-100™ is a proprietary, water based emulsion developed for releasing rigid, high-density polyurethane foam and cast polyurethane parts. This unique formulation is capable of multiple releases from a single application. Parts molded with Frekote® PUR-100™ can be painted without any additional preparation.

Visit www.frekote.com

Frekote®

Dispensing Equipment

Frekote® applicators are state-of-the-art dispensing units for the application of mold release agents. These units combine ergonomic, user-friendly design and reliability.

Frekote® applicators are available in two performance categories:

Frekote® Adjustable Spraying Equipment and *Frekote® Fine Spraying Equipment*.

Frekote® Adjustable Spraying Equipment – for large volume dispense patterns



FREKOTE® SPRAY APPLICATORS – Adjustable Volume

The Frekote® Adjustable Spray Applicators are appropriate for many industrial-molding operations. These durable spray applicators have a forged aluminum body and a stainless steel needle and extension. They feature a variable fluid adjustment for higher volume release agent applications. Applicators come standard with a 90 degree air cap. 0 degree and dual 90 degree air caps are offered as optional accessories. Air and Fluid hoses are sold separately.

Item Number 98183 – Frekote® Adjustable Spray Applicator, 6"

Item Number 98184 – Frekote® Adjustable Spray Applicator, 12"

Item Number 98185 – Frekote® Adjustable Spray Applicator, 24"



FREKOTE® PRESSURE POT – Adjustable Volume

The Frekote® 2 1/2 Gallon Pressure Tank is designed to supply any Frekote® release product to a Frekote® Adjustable Spray Applicator. The Frekote® 2 1/2 Gallon Pressure Pot is made of galvanized steel and comes equipped with a pressure regulator and disposable polyethylene liners. These liners are required for use with any water based Frekote® product. The reservoir also comes standard with a 1/4" male adapter for easy connection to a Frekote® Adjustable Spray Applicator via the recommended fluid and air hoses. A special adapter kit (item # 98338) is available for use with the Frekote® Fine Spray Applicators.

Item Number 98190 – Frekote® 2 1/2 Gallon Pressure Tank

FREKOTE® AIR & FLUID HOSES – Adjustable Volume

Item Number 98186 – 8 ft. Air Hose w/HTC 1/4

Item Number 98187 – 8 ft. Fluid Hose w/HTC 1/4

Item Number 98188 – 25 ft. Air Hose w/HTC 1/4

Item Number 98189 – 25 ft. Fluid Hose w/HTC 1/4

FREKOTE® NOZZLES – Adjustable Volume

Item Number 987157 – Dual 90 Degree Aircap

Item Number 987158 – Zero Degree Aircap

Frekote® Fine Spraying Equipment – for fine spray applications where you need greater control and the thinnest of coatings



FREKOTE® FINE SPRAY APPLICATORS

Frekote® Fine Spray Applicators are rugged, durable and ideal for spraying semi-permanent mold release agents. This line of high performance spray applicators is especially suited for applications where the cosmetics of your molded part and mold build-up are of concern. The very fine, pre-set atomization and material consumption of these applicators provide a fine, even release agent coating on your molds and eliminates the need for operator adjustment of the spray applicator. This feature greatly improves consistency of part finish and reduces the chance of over application and waste of the release agent. Additionally, these applicators feature easy rotation of the spray extension for effortless 360 degree application. Applicators come standard with a 90 degree air cap and all required air and fluid dual-hoses.

- Item Number 97716 – Frekote® Fine Spray Applicator, 8"
- Item Number 97717 – Frekote® Fine Spray Applicator, 15"
- Item Number 97719 – Frekote® Fine Spray Applicator, 24"



FREKOTE® FINE SPRAY PRESSURE TANKS

The Frekote® Fine Spray Pressure Tank is designed to supply any Frekote® release product to a Frekote® Fine Spray Applicator. The Frekote® Fine Spray Pressure Tank comes in either a 5 liter or 10 liter capacity and is made entirely of stainless steel for corrosion resistance and compatibility with water based Frekote® products. In addition, the Frekote® Fine Spray Tank is equipped with both fluid and air pressure gauges and requires no assembly. The reservoir fittings are designed to supply the Fine Spray Duo tube that feeds a Frekote® Fine Spray Applicator.

