

Chemlease® | Zyvox®

Tailored solutions for **COMPOSITES** moulding challenges



Mould release agents Mould cleaners
Mould sealers Mould primers

 **Chem
Trend**

Release Innovation™

COMPOSITES

Each year, we spend thousands of hours on the plant floors of composites processors, giving our technical experts insight into the industry's toughest production challenges. In our world-class laboratories dedicated to the composites industry, we apply this insight to developing solutions that improve your operating efficiency.

***Our solutions will enhance
your bottom line by:***

Improving quality ▪ Reducing costs
Boosting productivity

INNOVATIVE SOLUTIONS

Chemlease® and Zyvax®, Chem-Trend brands, offer a complete range of mould release systems developed to improve composites moulding processes. By offering both Chemlease® and Zyvax® brands, Chem-Trend is uniquely positioned to fully support the wide range of composites applications, including aerospace, automotive, construction and industrial, marine, recreational goods, wind energy and more.

Our Chemlease® and Zyvax® product lines include:

- **Release agents** Quality, cost and efficiency depend on successful removal of the composite piece from the mould. Chemlease® and Zyvax® semi-permanent water-based and solvent-based release agents offer excellent release of large, expensive and intricate composite parts such as wind blades, boat hulls and aircraft parts. Amongst our industry leading release technology we offer a product group that allows the user to choose from multiple levels of release and slip, even on the same mould.

- **Cleaners** Water-based and solvent-based Chemlease® and Zyvax® mould cleaners thoroughly and safely aid the removal of mould buildup, including wax, silicone, contaminants and resin, from pre-production and in-line mould applications.
- **Sealers and primers** Chemlease® and Zyvax® mould sealers and primers work in unison with our release agents to protect your mould, offering enhanced surface finish and extended release film life. Chemlease® and Zyvax® primers are available for gloss and matte surface finishes.

CONVENTIONAL TECHNOLOGY

When you need high slip, turn to our conventional Chemlease® technology. These products are designed to release the most difficult resins and part geometries. Our conventional products are suitable for high-gloss or non-cosmetic applications in solvent-based and water-based options.



Our superior products are rooted in our manufacturing and technical expertise, understanding of composites moulding operations, deep industry insight and specialised laboratory resources.

INDUSTRY KNOWLEDGE FOR MAXIMUM EFFECTIVENESS

Composites moulding is demanding, and a mistake made in the de-moulding process can be costly. As your partner, we understand these challenges and the varying requirements for surface finish and post-moulding operations. With our understanding of the industry's complexities and trends, we can offer the most effective solutions for your needs.

The development of new chemical technologies in our own laboratories further extends our ability to formulate solutions that are most effective for the challenges of composites moulding. During product development, we simulate your production environment, enabling us to evaluate and ensure optimal quality and performance.

A REPUTATION FOR SUCCESS

For more than 50 years, Chem-Trend has been a global leader in the development of solutions for moulding and casting process challenges. We have a singular focus on developing chemical specialties for processing. Because we are so focused, we can deliver exceptional value, performance and dependability in all we do.

MANUFACTURING EXCELLENCE


We are committed to excellence in all aspects of manufacturing. We are leaders in quality manufacturing practices, environmental standards and health and safety management systems. Our facilities hold the following certifications:

- ISO-9001
- ISO-14001
- OHSAS-18001

GLOBAL LOCATIONS FOR LOCAL SERVICE

As a global supplier singularly focused on mould processing solutions, we operate from offices, manufacturing facilities and distribution partners in all industrialised regions of the world, providing local sales and technical support wherever you need us.





Let our experienced, knowledgeable
and insightful team of experts deliver
value-adding solutions to help you improve quality,
reduce costs and boost productivity.

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a brand of
 **FREUDENBERG**



PRODUCT DATA SHEET

Chemlease® 15 Sealer EZ Mold Sealer

Description

Chemlease® 15 Sealer EZ is a high performance sealer developed to condition and seal mold surfaces, reduce mold porosity and act as a base for new or reconditioned molds.

Benefits

- HAPs free*
- Reduces porosity problems.
- Provides an excellent base coat for all types of release agents.
- Compatible with fiberglass, aluminum, steel, and most solid or dense surfaces
- Shortens break-in time.
- Reduces labor time and costs
- High temperature stability

*HAPs are not formula constituents of this product. Standard manufacturing processes may result in trace quantities [$<0.1\%$] of HAPs.

Chemlease® solvent carriers contain no Class I or II registered ozone depleting substances.

