

FREKOTE®

Mold Release Agents for multiple releases



Advanced Solutions

Henkel is much more than just a manufacturer of adhesives – it is, and has always been, solution-driven with a high regard for invention and deep commitment to research and development. Finding better, more cost-effective ways has always been the Henkel mission. With the addition of Frekote® to its product family, Henkel has further strengthened its position as a leading supplier of speciality chemicals.

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® not just for our unique mold release products, but also for our expertise in developing customised solutions. We take pride in our knowledge, experience, and responsiveness in providing the best technical service to our customers around the globe.

The Frekote® Range is the Broadest Mold Release Line – Frekote® mold release agents, backed by over 50 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 organisations, Henkel understands what it takes to release the most complex materials in the most demanding applications. Henkel has designed mold release agents for virtually all composite and rubber molding operations. The Frekote® line offers the broadest product range in the industry. From composite panels for aerospace applications, truck and train body panels, tyres, O-rings, recreational sport equipments, bathtubs, swimming pools, kayaks, custom yachts to wind rotor blades, we have the release agent you need for most composite and rubber materials.

Lowest Cost per Release – Frekote® semi-permanent release agents minimise fouling and ensure the highest number of releases possible per application. Our customers realise higher productivity and profitability through reduced downtime; 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 with the mold surface. The parts release cleanly, and will not stick to low surface energy films. Frekote® products are designed to save your money.

Technical Support – If you require information or advice, Henkel has engineers and technical personnel trained to provide on-site technical assistance for the evaluation of Frekote® mold release products, process recommendations, or application troubleshooting. Henkel also has in-house analytical capabilities to assist customers in the chemical evaluation of materials, perform surface analysis evaluations, or simulate process conditions. Henkel recognises that partnering with manufacturers and sharing expertise is critical to the successful selection of the right mold release product.

Making the Right Choice

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.

Markets Served

For an initial market overview

| Thermoset Plastics | | Thermoplastics | Rubbers |
|---|---|---|--|
| Advanced Composites Epoxy Systems | GRP Composites Polyester, Vinyl Ester | Rotational Molding | Rubber Industry |
| <ul style="list-style-type: none">• Aerospace Aircraft, helicopters ...• Recreational Bicycles, skis, rackets ...• Special Racing parts, medicals, electronics, filament windings ... | <ul style="list-style-type: none">• Marine GRP Boats, yachts, jet-skis ...• Transportation GRP Panels, roofs, spoilers ...• Construction GRP Wind rotor blades, cultured marble sinks & countertops, bathtubs ... | <ul style="list-style-type: none">• Recreational Kayaks, pedal boats ...• Construction Containers, tanks, chairs, waste bins ... | <ul style="list-style-type: none">• Tyre Treads / side walls• Technical Rubber Vibration dampers, roller blade wheels, footwear, custom molding ... |
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Application Selector Guide

To meet your individual requirements

- 4 Release Agents for Advanced Composites
Epoxy Systems
- 6 Release Agents for GRP Composites
Polyester, Vinyl Ester
- 8 Release Agents for Rotational Molding
- 10 Release Agents for Rubber & Polyurethane
- 12 Cleaners & Sealers

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To select compatible applicators / For your assistance

Complete Product List 15

Including ordering information

Release Agents for Advanced Composites

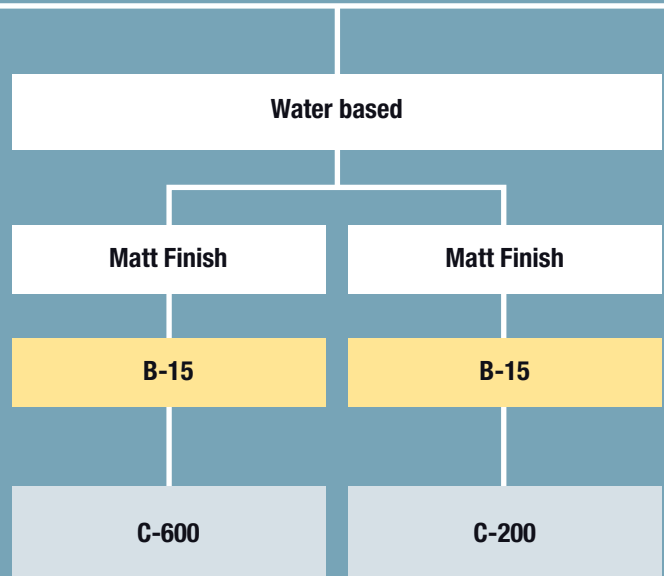
Epoxy Systems

Your application

Handy Hints:

- **B-15** Mold Sealer is mostly used for metal and epoxy molds
- **FMS** Mold Sealer is mostly used for polyester molds
- **PMC** is a universal cleaner for use prior to application of Frekote® Release Agents

For more information see pages 12-13.



| | | |
|-------------------------------------|----------------|----------------|
| Description: | Release agent | Release agent |
| Appearance: | White emulsion | White emulsion |
| Application temperature: | 20-40°C | 20-205°C |
| Dry time between coats @ RT: | 15 min | 10 min |
| Final Cure Time @ RT: | 30 min | n.a. |
| Final Cure Time @ 100°C: | n.a. | 20 min |
| Thermal stability: | up to 315°C | up to 315°C |

Frekote® Aqualine® C-600

- RT application and curing
- Large scale parts
- No flash point

Frekote® Aqualine® C-600 is a water-based semi permanent release agent for high performance composite structures. Apply by wiping or spraying at RT a thin, continuous wet film; wait 1-2 min, then gently wipe dry. Apply a minimum of 3 coats, allowing 15 min dry time between the coats. Cure the final coat for 30 min at 22°C.

Frekote® Aqualine® C-200

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

Frekote® Aqualine® C-200 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. Frekote® Aqualine® C-200 can be applied at any temperature between 20°C and 205°C. Apply 4 coats to clean mold surfaces and allow to dry before applying the subsequent coat. Dry time 10 min at RT or decrease dry time by additional heat sources. Post cure the the complete coating for at least 40 min at 60°C or 20 min at 100°C.