- Item Number 97707 – Frekote® Fine Spray Pressure Tank, 5 L
- Item Number 97710 – Frekote® Fine Spray Pressure Tank, 10 L

www.frekode.com



Visit the web for immediate access to distributors, safety and technical data sheets, and product literature.



Product Information

MATERIALS APPLICATION GUIDE

FREKOTE® BRAND MOLD RELEASE AGENTS		44-NC™	55-NC™	700-NC™	770-NC™	800-NC™	810-NC™	C-200™	901WB™	FREMAX®	FRP-NC™	HMT™	HMT-2™	R-110™	R-120™	R-150™	R-180™	R-500™	S-50™	WLO™	WLO-HS™	SOLO®	
POLYMER	Epoxy (Non Gel-Coat)	○	○	○	○			○	○		○	○									○	○	
	Polyester Gel-Coat – Glossy			◆	◆					◆	○										○		
	Polyester Gel-Coat – Matte	○	◆									○	◆										
	Polyester Gel-Coat / Resin – Low Shrink		◆	○	○						◆		◆								◆	○	◆
	Polyamide (PA / Nylon)	○	◆	◆	◆			○	○			○	◆										
	Polyester (Non Gel-Coat)	◆	◆	○	○						◆	◆	◆										
	Polyethylene (PE)	◆	◆	◆	○			○	○			◆	◆										
	Polypropylene (PP)	◆	◆	◆	○			○	○				◆	◆									
	Vinyl Ester	◆	◆	○	○							◆	◆										
COMPOUND	Butyl														○	○	○	○					
	EPDM														◆	○	○	○					
	HNBR															○	○	○					
	Natural													○	○	○	○	○					
	Neoprene														◆	◆	◆	○					
	Nitrile														◆	◆	◆	○					
	Silicone															◆	◆	◆	○				
	Thermoplastic Urethane (TPU)															○	○	○	◆				
	Vamac														○	○	○	◆					
	Viton														◆	◆	◆	◆					
PROCESS	Cast Polymer / Solid Surface	◆	◆	◆	◆					◆	○	◆	◆								○		
	Compression / Transfer / Vacuum Bagging	○	○	○	○			○	○			○	○	○	○	○	○	○	○				
	Filament Winding			◆	○																		
	Hand Lay up / Spray up	◆	◆	◆	◆					◆	○	◆	◆									○	
	Injection Molding													◆	◆	○	○	◆	○				
	Rotational Molding				○			○	○														
	Rubber-to-Metal Bonding					◆	◆							○	○	○	○	○	◆				
	Tire Treads															◆	○	○	◆				

○ Highly Recommended ◆ Recommended

TROUBLE SHOOTING GUIDE

Problem	Cause	Solution
Complete failure to obtain release	Insufficiently cleaned mold surface has prevented Frekote® from bonding to the mold	Strip out part; thoroughly clean mold and reapply Frekote®
	Improperly cured Frekote® film	Ensure that Frekote® is fully cured before molding
	Precipitated and thus ineffective Frekote®	Examine Frekote®, if separation is present, replace with fresh material; clean mold and reapply
Poor release accompanied by small particles of molding material left on mold surface	Micro-porosity present in mold	Thoroughly clean mold and apply a Frekote® mold sealer; reapply Frekote® top coats
Poor release accompanied by white patches on parts	Insufficiently cleaned mold surface that prevents Frekote® from bonding properly, resulting in transfer to parts	Thoroughly clean mold and reapply Frekote®
Poor release accompanied by discolored blemishes on parts	Solvent based Frekote® contaminated by use of synthetic application cloths and contaminants applied to tool surface	Thoroughly clean mold and reapply Frekote®, ensuring the use of non-synthetic application cloths
Poor release in high-draft areas	Lack of slip due to mold geometry to difficult high-draft areas	Apply one or two extra coats of Frekote® or touch-up coats with Frekote® WOLO-HS™
Inability to achieve multiple release	Unconditioned mold surface	Reapply Frekote® frequently for initial production shift; thereafter gradually decrease the frequency of application
	Separated and thus ineffective Frekote®	Examine Frekote®, if separation is present, use fresh material
Good release but build-up of Frekote® on mold surface	Overapplication of Frekote®	Thoroughly clean mold and reduce amount of Frekote® applied
Good release but parts exhibit white blemishes	Excessive Frekote® applied to mold, resulting in transfer to parts	Thoroughly clean mold and reduce amount of Frekote® applied

