



Tergo® Precision Cleaners

Economical | Safe | Engineered for Performance

Topics



- **Tergo® Precision Cleaners - Only from MicroCare®**
- **Vapour Degreasing**
- **Tergo® Metal Cleaning Fluid (MCF)**
- **General Conversion Guidelines from TCE or nPB**
- **Material Compatibility**
- **MicroCare Product Selector**

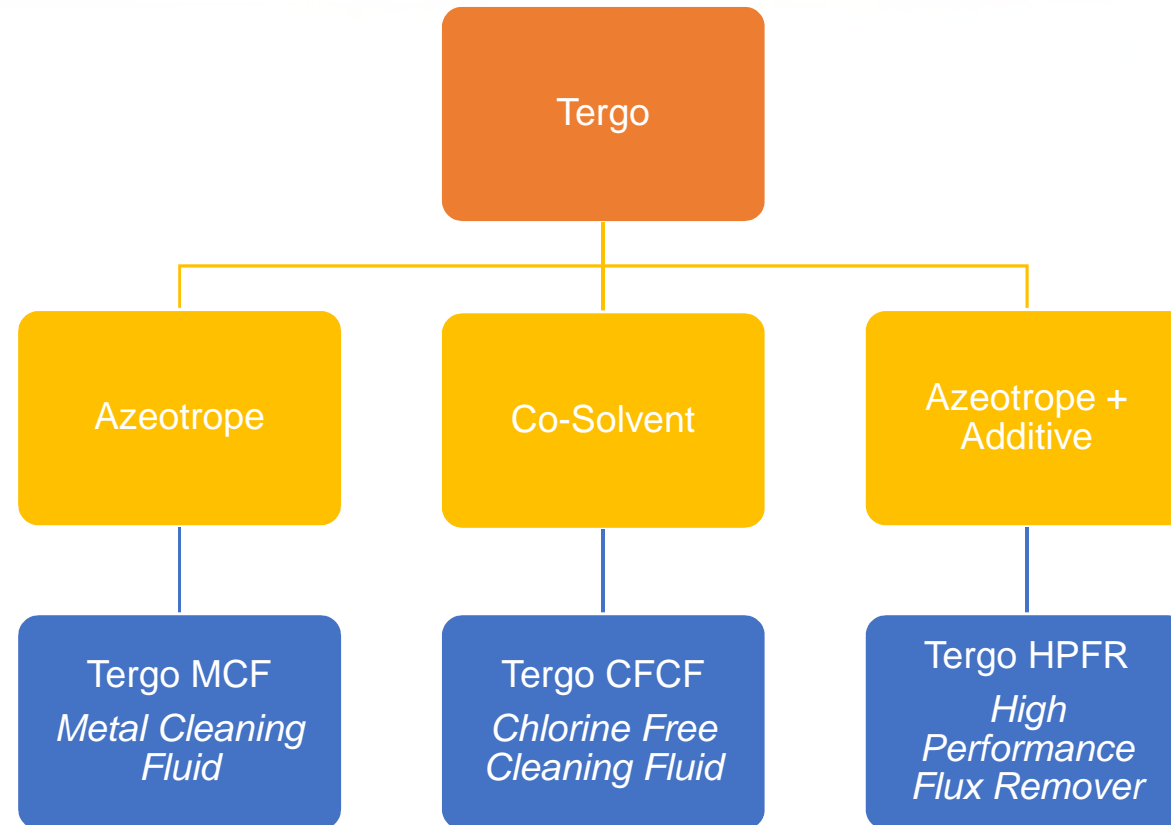
Tergo® Precision Cleaners

Only from MicroCare®

A line of fast drying, non flammable, solvent based cleaners designed to clean a broad array of hard to clean soils and contaminants.