Solvent based

| Matt Finish | Satin Finish | Gloss Finish | Gloss Finish |
|-------------|--------------|--------------|--------------|
| B-15 | B-15 | B-15 or FMS | B-15 or FMS |
| 44-NC | 55-NC | 700-NC | 770-NC |

| 44-NC | 55-NC | 700-NC | 770-NC |
|---------------|---------------|---------------|---------------|
| Release agent | Release agent | Release agent | Release agent |
| Clear liquid | Clear liquid | Clear liquid | Clear liquid |
| 15-60°C | 15-60°C | 15-135°C | 15-60°C |
| 10-15 min | 5 min | 5 min | 5-10 min |
| 3 h | 30 min | 15-20 min | 5-10 min |
| n.a. | n.a. | 5 min | n.a. |
| up to 400°C | up to 400°C | up to 400°C | up to 400°C |

Frekote® 44-NC

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

Frekote® 44NC is a semi-permanent release polymer designed to provide multiple release for most molding processes with no contaminating transfer.

Apply 3-6 coats to clean mold surfaces by wiping, brushing or spraying a thin continuous wet film. Allow 15 min between coats to dry. Curing of the final coat takes 3 h at RT and can be shortened by baking the mold for 15 min at 100-150°C.

Frekote® 55-NC

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

Frekote® 55-NC is a semi-permanent release polymer designed to provide multiple release for most molding processes with no contaminating transfer.

Apply 3-6 coats to clean mold surfaces by wiping, brushing or spraying a thin continuous wet film. Allow 5 min between coats to dry. Curing of the final coat takes 30 min at RT and can be shortened by heating the mold for 5 min at 100-150°C.

Frekote® 700-NC

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

Frekote® 700-NC is a versatile 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 5-10 min between coats. Touch up as necessary.

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; allow 5-10 minutes between coats. Touch up as necessary.

Release Agents for GRP Composites

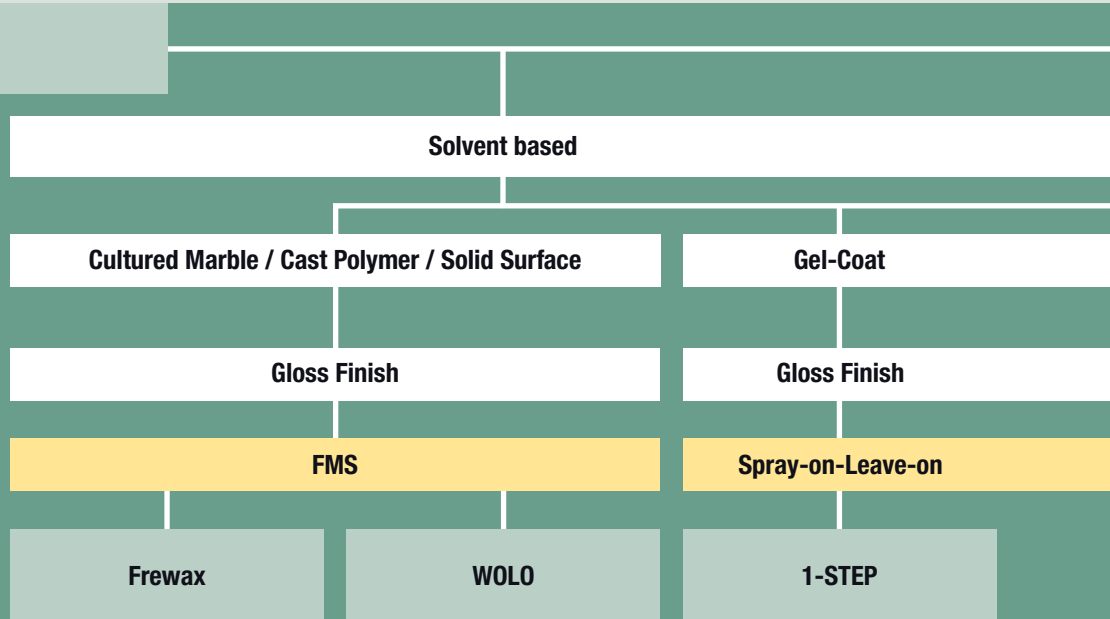
Polyester, Vinyl Ester

Your application

Handy Hints:

- **B-15** Mold Sealer is mostly used for metal and epoxy molds
- **FMS** Mold Sealer is mostly used for polyester molds
- **PMC** is a universal cleaner for use prior to application of Frekote® Release Agents

For more information see pages 12-13.



| | | | |
|-------------------------------------|---------------|---------------|---------------|
| Description: | Release agent | Release agent | Release agent |
| Appearance: | Milky white | Clear liquid | Clear liquid |
| Application temperature: | 15-35°C | 15-45°C | 15-45°C |
| Dry time between coats @ RT: | 5-10 min | 5 min | n.a. |
| Final Cure Time @ RT: | 5-10 min | 15 min | 30 min |
| Final Cure Time @ 100°C: | n.a. | n.a. | n.a. |
| Thermal stability: | up to 280°C | up to 400°C | up to 400°C |

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 Frewax well before and during use. Apply to clean mold surfaces with a clean, lint-free, cotton cloth. Allow Frewax 5-10 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 is simple – wipe it on, allow to evaporate to produce a high gloss finish. No polishing is needed.

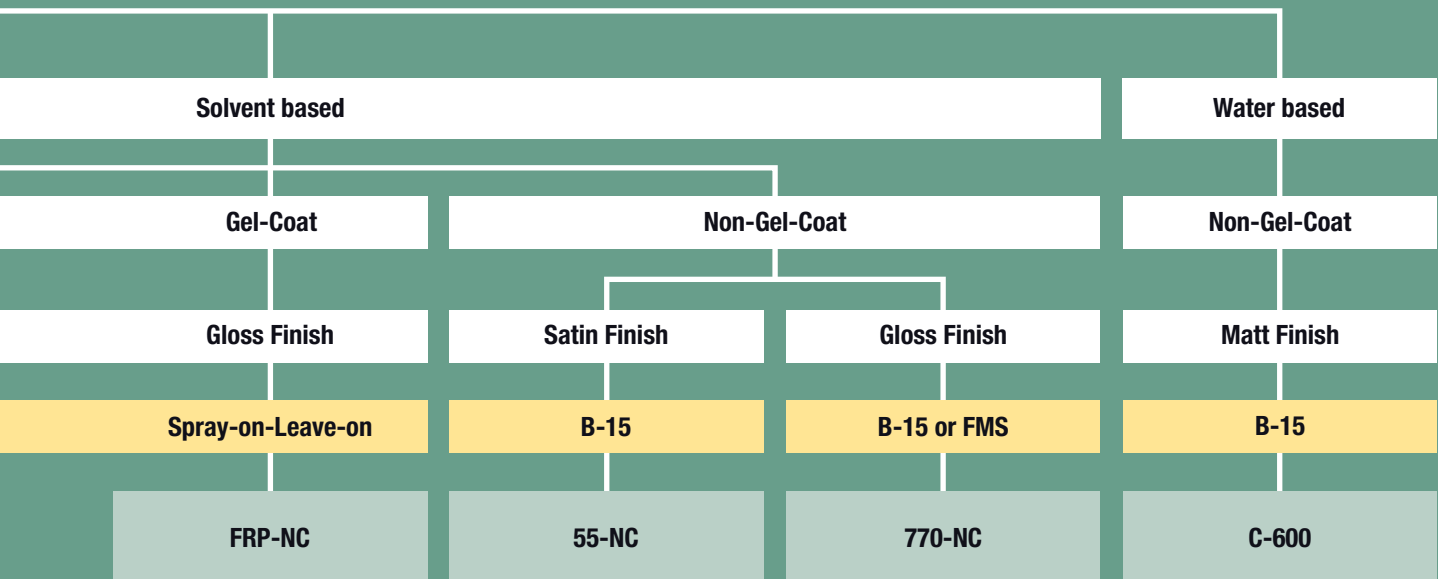
Apply WOLO with a clean wiping cloth. Wipe a smooth, wet film over the mold surface. Continue to work the material into the mold by lightly wiping the wet film (10-30 sec) until a thin and uniform coating is obtained and allow to evaporate.