For technical product assistance, call 1-800-562-8483 in the U.S. or 1-800-263-5043 in Canada.

Ordering Information / Index

FREKOTE® BRAND PRODUCT	ITEM NUMBER	CONTAINER SIZE	PIECES PER CASE	PAGE
44-NC™	83430	16 fl. oz. can (1 pint)	4	2
	83434	1 gallon can	4	2
	83433	5 gallon pail	1	2
	83432	55 gallon drum	1	2
44-NC™ Wipes	987545	1 case (20 packs w/10 wipes/pack)	200	5
48-NC™	83435	16 fl. oz. can (1 pint)	4	Web*
	83438	1 gallon can	4	Web*
	83437	5 gallon pail	1	Web*
55-NC™	83444	9.6 oz. net wt. aerosol	12	2, 5, 6
	83440	16 fl. oz. can (1 pint)	4	2, 5, 6
	83443	1 gallon can	4	2, 5, 6
	83442	5 gallon pail	1	2, 5, 6
	83441	55 gallon drum	1	2, 5, 6
55-NC™ Wipes	41694	1 case (20 packs w/10 wipes/pack)	200	2, 5, 6
700-NC™	38428	10.5 oz. net wt. aerosol	12	2, 5
	38424	16 fl. oz. can (1 pint)	4	2, 5
	38425	1 gallon can	4	2, 5
	38426	5 gallon pail	1	2, 5
	38427	55 gallon drum	1	2, 5
710-LV™	41345	1 gallon can	4	2
	41344	5 gallon pail	1	2
710-LV™ Wipes	1053401†	1 case (20 packs w/10 wipes/pack)	200	2
710-NC™	38429	1 gallon can	4	Web*
	38430	5 gallon pail	1	Web*
	38431	55 gallon drum	1	Web*
720-NC™	38422	16 fl. oz. can (1 pint)	4	3
	38423	1 gallon can	4	3
	83469	9.6 oz. net wt. aerosol	12	2, 5, 7
770-NC™	83465	16 fl. oz. can (1 pint)	4	2, 5, 7
	83468	1 gallon can	4	2, 5, 7
	83467	5 gallon pail	1	2, 5, 7
	83466	55 gallon drum	1	2, 5, 7
	83474	10.7 oz. net wt. aerosol	12	8
800-NC™	83473	1 gallon can	4	8
	83472	5 gallon pail	1	8
	83479	10.3 oz. net wt. aerosol	12	8
810-NC™	83483	1 gallon can	4	8
	83482	5 gallon pail	1	8
	83481	55 gallon drum	1	8
815-NC™	38432	16 fl. oz. can (1 pint)	4	13
	38434	5 gallon can	1	13
	38416	16 fl. oz. can (1 pint)	4	4
EFR™	38417	1 gallon can	4	4
	38418	5 gallon pail	1	4
	38419	55 gallon drum	1	4
FRP-NC™	83570	1 gallon can	4	Web*
	83569	5 gallon pail	1	Web*
	83508	16 fl. oz. can (1 pint)	4	13
CUR™	83510	1 gallon can	4	13
	83509	5 gallon pail	1	13
	38406	16 fl. oz. can (1 pint)	4	4
SOLO®	38407	1 gallon can	4	4
	38408	5 gallon pail	1	4
	38409	55 gallon drum	1	4
	83631	16 fl. oz. can (1 pint)	4	4
WOLO™	83634	1 gallon can	4	4
	83633	5 gallon pail	1	4
	967328	1 gallon can	4	5
WOLO-HS™	967327	5 gallon pail	1	5
	967326	55 gallon drum	1	5
	40029	1 gallon can	4	Web*
WOLO-LV™	40030	5 gallon pail	1	Web*
	83540	1 gallon can	4	9
	83539	5 gallon pail	1	9
HMT™	83538	55 gallon drum	1	9
	38439	9.7 oz. net wt. aerosol can	4	9
	38435	16 fl. oz. can (1 pint)	4	9
HMT-2™	38436	1 gallon can	1	9
	38437	5 gallon pail	1	9
	38438	55 gallon drum	1	9
	83493	16 fl. oz. can (1 pint)	4	3, 5, 7, 12
B-15™	83496	1 gallon can	4	3, 5, 7, 12
	83494	5 gallon pail	1	3, 5, 7, 12
	38412	16 fl. oz. can (1 pint)	4	3, 5, 12
FMS™	38413	1 gallon can	4	3, 5, 12
	38414	5 gallon pail	1	3, 5, 12
	38415	55 gallon drum	1	3, 5, 12