Application Instructions

Wiping

1. Mold surface must be thoroughly cleaned to remove all traces of wax, release agents, and other sealers. We recommend Chemlease® Mold Cleaner.
2. Surface should be dry and free of contaminants.
3. Saturate clean cotton cloth (not dripping) and wipe on a smooth continuous film of no more than a few square feet at a time.
4. When the film begins to evaporate at the edges, wipe the surface with a second clean dry cotton cloth. Use a circular motion from the outside, working inwards until the tooling is left dry and clear. See **Notes**.
5. Repeat above procedures until entire mold surface has been covered. Usually only one coat is necessary on a seasoned mold (Two coats are recommended when sealing a new or green mold. Allow 15 minutes cure time between the first and second application. Wait 1 hour after the second coat before applying the release or top coat).
6. Allow to cure for one hour before applying mold release.

Spraying

1. Mold surface must be thoroughly cleaned to remove all traces of wax, release agents, and sealers.
2. To apply by spraying use a new, clean, hand held manual spray bottle or a clean dry air system. It is important that all containers and spray lines be thoroughly clean and dry. If container is dirty, rinse at least 2 times with an appropriate cleaner.
3. Keep spray nozzle 15 inches from mold surface and apply a smooth, thin continuous film. Do not allow to run or drip (by over applying).

4. When film begins to evaporate at edges, wipe the surface with a second clean dry cotton cloth using a circular motion from the outside, working inwards until film is left dry and clear. See **Notes**.
5. Repeat above procedures until the entire mold surface is covered, overlapping slightly to ensure complete coverage. Usually only one coat is necessary on a seasoned mold (Two coats are recommended when sealing a new or green mold. Allow 15 minutes cure time between the first and second application. Wait one hour after the second coat before applying the release or top coat).
6. Allow to cure for one hour before applying mold release.

Notes

Time will vary with room and mold temperature. Wipe off as the solvent begins to evaporate. If the release agent is left on too long, you may notice some smearing or streaking. To remove the smear or streak, rub the affected area with the recommended Chemlease® release agent, then simply remove the excess sooner than you had before.

Important

The recommended number of coats and cure times are a general guideline found to be more than sufficient in a broad spectrum of molding conditions. When molding products with extreme geometries or experiencing low-humidity conditions in the shop, the customer may find the need to extend the cure time between coats and increase the number of coats applied to the mold. The efficiency of a release film is best determined through a combination of tape tests and experimentation.

Troubleshooting Tips

1. Keep container closed at all times when not in use.
2. Mold must be thoroughly cleaned and dried before application. A good test to tell if the mold is clean is to use a small piece of masking tape (approximately 1" in width) on the mold surface. Sufficient resistance should be felt when removing the tape.
3. Material should be clear with no noticeable precipitate. If cloudy or milky, material is contaminated.
4. Areas of application should be well ventilated.

Storage

Do not store above 49°C/120°F. Keep container tightly sealed to prevent evaporation and/or contamination. If stored in cold temperatures, allow to warm to room temperature before using.

Packaging

Chemlease® 15 Sealer EZ is available in a variety of package sizes. Please contact Chem-Trend customer service for details.

Safety Data

Safety Data Sheets are available for all Chemlease® products and should be consulted prior to use of the product.



PRODUCT DATA SHEET

Chemlease® 70 EZ Release Agent

Description

Chemlease® 70 EZ is a unique semi-permanent mold release system developed specifically for the composites industry, for use where a high quality finish is required.

Benefits

- HAPs free*
- Multiple releases between applications
- Easy to apply
- Eliminates the use of wax
- Reduces labor time and costs
- Provides excellent gloss
- High temperature stability
- Does not build up on the mold surface
- Minimal transfer to molded part

* HAPs are not formula constituents of this product. Standard manufacturing processes may result in trace quantities [$<0.1\%$] of HAPs.

Chemlease® solvent carriers contain no Class I or II registered ozone depleting substances.

Mold Preparation

1. Mold surfaces should be thoroughly cleaned to remove all traces of wax, release agents, sealers and buffing compounds.
2. Do a final cleaning of mold surface with Chemlease® Mold Cleaner.
3. Seal mold with the appropriate Chemlease® Sealer.