Frekote® 1-STEP

- Easy to use
- High gloss finish
- Minimal mold build-up

Frekote® 1-STEP is a unique polymer release agent, designed to release all fiberglass reinforced and filled polyester composites. Application and use is fast and easy – simply spray on and leave on, gloss is instant.

Frekote® 1-STEP does not require a mold sealer. Spray 5 fine coats (7 coats for new molds), using an HVLP spray gun. Repeat one coat after another (no cure time required between coats) to give a final coverage of 200 ml/m² of mold surface.



| | | | |
|---------------|---------------|---------------|---------------|
| Release agent | Release agent | Release agent | Release agent |
| Clear liquid | Clear liquid | Clear liquid | Clear liquid |
| 15-45°C | 15-60°C | 15-60°C | 15-60°C |
| 15 min | 5 min | 5-10 min | 15 min |
| 15 min | 30 min | 5-10 min | 20 min |
| n.a. | n.a. | n.a. | n.a. |
| up to 400°C | up to 400°C | up to 400°C | up to 315°C |

Frekote® FRP-NC

- Minimal mold build-up
- Maximum mold utilisation
- 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 10-20 sec at RT after application. Gently wipe dry with a second dry, cotton cloth. Apply a maximum of 6 coats initially. Allow 15-20 min cure time between coats and after the final coat at RT.

Frekote® 55-NC

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

Frekote® 55-NC is a semi-permanent release polymer designed to provide multiple release for most molding processes with no contaminating transfer. Apply 3-6 coats to clean mold surfaces by wiping, brushing or spraying a thin continuous wet film. Allow 5 min between coats to dry. Curing of the final coat takes 30 min at RT and can be shortened by heating the mold for 5 min at 100-150°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; allow 5-10 minutes between coats. Touch up as necessary.

Frekote® Aqualine® C-600

- RT application and curing
- Large scale parts
- No flash point

Frekote® Aqualine® C-600 is a water-based semi permanent release agent for high performance composite structures. Apply by wiping or spraying at RT a thin, continuous wet film; wait 1-2min, then gently wipe dry. Apply a minimum of 3 coats, allowing 15 min dry time between the coats. Cure the final coat for 30 min at 22°C.

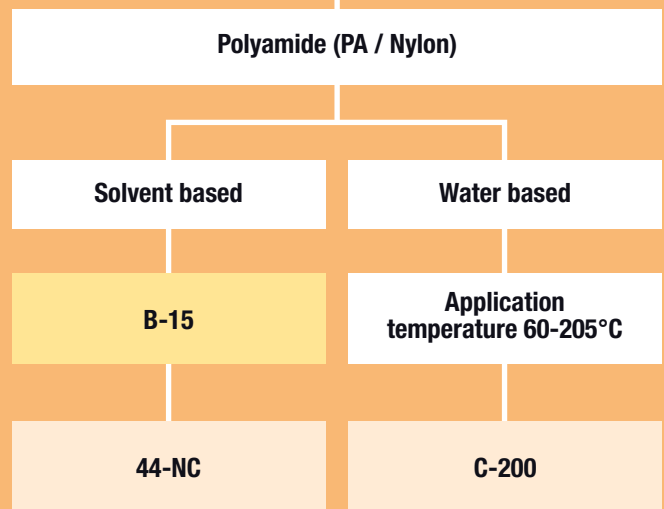
Release Agents for Rotational Molding

Your application

Handy Hints:

- **B-15** Mold Sealer is mostly used for metal and epoxy molds
- **PMC** is a universal cleaner for use prior to application of Frekote® Release Agents

For more information see pages 12-13.



| | | |
|-------------------------------------|---------------|----------------|
| Description: | Release agent | Release agent |
| Appearance: | Clear liquid | White emulsion |
| Application temperature: | 15-60°C | 20-205°C |
| Dry time between coats @ RT: | 10-15 min | 10 min |
| Final Cure Time @ RT: | 3 h | n.a. |
| Final Cure Time @ 100°C: | 15 min | 20 min |
| Thermal stability: | up to 400°C | up to 315°C |