Tergo® Precision Cleaners

Only from MicroCare®



Tergo® Benefits

Only from MicroCare®



- **EPA approved**
- **Non-flammable**
- **Safe**
 - Favorable exposure levels
 - Non flammable
- **DOT Non-Hazardous**
- **Have lower VOC and GWP values than historic solvents**
- **Uses existing equipment**

Tergo® Benefits

Only from MicroCare®

*Shrinking surface features
Increasing environmental pressure on waste water*

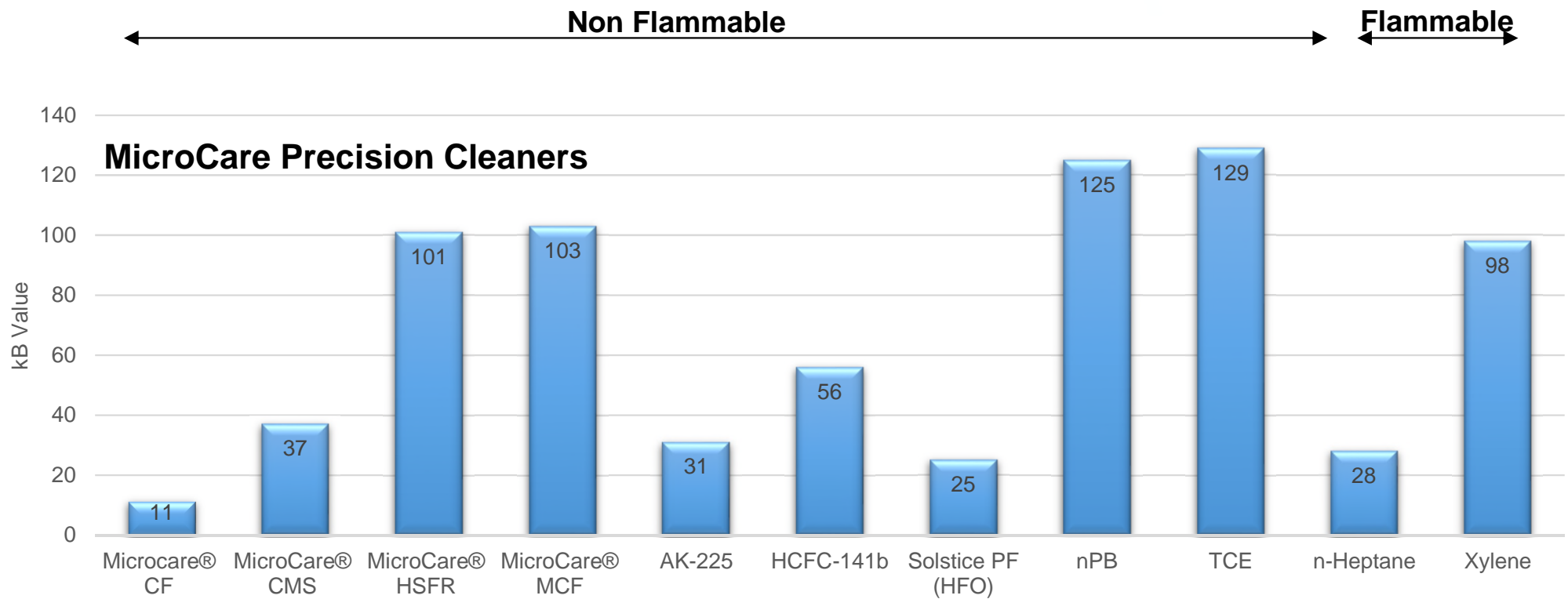
- Excellent penetrating properties (low surface tension, low viscosity, high density)
- Good cleaning strength
- Fast drying
- Compatible with most surfaces
- Excellent recyclable, environmental properties
- Safe
- Competitive investment cost



