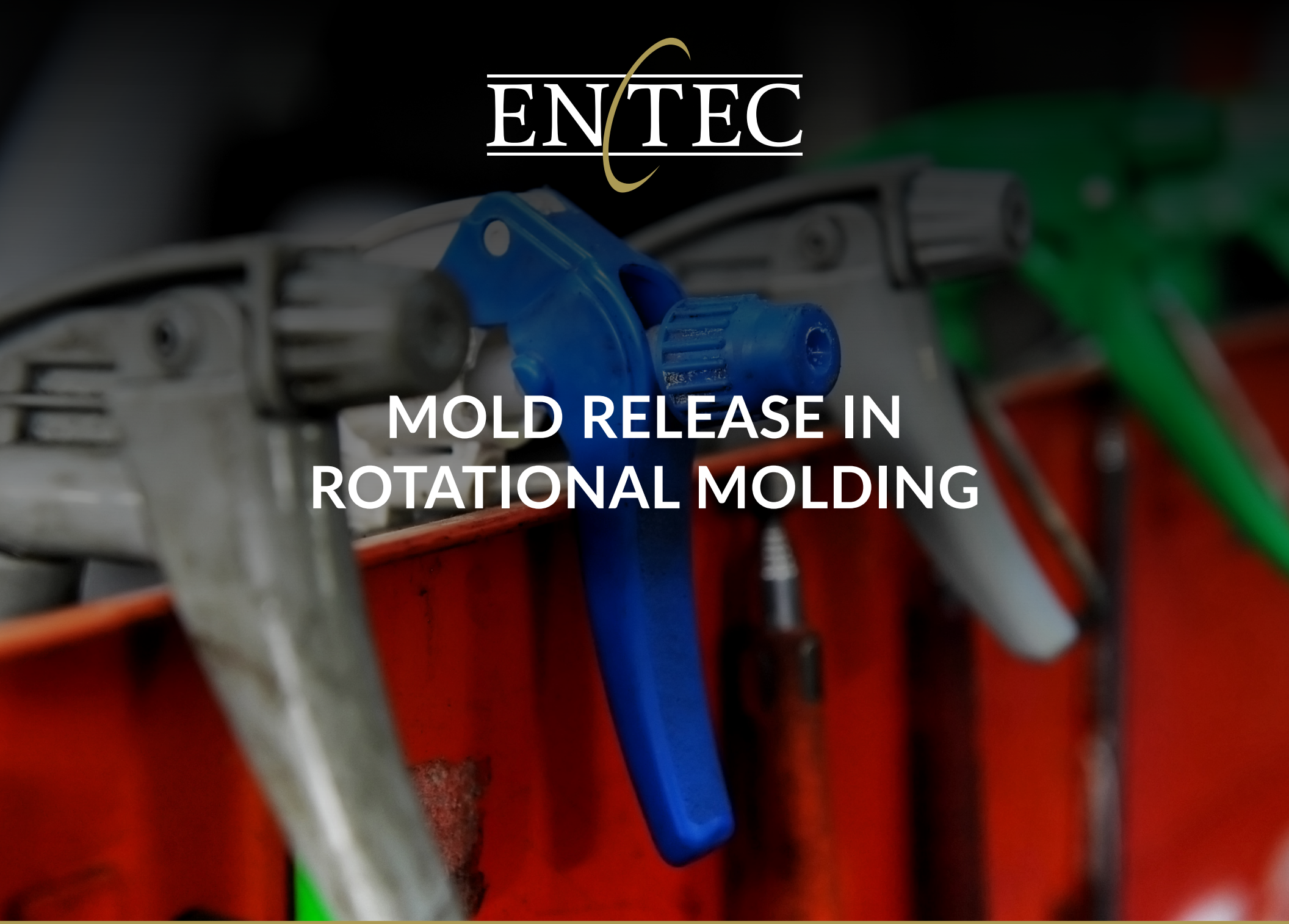


MOLD RELEASE IN ROTATIONAL MOLDING

MOLD RELEASE IN ROTATIONAL MOLDING

How Mold Release Works – During the molding process, melted plastic forms on the inside surface of a mold. In certain areas of the mold like under cuts, deep recesses, pull pins, and kiss-offs the plastic can at times stick during the cooling cycle. Mold Release is an agent that can be applied onto these areas to allow the molded part to release from the mold's surface more easily during the demolding process.

However, if used incorrectly, mold release can cause molds to produce many unacceptable or reject parts. Warpage, surface pitting, release build up and dimensional issues can be caused from a poor application process.

Mold release agents are barriers between the mold and the molded part. The most common types are either water base or solvent based.

Mold Release Types

Conventional or Sacrificial
- Must be used prior to every molding cycle

Permanent
- Sintered or melted to mold surface
- Typically PTFE

Semi Permanent
- Re-applied from time to time

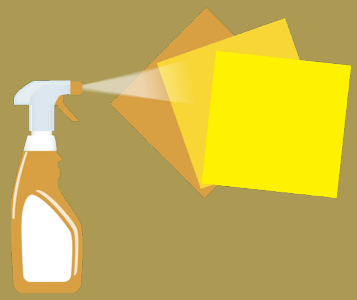
In general, most mold release agents work best when they are applied to a warm mold. Most often the mold temperature needs to be at least 130F° before the mold release should be applied. Use a temperature gauge to check the internal mold surface temperature before applying the release. If the temperature drops below 130°F the mold should be re-heated in order to raise the mold temperature to 130°F for the best results. This ensures that the Semi-permanent mold release bonds well to the mold surface so that it works properly and doesn't just pull off after one or two cycles.

MOLD RELEASE IN ROTATIONAL MOLDING

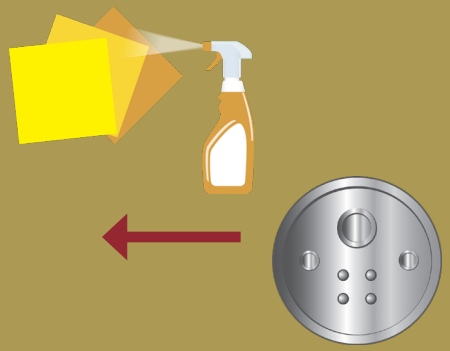
Mold release should always be used sparingly and only when needed. If you are unsure of the correct way to apply mold release to the surface of a mold, contact your Process Technician or Supervisor. It's always a great idea regardless of the mold release type to shake the mold release vigorously before each use. Below are some key points that we recommend:

Do not spray the release directly onto the surface of the mold.

Always spray the mold release onto a clean rag or one that has only been used for the same release agent.

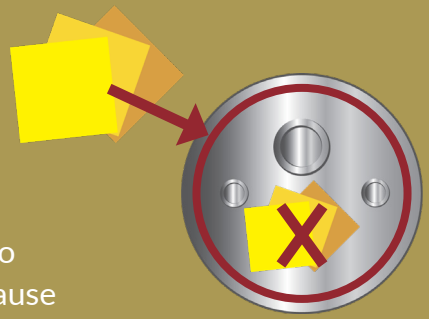


When applying the mold release to the rag do so away from the open mold so that overspray doesn't become an issue.



Use the rag to safely apply the mold release ONLY to the area that needs to be released.

Avoid applying the mold release agent onto flat areas of the mold which could easily cause warpage issues.



At Entec we are here to help and assist you with training and coaching your team in the proper way to apply mold release your molds. Applying mold release the correct way is key to your process and can easily reduce scrap parts. For a more detailed discussion on choosing the correct mold release type or application methods please feel free to reach out and let us know how we can help!