Frekote® 44-NC

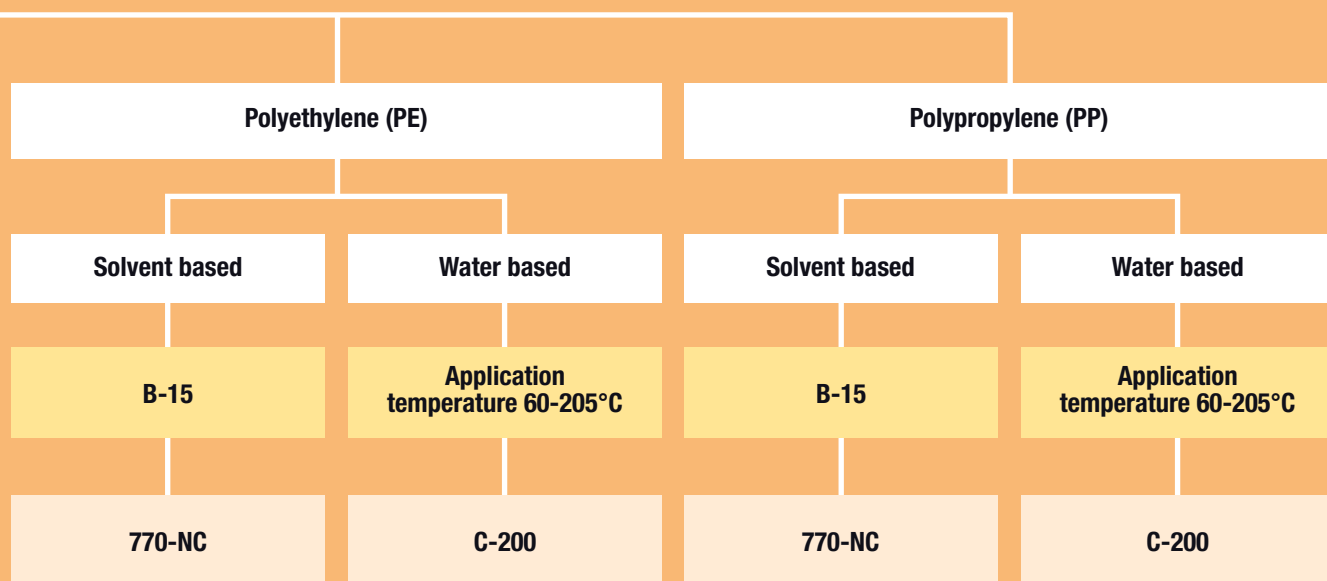
- No mold build-up
- No contaminating transfer
- High thermal stability

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

Frekote® Aqualine® C-200

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

Frekote® Aqualine® C-200 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. Frekote® Aqualine® C-200 can be applied at any temperature between 20°C and 205°C. Apply 4 coats to clean mold surfaces and allow to dry before applying the subsequent coat. Dry time 10 min at RT or decrease dry time by additional heat sources. Post cure the the complete coating for at least 40 min at 60°C or 20 min at 100°C.



| | | | |
|---------------|----------------|---------------|----------------|
| Release agent | Release agent | Release agent | Release agent |
| Clear liquid | White emulsion | Clear liquid | White emulsion |
| 15-60°C | 20-205°C | 15-60°C | 20-205°C |
| 5-10 min | 10 min | 5-10 min | 10 min |
| 5-10 min | n.a. | 5-10 min | n.a. |
| n.a. | 20 min | n.a. | 20 min |
| up to 400°C | up to 315°C | up to 400°C | up to 315°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; allow 5 minutes between coats. Touch up as necessary.

Frekote® Aqualine® C-200

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

Frekote® Aqualine® C-200 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. Frekote® Aqualine® C-200 can be applied at any temperature between 20°C and 205°C. Apply 4 coats to clean mold surfaces and allow to dry before applying the subsequent coat. Dry time 10 min at RT or decrease dry time by additional heat sources. Post cure the complete coating for at least 40 min at 60°C or 20 min at 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 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; allow 5 minutes between coats. Touch up as necessary.

Frekote® Aqualine® C-200

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

Frekote® Aqualine® C-200 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. Frekote® Aqualine® C-200 can be applied at any temperature between 20°C and 205°C. Apply 4 coats to clean mold surfaces and allow to dry before applying the subsequent coat. Dry time 10 min @ RT or decrease dry time by additional heat sources. Post cure the complete coating for at least 40 min at 60°C or 20 min @ 100°C.

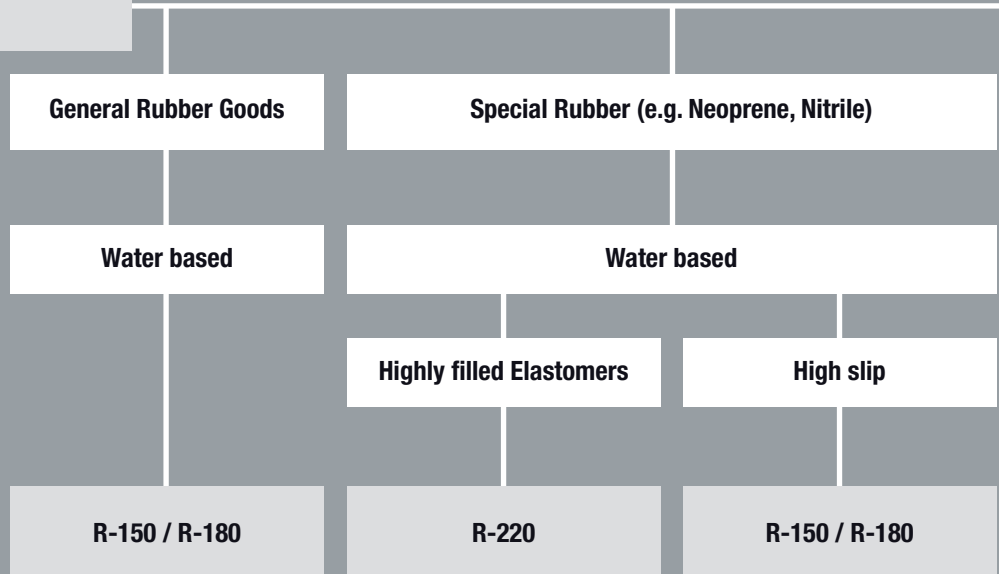
Release Agents for Rubber & Polyurethane

Your application

Handy Hints:

- **PMC** is a universal cleaner for use prior to application of Frekote® Release Agents

For more information see pages 12-13.



| | | | |
|---------------------------------|----------------|----------------|----------------|
| Description: | Release agent | Release agent | Release agent |
| Appearance: | White emulsion | White emulsion | White emulsion |
| Application temperature: | 60-205°C | 60-205°C | 60-205°C |
| Final Cure Time @ 60°C: | 30 min | 25 min | 30 min |
| Final Cure Time @ 150°C: | 4 min | 4 min | 4 min |
| Thermal stability: | up to 315°C | up to 315°C | up to 400°C |

Frekote® R-150/R-180

- Fast curing
- High slip
- Minimum reject rates

Frekote® Aqualine® R-150 and R-180 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 >60°C. For warm molds (60-120°C), a minimum of 4 coats should be applied. For hot (120-205°C), new or porous molds, apply a minimum of 6 coats. Allow to cure prior to production.

Frekote® R-220

- Fast curing
- Excellent slip
- Release most compounds

Frekote® Aqualine® R-220 is a semi-permanent water based release agent which provides multiple releases. Recommended for the most difficult to release rubbers, such as EPDM and for high aspect ratio parts.