Tergo® Benefits – Range of Cleaning Strength

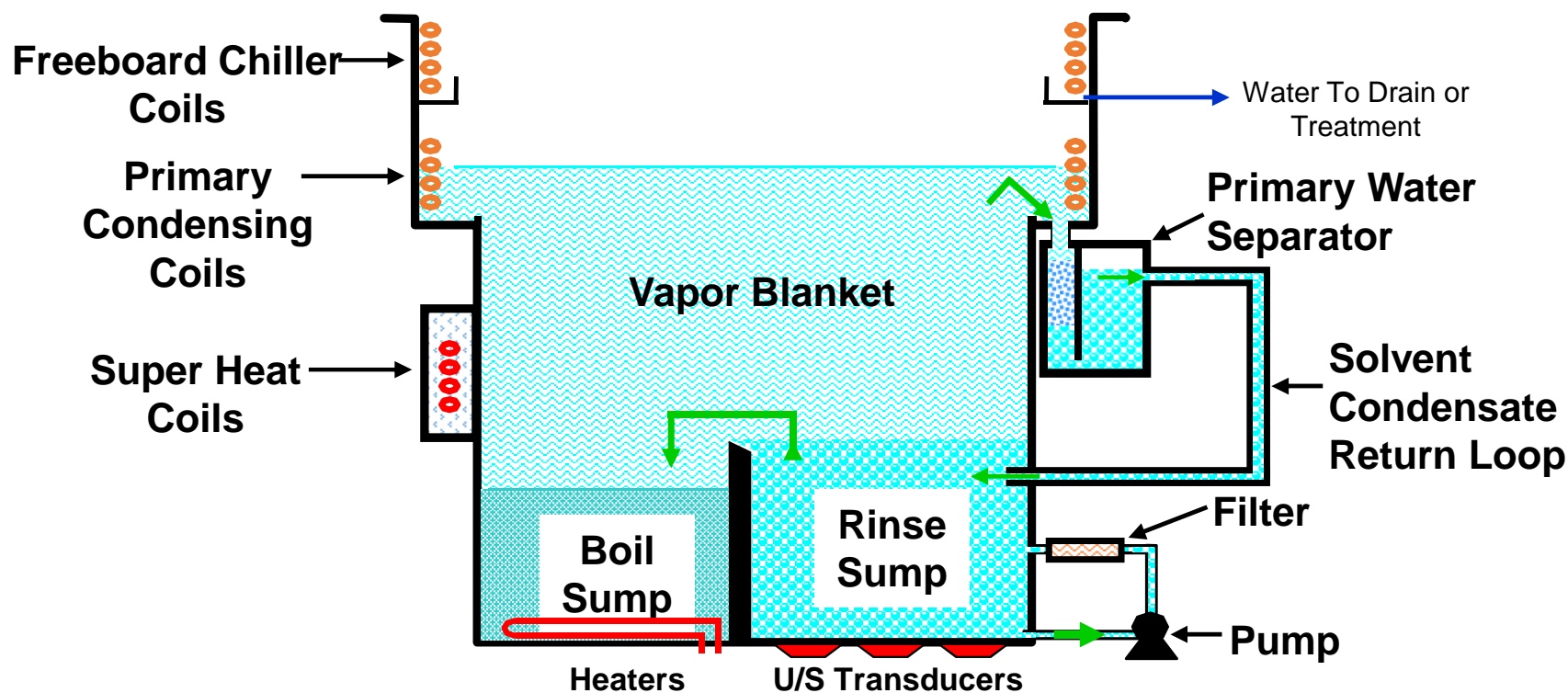
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↑ Cleaning Strength ↓



Tergo® - In Vapour Degreasing Equipment

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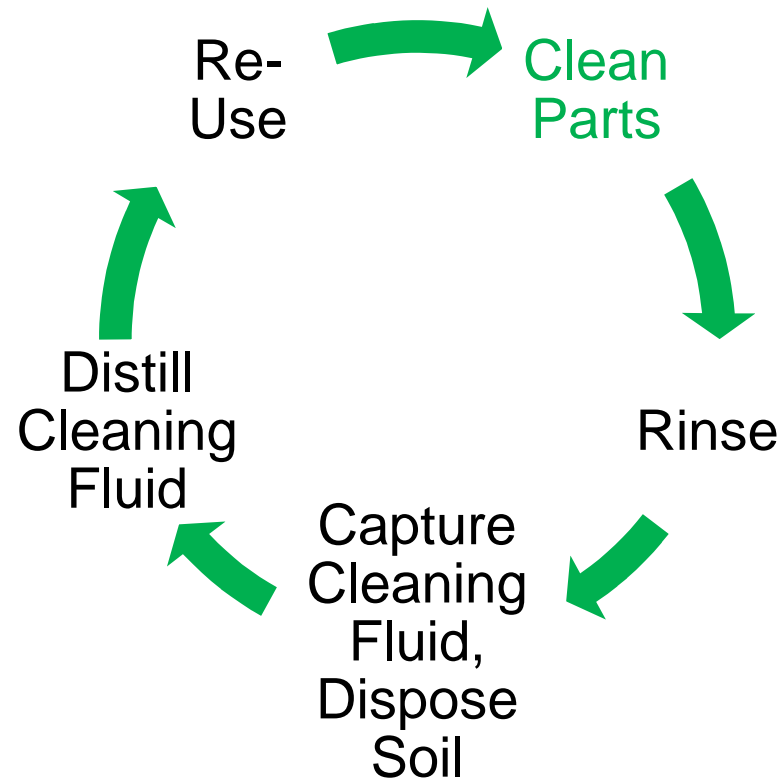