† Available in 3rd quarter of 2007.

* Visit www.frekote.com for more information on these products.

FREKOTE® BRAND PRODUCT	ITEM NUMBER	CONTAINER SIZE	PIECES PER CASE	PAGE
AC-4368™	83490	9.2 oz. net wt. aerosol	12	11
	83486	16 fl. oz. can (1 pint)	4	11
	83489	1 gallon can	4	11
	83488	5 gallon pail	1	11
	83487	55 gallon drum	1	11
	83426	9.2 oz. net wt. aerosol	12	10
1711™	83417	1 gallon can	4	10
1711-I™	83416	5 gallon pail	1	10
	83415	55 gallon drum	1	10
	83511	9.5 oz. net wt. aerosol	12	3, 11
EXITT™	83516	16 fl. oz. can (1 pint)	4	11
	83517	5 gallon pail	1	11
	83518	55 gallon drum	1	11
LIFFT™	83551	9.5 oz. net wt. aerosol	12	11
	83557	1 gallon can	4	11
LIFFT-I™	83554	5 gallon pail	1	11
	83553	55 gallon drum	1	11
	83610	55 gallon drum	1	11
RIMLEASE 8™	38410	16 fl. oz. can (1 pint)	4	4, 13
	38411	1 gallon pail	4	4, 13
FREWAX®	40614†	1 liter can	10	12
	83559	16 fl. oz. can (1 pint)	4	3, 5, 7, 9, 12
915WB™	83562	1 gallon can	4	3, 5, 7, 9, 12
	83561	5 gallon pail	1	3, 5, 7, 9, 12
	83560	55 gallon drum	1	3, 5, 7, 9, 12
PMC™	40613	1 gallon can	4	12
	38172	1 gallon can	4	13
CMR™	38171	5 gallon pail	1	13
	38170	55 gallon drum	1	13
	83572	5 gallon pail	1	Web*
PUR-100™ Aqualine®	83571	55 gallon drum	1	Web*
	83575	12.8 oz. net wt. aerosol	12	Web*
	83580	1 gallon can	4	Web*
R-100™ Aqualine®	83579	5 gallon pail	1	Web*
	83578	55 gallon drum	1	Web*
	83586	12.8 oz. net wt. aerosol	12	9
R-110™ Aqualine®	83585	1 gallon can	4	9
	83584	5 gallon pail	1	9
	83583	55 gallon drum	1	9
R-120™ Aqualine®	83590	1 gallon can	4	8
	83589	5 gallon pail	1	8
	83588	55 gallon drum	1	8
R-150™ Aqualine®	36751	1 gallon can	4	8
	36535	5 gallon pail	1	8
	38229	55 gallon drum	1	8
R-180™ Aqualine®	41731	5 gallon pail	1	8, 9
	41730	55 gallon drum	1	8, 9
	83503	1 gallon can	4	3, 6, 7
R-220™ Aqualine®	83502	5 gallon pail	1	3, 6, 7
	83505	5 gallon pail	1	Web*
	83504	55 gallon drum	1	Web*
C-200™ Aqualine®	83601	5 gallon pail	1	Web*
	83606	1 gallon can	4	13
	83635	5 gallon pail	1	13
C-210™ Aqualine®	83604	55 gallon drum	1	13
	36750	1 gallon can	4	13
	36749	5 gallon pail	1	13
R-550™ Aqualine®	966681	55 gallon drum	1	3, 6, 7
	83514	5 gallon pail	1	10
	83513	55 gallon drum	1	10
RC-321™ Aqualine®	83412	5 gallon pail	1	10
	83413	55 gallon drum	1	10
	37086	12.8 oz. net wt. aerosol	12	9, 10
Rotolease® Aqualine®	36529	1 gallon can	4	9, 10
	36530	5 gallon pail	1	9, 10
	36534	55 gallon drum	1	9, 10
901WB™	83514	5 gallon pail	1	10
	83513	55 gallon drum	1	10
	83412	5 gallon pail	1	10
EXITT-EM™	83413	55 gallon drum	1	10
	37086	12.8 oz. net wt. aerosol	12	9, 10
	36529	1 gallon can	4	9, 10
1450™	36530	5 gallon pail	1	9, 10
	36534	55 gallon drum	1	9, 10
	36534	55 gallon drum	1	9, 10