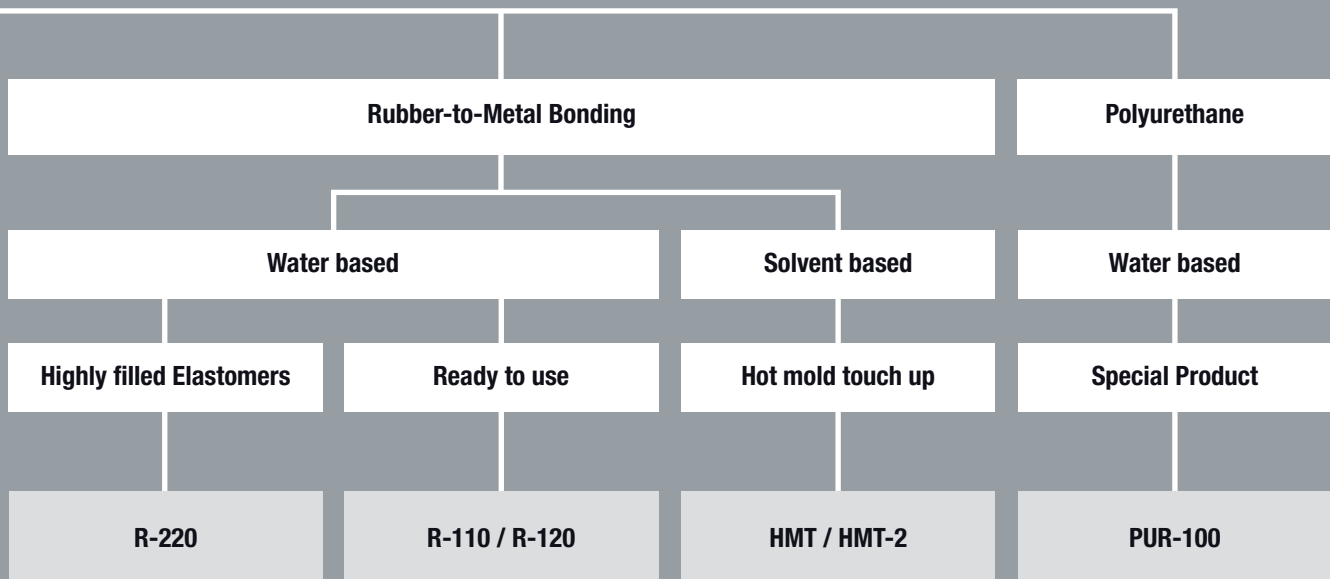
Apply by spraying to clean pre-heated molds >60°C. For warm molds (60°C – 120°C) a minimum of 4 coats should be applied. For hot (120°C-205°C), new or porous molds, apply a minimum of 6 coats.

Frekote® R-150/R-180

- Fast curing
- High slip
- Minimum reject rates

Frekote® Aqualine® R-150 and R-180 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 >60°C. For warm molds (60-120°C), a minimum of 4 coats should be applied. For hot (120-205°C), new or porous molds, apply a minimum of 6 coats. Allow to cure prior to production.



| | | | |
|----------------|----------------|---------------|----------------|
| Release agent | Release agent | Release agent | Release agent |
| White emulsion | White emulsion | Clear liquid | White emulsion |
| 60-205°C | 60-205°C | 60-190°C | 50-100°C |
| 25 min | 30 min | 5 min | n.a. |
| 4 min | 4 min | Instantly | 10 min |
| up to 315°C | up to 315°C | up to 400°C | up to 315°C |

Frekote® R-220

- Fast curing
- Excellent slip
- Release most compounds

Frekote® Aqualine® R-220 is a semi-permanent water based release agent which provides multiple releases. Recommended for the most difficult to release rubbers, such as EPDM and for high aspect ratio parts. Apply by spraying to clean pre-heated molds >60°C. For warm molds (60°C-120°C) a minimum of 4 coats should be applied. For hot (120°C-205°C), new or porous molds, apply a minimum of 6 coats.

Frekote® R-110/R-120

- Fast curing
- No transfer
- High thermal stability

Frekote® Aqualine® R-110 and R-120 are semi-permanent water based release agents which provide maximum release performance with high slip properties. Apply by spraying to clean molds, pre-heated to >60°C. For warm molds (60-120°C), a minimum of 4 coats should be applied. For hot (120-205°C), new or porous molds, apply a minimum of 6 coats. Allow to cure prior to production.

Frekote® HMT/HMT-2

- Multiple release
- Minimum reject rates
- No contaminating transfer

Frekote® HMT and HMT-2 are both excellent solvent based release products designed for multiple release applications to hot molds >60°C. HMT-2 is less moisture sensitive than HMT. Brush or spray apply (ensure dry air source) 4-6 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® Aqualine® PUR 100

- for PU parts
- no contaminating transfer
- multiple releases

Frekote® Aqualine® R-100 is a semi permanent water based release agent which provides multiple releases for PU parts. Molded parts can be painted or bonded without any post-finishing steps. Apply a minimum of 3 coats by spraying to clean pre-heated molds > 50°C . Apply light, barely visible coats. For warm molds (max. 120°C) allow a cure time for the final coat of 5 min. Allow each coat to dry 2 min before applying subsequent coats.

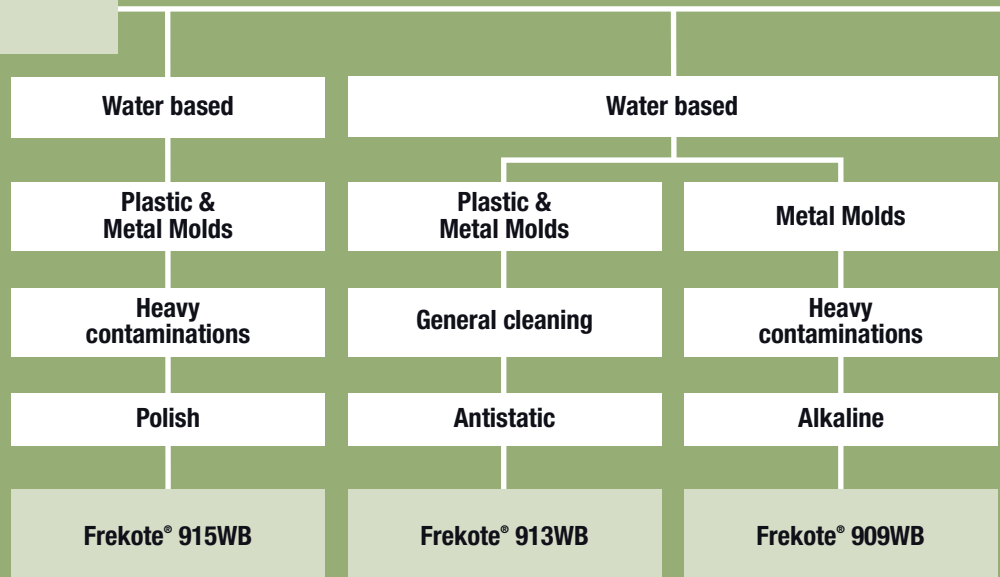
Cleaners & Sealers

Your application

Handy Hints:

- **B-15** Mold Sealer is mostly used for metal and epoxy molds
- **FMS** Mold Sealer is mostly used for polyester molds
- **PMC** is a universal cleaner for use prior to application of Frekote® Release Agents

Frekote removes heavy mold build up



| | | | |
|-----------------------------------|--------------------|--------------|--------------|
| Description: | Mold Cleaner | Mold Cleaner | Mold Cleaner |
| Appearance: | Beige-pasty liquid | Clear liquid | Yellow |
| Application temperature: | 10-40°C | 10-40°C | 10-40°C |
| Exposure / Cure Time: | 5 min | Immediate | 1 h |
| Removed cured rel. agents: | Yes | No | Yes |

Frekote® 915WB

- water based
- polishing liquid
- removes cured films

Frekote® 915WB is a water-based cleaner for removing residues from mold surfaces. The surfactants and emulsifiers in combination with soft abrasives give excellent cleaning results without dulling or scratching the surface. Shake before use. Apply product to the mold surface with a cotton or paper cloth. Allow residue to soften for 5min. After product became hazy, rub or buff off mold surface. Rinse with water or other appropriate cleaner, like Lixton TS 613.

Frekote® 913WB

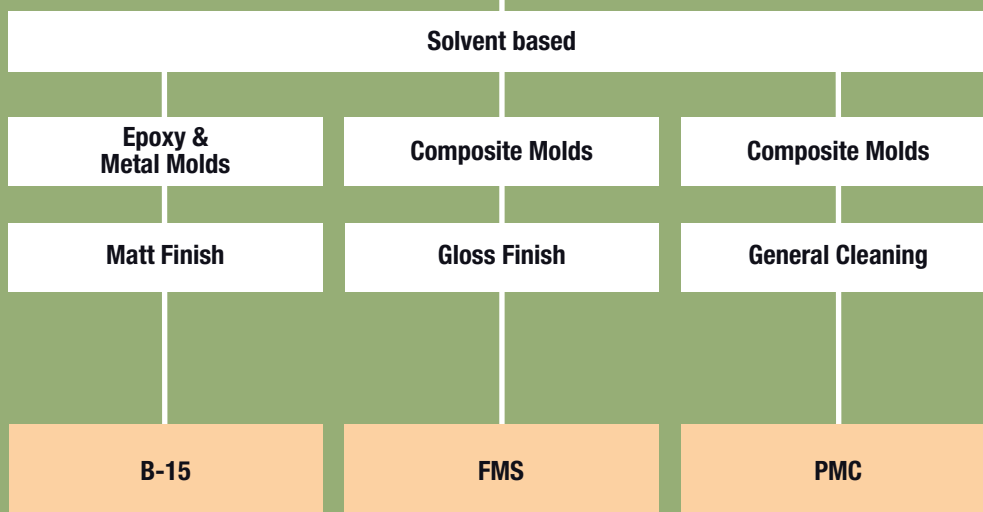
- water based
- for plastic and metal molds
- removes abrasives, greases, waxes

Frekote® 913WB is a water based cleaner for composite and metal molds. Used for contaminations like finger prints, greases oils, waxes and abrasive particles from Frekote® 915WB. Non-smearing and prevents recontamination with dust by antistatic agents. Wipe or spray on and wipe off or polish with a lint free cotton cloth.

Frekote® 909WB

- water based
- alkaline cold depainter
- removes cured films

Frekote® 909WB is an alkaline paint stripper foam on the basis of potassium hydroxide. Cold cleaner for removing paint and cured release agents from steel, nickel and casted iron molds. Apply the product on the contaminated surface until it begins to foam. Allow contaminations to soften for 1 hour. Dissolved organic layers have to be removed by hand or with high pressure water spray. Dry with hot air.



| | | |
|--------------|--------------|--------------|
| Mold Sealer | Mold Sealer | Mold Cleaner |
| Clear liquid | Clear liquid | Clear liquid |
| 15-60°C | 15-35°C | 15-40°C |
| 24 h | 15-20 min | n.a. |
| n.a. | n.a. | n.a. |

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, 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 min between coats. The final coating will cure within 24 h at RT

Frekote® FMS

- Easy to apply
- Fast cure
- Seals mold porosity

Frekote® Mold Sealer (FMS) for glass fibre 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 15-20 sec, then gently wipe dry. Apply 1-3 coats, allowing 15-20 min 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 it is still dissolved in the PMC.

Loctite® Frekote® Dispensing Applicators

Loctite® Frekote® Applicators are state-of-the-art dispensing units designed for the application of mold release agents.

The equipment includes ergonomic spray guns and pressure pots. The supply of fluid is achieved via pressure tanks. Mechanical valves control the individual impulses of fluid emission. The different extensions of the valves allow installation into machines with limited inner space or in narrow recessed areas. The spray guns are provided with two connections to allow separate supply of release agent and atomising air.