Purpose of Vapour Degreasing

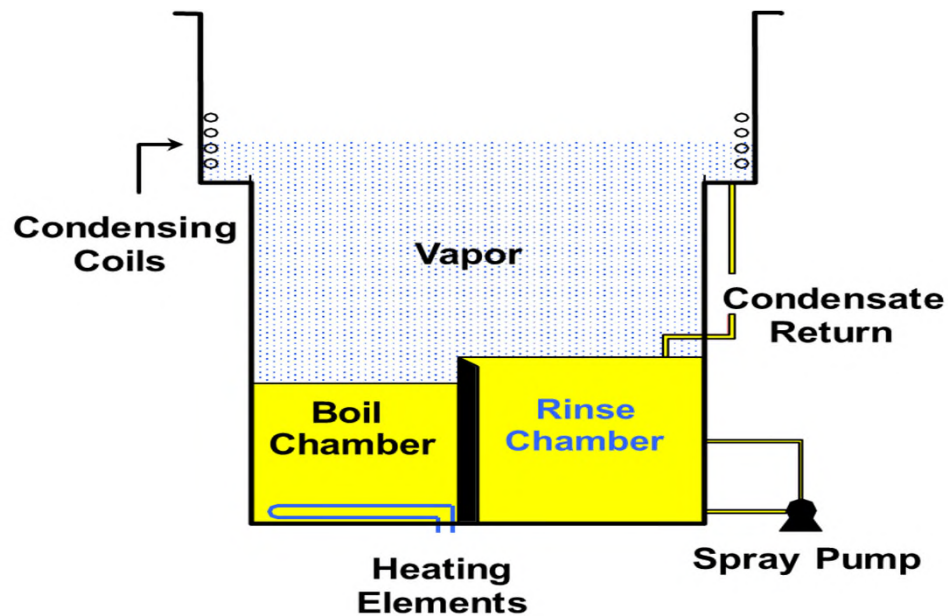
- **Keep cost down by capturing and reusing solvent**
- **Protect the environment by reducing waste**
- **Improve plant efficiency (speed, consistency, quality)**

MicroCare recommends the use of a vapor degreaser

Purpose of Vapour Degreasing



Benefits of Vapour Degreasing



Function: Distills, cleans, and recycles solvents


Benefits:

- Clean solvent always available.
- Eliminates solvent emissions
- Eliminates liquid waste