Application

1. Mold surface must be thoroughly cleaned to remove all traces of wax, release agents, and other sealers.
2. Surface should be dry and free of contaminants.
3. Saturate clean cotton cloth (not dripping) and wipe on a smooth continuous film. Apply no more than a few square feet at a time.
4. When the film begins to evaporate at the edge, wipe the surface with a second clean dry cotton cloth. Use a circular motion from the outside, working inwards until film is left dry and clear. See **Notes**.
5. Repeat above procedures until entire mold surface has been covered.
6. Apply 4-5 coats, allowing 15 minutes between each complete coat.
7. Allow 30 minutes for full cure. Proceed with production.

Notes

Time will vary with room and mold temperature. Wipe off as the solvent begins to evaporate. If the release agent is left on too long, you may notice some smearing or streaking. To remove the smear or streak, rub the affected area with the recommended Chemlease® release agent, and then simply remove the excess sooner than you had before.

Test To Ensure Proper Application

Attach a small strip of masking tape to different areas of the mold. There should be very little resistance when removing the tape if proper release is applied. Compare to an untreated mold. (Tape should adhere to untreated mold).

Touch-Up Coats

Once in production the release film will begin to wear. Rather than applying a touch-up coat once the parts begin to stick, it is better to do preventative maintenance. For example, if trials determine that 20 releases are obtainable between touch-up coats, it is better to reapply a touch-up coat after every 15 cycles or at the end of every second shift. The above-described action will keep the molds in production longer and help establish a routine of quality preventative maintenance.

Important

The recommended number of coats and cure times are a general guideline found to be more than sufficient in a broad spectrum of molding conditions. When molding products with extreme geometries or experiencing low-humidity conditions in the shop, the customer may find the need to extend the cure time between coats and increase the number of coats applied to the mold. The efficiency of a release film is best determined through a combination of tape tests and experimentation.

Storage

Do not store at temperatures above 49°C/120°F. Keep container tightly sealed to prevent evaporation and/or contamination. If stored in cold temperatures allow warming to room temperature before using.

Packaging

Chemlease® 70 EZ is available in a variety of package sizes. Please contact Chem-Trend customer service for details.

Safety Data

Safety Data Sheets are available for all Chemlease® products and should be consulted prior to use of the product.

While the technical information and suggestions for use contained herein are believed to be accurate and reliable, nothing stated in this bulletin is to be taken as a warranty either expressed or implied.



PRODUCT DATA SHEET

Chemlease® 71-90 EZ Semi-Permanent Release Agent

Description

Chemlease® 71-90 EZ is a rapid curing semi-permanent mold release agent that provides multiple releases with minimal transfer to the molded part. Chemlease® 71-90 EZ is the highest slip version of the Chemlease® 71 family; primarily for closed molding of abrasive or low draft parts.

Benefits

- HAPs Free*
- High thermal stability
- Easy to apply
- Multiple releases between applications.
- Reduces labor time and cost

* HAPs are not formula constituents of this product. Standard manufacturing processes may result in trace quantities [$<0.1\%$] of HAPs.

Chemlease® solvent carriers contain no Class I or II registered ozone depleting substances

Mold Preparation

1. Clean mold surface to remove all traces of waxes, releases and sealers.
2. Clean mold with Chemlease® Mold Cleaner.
3. Apply the appropriate Chemlease® Sealer to new or porous molds (contact a Sales Rep or Distributor for details).

Application For Base Coats

1. Mold surface must be thoroughly cleaned to remove all traces of wax, release agents, and other sealers.
2. Surface should be dry and free of contaminants.
3. Saturate clean cotton cloth (not dripping) and wipe on a smooth continuous film. Apply no more than a few square feet at a time.
4. When the film begins to evaporate at the edge, wipe the surface with a second clean dry cotton cloth. Use a circular motion from the outside, working inwards until film is left dry and clear. See Notes.
5. Repeat above procedures until entire mold surface has been covered.
6. Apply 4-5 coats, allowing 15 minutes between each complete coat.

Touch-Up Coats

Reapply one light coat as required and cure as for final coat.

Notes

Time will vary with room and mold temperature. Wipe off as the solvent begins to evaporate. If the release agent is left on too long, you may notice some smearing or streaking. To remove the smear or streak, rub the affected area with the recommended Chemlease® release agent, and then simply remove the excess sooner than you had before..

Important

The recommended number of coats and cure times are a general guideline found to be more than sufficient in a broad spectrum of molding conditions. When molding products with extreme geometries or experiencing low-humidity conditions in the shop, the customer may find the need to extend the cure time between coats and increase the number of coats applied to the mold. The efficiency of a release film is best determined through a combination of tape tests and experimentation.