| Items 97706 / 97710 | Pressure Pots 3 litre / 10 litre | | | | | | | | | | | | |
|--|---|---------------|-------------|--------|-----------|-------|--|---|--------|-------|--|---|--------|
| Features <ul style="list-style-type: none"> Stainless steel Wide opening lid for easy refilling Automatic depressurizing air inlet valve  | <p>The safety of each individual tank is based on tests in keeping with the strict rules of the German Pressure Tank Ordinance before they are cleared for the markets at home and abroad. Other pressure pots are usually galvanised or cast iron or aluminium. These materials WILL REACT with release agents causing corrosion and contamination.</p> <table border="1" data-bbox="710 1025 1477 1178"> <thead> <tr> <th>Equipment No.</th> <th>Description</th> <th>No/Ctn</th> <th>Order No.</th> </tr> </thead> <tbody> <tr> <td>97706</td> <td>Pressure Pot 3 litre with integrated pneumatics</td> <td>1</td> <td>525226</td> </tr> <tr> <td>97710</td> <td>Pressure Pot 10</td> <td>1</td> <td>529497</td> </tr> </tbody> </table> | Equipment No. | Description | No/Ctn | Order No. | 97706 | Pressure Pot 3 litre with integrated pneumatics | 1 | 525226 | 97710 | Pressure Pot 10 | 1 | 529497 |
| Equipment No. | Description | No/Ctn | Order No. | | | | | | | | | | |
| 97706 | Pressure Pot 3 litre with integrated pneumatics | 1 | 525226 | | | | | | | | | | |
| 97710 | Pressure Pot 10 | 1 | 529497 | | | | | | | | | | |
| Items 97740 / 97760 | HVLP Spray Gun | | | | | | | | | | | | |
| Features <ul style="list-style-type: none"> For Frekote 1-Step Nozzle and needle made from stainless steel Duo-feed hose, 3 m 97740 0.5 mm nozzle 97760 0.8 mm nozzle <p>Technical Specification</p> <ul style="list-style-type: none"> Weight: 650 g  | <p>High Volume Low Pressure (HVLP) spraying is more efficient, cost effective and produces the same fine finish at the same speed as conventional compressed air spray guns, without all the „over spray“, „bounce back“ and air pollution.</p> <table border="1" data-bbox="710 1422 1477 1523"> <thead> <tr> <th>Equipment No.</th> <th>Description</th> <th>No/Ctn</th> <th>Order No.</th> </tr> </thead> <tbody> <tr> <td>97740</td> <td>HVLP Spray Gun, 0.5 mm nozzle</td> <td>1</td> <td>416128</td> </tr> <tr> <td>97760</td> <td>HVLP Spray Gun, 0.8 mm nozzle</td> <td>1</td> <td>568325</td> </tr> </tbody> </table> | Equipment No. | Description | No/Ctn | Order No. | 97740 | HVLP Spray Gun, 0.5 mm nozzle | 1 | 416128 | 97760 | HVLP Spray Gun, 0.8 mm nozzle | 1 | 568325 |
| Equipment No. | Description | No/Ctn | Order No. | | | | | | | | | | |
| 97740 | HVLP Spray Gun, 0.5 mm nozzle | 1 | 416128 | | | | | | | | | | |
| 97760 | HVLP Spray Gun, 0.8 mm nozzle | 1 | 568325 | | | | | | | | | | |
| Item 97725 | HVLP Fine Spray Gun | | | | | | | | | | | | |
| Features <ul style="list-style-type: none"> For low viscosity liquids 0.3, 0.5, 0.8 mm nozzles and needles made from stainless steel Different extension and spray angles available Duo feed hose 3m included <p>Technical Specification</p> <ul style="list-style-type: none"> Weight: 245 g <p>Extensions 400 mm</p>  | <p>Careful coordination of precision made nozzle, needle and air cap produce an atomising result which gives an extremely smooth „lay“ on molds and dies particularly when applying release agents. High Volume Low Pressure (HVLP) spraying is more efficient, cost effective and produces the same fine finish at the same speed as conventional compressed air spray guns, without all the „over spray“, „bounce back“ and air pollution. The short, lightweight gun body and the Duo-feed hose, which passes fluid as well as atomising air through the grip, allows comfortable handling.</p> <table border="1" data-bbox="710 1886 1477 2078"> <thead> <tr> <th>Equipment No.</th> <th>Description</th> <th>No/Ctn</th> <th>Order No.</th> </tr> </thead> <tbody> <tr> <td>97725</td> <td>HVLP Fine Spray Gun 0.5 mm, 60° flat fan, incl. protecting ring and 3 m Duo tube</td> <td>1</td> <td>442459</td> </tr> <tr> <td>97717</td> <td>Fine Spray Gun 0.5 mm, 60° flat fan, with 90° extension, length 400 mm</td> <td>1</td> <td>442458</td> </tr> </tbody> </table> | Equipment No. | Description | No/Ctn | Order No. | 97725 | HVLP Fine Spray Gun 0.5 mm, 60° flat fan, incl. protecting ring and 3 m Duo tube | 1 | 442459 | 97717 | Fine Spray Gun 0.5 mm, 60° flat fan, with 90° extension, length 400 mm | 1 | 442458 |
| Equipment No. | Description | No/Ctn | Order No. | | | | | | | | | | |
| 97725 | HVLP Fine Spray Gun 0.5 mm, 60° flat fan, incl. protecting ring and 3 m Duo tube | 1 | 442459 | | | | | | | | | | |
| 97717 | Fine Spray Gun 0.5 mm, 60° flat fan, with 90° extension, length 400 mm | 1 | 442458 | | | | | | | | | | |

Application Overview & Trouble Shooting Guide

| Frekote® Mold Release Agent | | 1-STEP | 44-NC | 55-NC | 700-NC | 770-NC | C-200 | C-600 | Frewax | FRP-NC | WOLO | HMT | HMT-2 | R-110 | R-120 | R-150 | R-180 | R-220 | PUR 100 | |
|--------------------------------|---|--------|-------|-------|--------|--------|-------|-------|--------|--------|------|-----|-------|-------|-------|-------|-------|-------|---------|---|
| Compound | Butyl | | | | | | | | | | | | | | ● | ● | ● | ● | | |
| | EPDM | | | | | | | | | | | | | | ▲ | ● | ● | ● | | |
| | HNBR | | | | | | | | | | | | | | | ● | ● | ● | | |
| | Natural | | | | | | | | | | | | | ● | ● | ● | ● | ● | | |
| | Neoprene | | | | | | | | | | | | | | ▲ | ▲ | ▲ | ▲ | ● | |
| | Nitrile | | | | | | | | | | | | | | ▲ | ▲ | ▲ | ▲ | ● | |
| | Silicone | | | | | | | | | | | | | | | ▲ | ▲ | ▲ | ▲ | |
| | Thermoplastic Urethane (TPU) | | | | | | | | | | | | | | | ● | ● | ● | ● | ● |
| | Vamac | | | | | | | | | | | | | | | ● | ● | ● | ● | ● |
| | Viton | | | | | | | | | | | | | | | ▲ | ▲ | ▲ | ▲ | ● |
| Polymer | Epoxy (Non Gel-Coat) | | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | |
| | Phenolresin | | | | | | ● | | | | | | | | | | | ● | | |
| | Polyester Gel-Coat – glossy | ● | | | ▲ | ▲ | | | ▲ | ● | ● | | | | | | | | | |
| | Polyester Gel-Coat – matt | | ● | ▲ | | | | | | | | | | | | | | | | |
| | Polyester Gel-Coat / Resin – low shrink | ▲ | | ▲ | ● | ● | | | | ▲ | ▲ | | | | | | | | | |
| | Polyamide (PA / Nylon) | | ● | ▲ | ▲ | ▲ | ● | | | | | | | | | | | | | |
| | Polyester (Non Gel-Coat) | | ▲ | ▲ | ● | ● | | | | ▲ | | | | | | | | | | |
| | Polyethylene (PE) | | ▲ | ▲ | ▲ | ● | ● | | | | | | | | | | | | | |
| | Polypropylene (PP) | | ▲ | ▲ | ▲ | ● | ● | | | | | | | | | | | | | |
| | Vinyl Ester | | ▲ | ▲ | ● | ● | | | | | | | | | | | | | | |
| Process | Cast Polymer / Solid Surface | ▲ | ▲ | ▲ | ▲ | ▲ | | | ▲ | ● | ● | | | | | | | | | |
| | Compression / Transfer / Vacuum Bagging / Cultured Marble | | ● | ● | ● | ● | ● | | | | | | | ● | ● | ● | ● | ● | ● | |
| | Filament Winding | | | | | ● | | | | | | | | | | | | | | |
| | Hand Lay up / Spray up | ● | ▲ | ▲ | ▲ | ▲ | | | ▲ | ● | ● | | | | | | | | | |
| | Injection Molding | | | | | | | | | | | | | ▲ | ▲ | ● | ● | ● | | |
| | Polyurethane in molding coating | | | | | | | | | | | | | | | | | ▲ | | |
| | Rotational Molding | | | | | ● | ● | | | | | | | | | | | | | |
| | Rubber-to-Metal Bonding | | | | | | | | | | | | | | ● | ● | ● | ● | ● | ● |
| | Tyre Treads | | | | | | | | | | | | | | | ▲ | ● | ● | ▲ | ● |