Visit www.frekote.com



Henkel – Your partner worldwide

Headquarter Locations

USA

Henkel Corporation
Engineering Adhesives
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067
1.800.562.8483
www.frekote.com
www.henkelna.com
Tel: 860.571.5100
Fax: 860.571.5465

Canada

Henkel Canada Corporation
Engineering Adhesives
2225 Meadowpine Blvd.
Mississauga, Ontario L5N 7P2
Tel: 1.800.263.5043 (*within Canada*)
Tel: 905.814.6511
Fax: 905.814.6522

Mexico

Henkel Capital, S.A. de C.V.
Blvd. Magnocentro No. 8
Piso 2 Interlomas
52760, Huixquilucan
Edo. de México
Tel: 01.800.90.181.00 (*within Mexico*)
Tel: +52.55.3300.3644
Fax: +52.55.5787.9404

South America

Henkel Ltda.
Rua Karl Huller, 136 – Jd.
Canhema 09941-410
Diadema/SP, Brazil
Tel: 0800.12.23.34 (*within Brazil*)
Tel: 55.11.4075.8955
Fax: 55.11.4075.8887

Europe

Henkel KGaA
Henkelstraße 67
40191 Düsseldorf, Germany
Tel: +49.211.797.0
Fax: +49.211.798.4008

Asia

**Henkel Asia-Pacific
& China Headquarters**
No.928 Zhang Heng Road
Zhangjiang Hi-Tech Park,
Pudong
Shanghai 201203
P. R. China
Tel.: +86 21 2891 8000

www.frekote.com



Visit the web for immediate access to:

- Distributor Information
- Technical Data Sheets
- Material Safety Data Sheets
- Product Literature

FREKOTE®

**For technical product assistance,
call 1-800-562-8483 in the U.S. or
1-800-263-5043 in Canada.**

Henkel Corporation
Engineering Adhesives
1001 Trout Brook Crossing
Rocky Hill, CT 06067
U.S.A
www.henkelna.com/industrial

® and TM designate trademarks of the Henkel Corporation or its Affiliates. ® = registered in the U.S. Patent and Trademark Office. © Henkel Corporation, 2007. All rights reserved. 4339/LT-4831 (9/2007)