Parts placed in the vapor will condense and be wet with solvent

Benefits of Vapour Degreasing



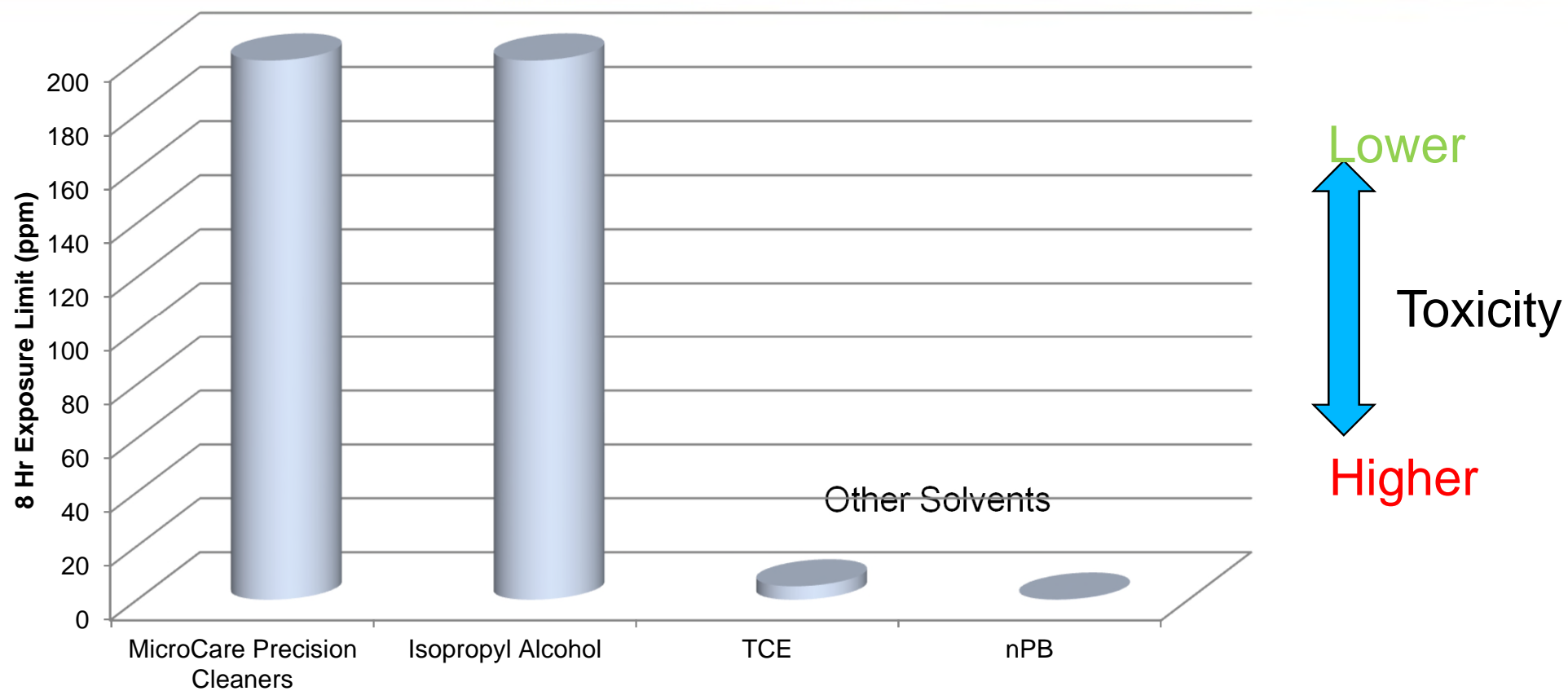
- Improved product consistency by reducing operator error
 - Increased line speed, shorter cycle time
 - Reduced waste by capturing, recycling and reclaiming solvent
 - No water treatment required
 - No hot air drying required
 - Small equipment foot print
 - Easy to use
- 

Tergo® MCF Description

- Proprietary azeotrope
 - fluorinated mixture
 - t-dichloroethylene
- Physical Properties
 - Boiling point: 47 C
 - KB: 103
 - Specific Gravity: 1.28
 - Surface Tension: 20.7 cp
- Ideal for vapor degreasing

Tergo® MCF – Safety Profile (MCF)

Only from MicroCare®



Solvent Conversion Guideline



1. **Cleaning test.** Will the candidate solvent clean the part? Is it compatible?
Cleaning cycle?
2. **Equipment:** what type of equipment is best to clean the part and efficiently use solvent.
3. **If using a vapor degreaser,**
 - A. Check for gasket and elastomer compatibility.
 - B. Match heat input with cooling capacity for new solvent.
 - C. Check solvent turnover rate. Is there enough clean solvent available to match production needs?
 - D. Adjust thermostats as needed

TCE or nPB Conversion

- **No solvent maintenance required**
- **Heating and cooling capacity must be balanced**
 - Oil Heat: Reduce oil temperature to keep delta T the same.
 - Electric Heat: No change required.
 - Steam Heat: Too difficult to control. Recommend change to oil
- **Make sure freeboard chillers cover the entire opening area.**
- **Install refrigerated freeboard chillers.**
- **Adjust temperature switches.**