● Highly Recommended ▲ Recommended

| 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 discoloured blemishes on parts | Solvent-based Frekote® contaminated by use of synthetic application cloths. 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® |
| 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 | Over application 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 |

Product List / Order Information

| Frekote® | Description | Pack Size | No/ Ctn | Order No. | Page | Frekote® | Description | Pack Size | No/ Ctn | Order No. | Page | | | |
|----------|---------------|-------------------------------|------------|--------------|-------------------|-------------------------------|---------------|-------------------------------|-------------------------|-------------------------------|---------|--------------|---------|-------|
| 1-STEP | Release Agent | 1 l Metal Can | 1 | 380908 | 6-7 | WOLO | Release Agent | 1 l Metal Can | 4 | 381139 | 6-7 | | | |
| | | 5 l Metal Can | 1 | 380914 | | | | 5 l Metal Can | 1 | 381145 | | | | |
| | | 25 l Metal Drum | 1 | 380916 | | | | 25 l Metal Drum | 1 | 381147 | | | | |
| 44-NC | Release Agent | 1 l Metal Can | 1 | 380923 | 4-5 8-9 | HMT | Release Agent | 5 l Metal Can | 1 | 381082 | 10-11 | | | |
| | | 5 l Metal Can | 1 | 380929 | | | | 25 l Metal Drum | 1 | 381084 | | | | |
| | | 25 l Metal Drum | 1 | 380931 | | HMT-2 | Release Agent | 1 l Metal Can | 1 | 381091 | 10-11 | | | |
| | | 208 l Drum | 1 | 380932 | | | | 5 l Metal Can | 1 | 381097 | | | | |
| 55-NC | Release Agent | 1 l Metal Can | 1 | 380941 | 4-5 6-7 | PMC | Mold Cleaner | 1 l Metal Can | 1 | 381108 | 12-13 | | | |
| | | 5 l Metal Can | 1 | 380947 | | | | 5 l Metal Can | 1 | 381114 | | | | |
| | | 25 l Metal Drum | 1 | 380949 | | | | R-110 | Release Agent | 5 l Plastic Container | | 1 | 377247 | 10-11 |
| | | 208 l Drum | 1 | 380950 | | | | | | 20 (2x10) l Plastic Container | | 1 | 377249 | |
| 700-NC | Release Agent | 1 l Metal Can | 1 | 380957 | 4-5 6-7 8-9 | R-120 | Release Agent | 5 l Plastic Container | 1 | 377257 | 10-11 | | | |
| | | 5 l Metal Can | 1 | 380963 | | | | 20 (2x10) l Plastic Container | 1 | 377259 | | | | |
| | | 25 l Metal Drum | 1 | 380964 | | | | 210 l Drum | 1 | 377255 | | | | |
| | | 208 l Metal Drum | 1 | 380965 | | R-150 | Release Agent | 5 l Plastic Container | 1 | 377265 | 10-11 | | | |
| 770-NC | Release Agent | 1 l Metal Can | 1 | 380973 | 4-5 6-7 8-9 | | | R-180 | Release Agent | 5 l Plastic Container | | 1 | 525711 | 10-11 |
| | | 5 l Metal Can | 1 | 380979 | | 20 (2x10) l Plastic Container | 1 | | | 525712 | | | | |
| | | 25 l Metal Drum | 1 | 380981 | | 210 l Drum | 1 | | | 525709 | | | | |
| | | 208 l Metal Drum | 1 | 459118 | | R-220 | Release Agent | | | 5 l Plastic Container | 1 | 1041793 | 10-11 | |
| B-15 | Mold Sealer | 1 l Metal Can | 4 | 381021 | PUR 100 | | | Release Agent | 3.7 l Plastic Container | 1 | 1038309 | 8-9 10-11 | | |
| | | 5 l Metal Can | 1 | 381027 | | 18.7 l Plastic Container | 1 | | 1038310 | | | | | |
| C-200 | Release Agent | 5 l Plastic Container | 1 | 377284 | 4-5 8-9 | 915WB | Mold Cleaner | 1 l Metal Can | 1 | 846875 | 12-13 | | | |
| | | 20 (2x10) l Plastic Container | 1 | 377286 | | | | 913WB | Mold Cleaner | 1 l Plastic Container | | 1 | 1252382 | 12-13 |
| C-600 | Release Agent | 5 l Plastic Container | 1 | 1079359 | 4-7 | 909WB | Mold Cleaner | | | 1 l Plastic Container | 1 | 1252381 | 12-13 | |
| FMS | Mold Sealer | 1 l Metal Can | 1 | 381038 | 12-13 | | | FRP-NC | Release Agent | 1 l Metal Can | 1 | 381073 | | 6-7 |
| | | 5 l Metal Can | 1 | 381044 | | 5 l Metal Can | 1 | | | 381079 | | | | |
| Frewax | Release Agent | 1 l Metal Can | 1 | 381052 | 6-7 | 25 l Metal Drum | 1 | | | 381081 | | | | |



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For technical data sheets please visit: www.loctite.com

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