Packaging

Chemlease® 71-90 EZ is available in a variety of package sizes. Please contact Chem-Trend customer service for details.

Safety Data

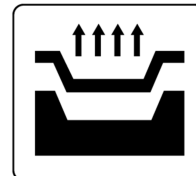
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Chemlease® Flex-Z™

Solvent-Based Semi-Permanent Release Agents



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Description

Chemlease® Flex-Z™ is an industry breakthrough - a variable release system that gives total control to the molder. An array of six products with a common platform, Chemlease® Flex-Z™ provides flexibility in mold release levels that is an absolute requirement. Formulated to control physical and chemical factors in polyester-molding environments, Chemlease® Flex-Z™ reduces prep time, eliminates sag and delivers predictable release across the performance spectrum from minimum to maximum slip. For the correct mold release system best suited to your needs, see our website:

www.chemtrend.com.

Benefits

- Low Odor
- Thermal stability: 480 °C (900°F)
- Excellent tape adhesion
- Fast, easy and versatile application
- Adjustable slip-coat for pre-release control
- Prevents styrene build up

Uses

Chemlease® Flex-Z™ 1.0 (Minimum Slip)

Inhibits pre-release and promotes tape adhesion

Chemlease® Flex-Z™ 2.0 (Low/Medium Slip)

Ideal for the occasional pre-release problem

Chemlease® Flex-Z™ 3.0 (Medium Slip)

Standard choice for large hulls and flat areas

Chemlease® Flex-Z™ 4.0 (Medium/High Slip)

If you don't know where to start, start here

Chemlease® Flex-Z™ 5.0 (High Slip)

Excellent choice for small parts and high wear areas

Chemlease® Flex-Z™ 6.0 Extra Slip

Use on difficult-to-release male molds or as a flange release

Application Instructions

Before applying Chemlease® Flex-Z™:

Remove all previous waxes or oils using a Chemlease® mold and part cleaner. Apply a Chemlease® sealer such as Chemlease® Sealer GP if required, allowing 15 minutes between each coat and 30 minutes after the last coat. (New molds and freshly repaired molds typically require sealing with Chemlease® Sealer GP).

1. If wiping: Apply Chemlease® Flex-Z™ to a small area of the mold (1-2 ft²; 0.2 m²) using a 100% cotton cloth wipe or paper towel or wipe on a light coat and DO NOT WIPE OFF.
2. If spraying: Using an HVLP type sprayer, Chemlease® Flex-Z™ should go on as a dry spray with no wet areas left behind the spray. Keeping the spray head 6-12 inches (if possible) from the surface, carefully and thoroughly spray the entire mold surface. If an area is over saturated, simply

wipe the wet area with a clean, dry cloth to ensure even coverage.

3. Carefully and thoroughly coat the entire mold surface.
4. Allow 15 minutes to cure before applying the next coat. Apply three additional coats of Chemlease® Flex-Z™ in the same way, and wait for a minimum 15 minutes before using the mold. For touch ups, apply a single coat of Chemlease® Flex-Z™, wait 15 minutes, and continue processing. **TIPS:** If more or less slip is needed, simply move up or down the Flex-Z® slipcoat scale. Two coats should be applied when doing so. Individual sections of a mold can be treated with different slipcoats to achieve optimum results.

Important

The recommended number of coats and cure times are a general guideline found to be more than sufficient in a broad spectrum of molding conditions. When molding products with extreme geometries or experiencing low-humidity conditions in the shop, the customer may find the need to extend the cure time between coats and increase the number of coats applied to the mold. The efficiency of a release film is best determined through a combination of tape tests and experimentation.

Storage

For best results, store between 5°C and 30°C. Keep from freezing. Keep container tightly sealed to prevent evaporation and/or contamination. If stored in cold temperatures, allow product to warm to room temperature prior to use.

WARNING: Never puncture any Chemlease® product container.

Handling

We believe Chemlease® Flex-Z™ has a low degree of hazard when used as intended. For more information, request a copy of Chem-Trend's Safety Data Sheet.

Packaging

Chemlease® Flex-Z™ is available in a variety of package sizes. Please contact Chem-Trend customer service for details.

Further Information

Request information on our complete range of materials: custom-formulated release agents for polyurethane molding; tire lubes and bladder coatings; Mono-Coat® semi-permanent release coatings; aerosol formulations; mold cleaners and sealers; specialized coatings and application equipment.

While the technical information and suggestions for use contained herein are believed to be accurate and reliable, nothing stated in this bulletin is to be taken as a warranty either expressed or implied.



PRODUCT DATA SHEET

Chemlease® Mold Cleaner

Mold Cleaner

Description

Chemlease® Mold Cleaner is a special blend of solvents designed to dissolve and remove wax from composite molds. It is ideal for preparing composite mold surfaces for the application of Chemlease® mold sealers and releasants. Chemlease® Mold Cleaner is also excellent for cleaning brushes and equipment.

Application

1. Chemlease® Mold Cleaner should be applied to the mold surface with clean 100% cotton cloths. While the mold surface is still wet, vigorously wipe the mold dry with a second clean, dry 100% cotton cloth.
2. Frequently exchange saturated cloths with new, clean cloths.
3. Repeat process several times until all residues (dirt, dust, grease, moisture, etc.) is removed (at least two cleanings are recommended.)
4. The mold is then ready for application of Chemlease® Mold Sealer and/or Chemlease® Mold Release.

Note

If you plan to use compounds or glazes, etc., prior to applying Chemlease® Mold Sealer and/or Chemlease® Mold Release, be sure to wipe clean with Chemlease® Mold Cleaner after doing so, as most buffing compounds will not allow Chemlease® sealers and release agents to work properly. Prolonged exposure on the mold surface (puddling, dipping, etc.) should be avoided.

WARNING

FOR INDUSTRIAL USE ONLY: FLAMMABLE -
Flash Point 34°F

Keep away from heat sparks and open flame. Close can after using. Avoid breathing of vapor or spray mist or prolonged contact with skin. Use only with adequate ventilation. DO NOT take internally. In confined areas, operators should wear respirators or fresh air masks. Industrial grade solvent resistant gloves should be worn while using Chemlease® materials.

Safety Data

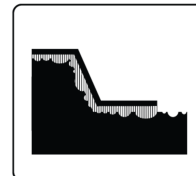
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Chemlease® Sealer 2667

Mold Sealer



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Description

Chemlease® Sealer 2667 is a high modulus, clear, flexible film with superior substrate adhesion that forms a protective shield on the mold surface. As a conditioner, Chemlease® Sealer 2667 is designed to treat both the chemical and physical bonding sites found on every "raw" mold surface. In addition, Chemlease® Sealer 2667 provides the base needed to extend the life of the release coating and will allow optimal performance from the release coating. For the mold release system best suited to your needs, see our website.

Benefits

- Retains mold detail and finish
- Thermal Stability: 480°C (900°F)
- Restores vacuum integrity
- Can be used with all release agents

Uses

Chemlease® Sealer 2667 overcomes micro-porosity in mold surfaces, eliminates the break-in time for new molds, restores a uniform surface when used over a mold repair or patch, protects the surface of the mold from styrene emission and oxidation, therefore extending the useful life of the mold.

Application

Before applying Chemlease® Sealer 2667:

All previous surface treatments, residues, waxes or oils should be removed using a Chemlease® mold and part cleaner.

1. Apply Chemlease® Sealer 2667 to a small area of the mold (1-2 ft²; 0.2 m²) using a paper towel or clean, lint-free cloth.
2. While still wet, wipe dry using a separate clean paper towel or lint free cloth. Make sure entire mold surface is coated in this manner, slightly over-lapping the last coated area if you are applying in sections. Be certain that all contours are adequately coated.
3. Allow a minimum of 15 minutes cure time before application of next coat.
4. Apply a second coat of Chemlease® Sealer 2667 in the same way, and wait for a minimum of 15 minutes before applying the next coat. Four coats are recommended for most substrates. Additional coats can be used for porous or repaired molds. After the final coat of Chemlease® Sealer 2667, wait at least 30 minutes before applying release agent.

Storage

Store product between 5°C and 30°C (41°F and 86°F). Shelf life is 18 months from the date of manufacture, in the original unopened container. NOTE: Product is moisture-sensitive. Container must be kept tightly closed when not in use.

Use Life

Use life of product is 60 days from opening of container. Product must be kept in the original container and the lid replaced immediately after dispensing. After opening, product should continue to be stored properly.

WARNING: Never puncture any Chemlease® product container.

Safety Data

Safety datasheets for all Chemlease® products are available and should be consulted prior to use.

Further Information

Request information on our complete range of materials: custom-formulated release agents for polyurethane molding; tire lubes and bladder coatings; Mono-Coat® semi-permanent release coatings; aerosol formulations; mold cleaners and sealers; specialized coatings and application equipment.

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