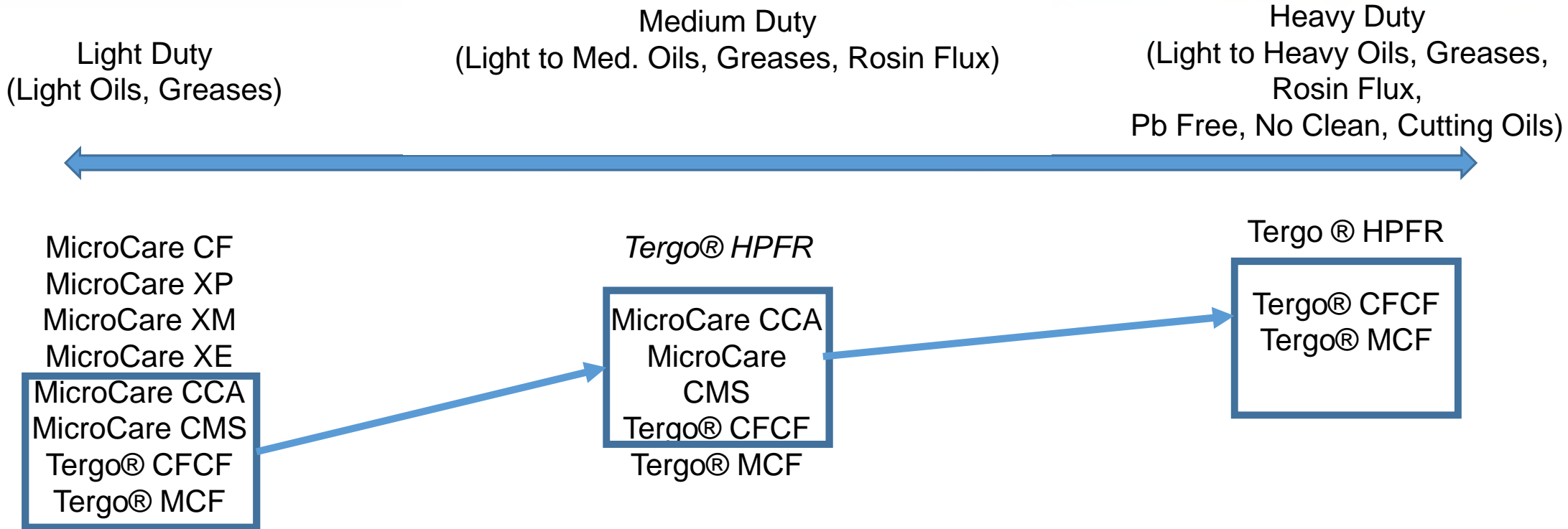
Material Compatibility

METALS*						
MicroCare® Precision Cleaners are compatible with most metals.						
PLASTICS*	MicroCare CF	MicroCare CFM	MicroCare CCA	MicroCare CMS	MicroCare HDS	Tergo® MCF
Polyethylene	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Polypropylene	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Polyester (PET, PBT)	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Nylon	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
FEP/PFA	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Halar	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Kynar	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Polyimide (PI, PEI, PAI)	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Polyetheretherketone (PEEK)	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Polyphenylene Sulfide (PPS)	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Polysulfone (PSO)	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Acetal	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Epoxy	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Phenolic	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
PTFE, ETFE	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Polyvinyl Chloride (PVC)	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Polystyrene	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
Cellulose	Incompatible	Incompatible	Incompatible	Incompatible	Incompatible	Incompatible
Polyphenylene Oxide (PPO)	Compatible	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
ABS	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Acrylic	Incompatible	Incompatible	Incompatible	Incompatible	Incompatible	Incompatible
Polycarbonate	Marginal	Marginal	Marginal	Incompatible	Incompatible	Incompatible
Polyacrylate	Incompatible	Incompatible	Incompatible	Incompatible	Incompatible	Incompatible

ELASTOMERS*							
Polysulfide	Compatible	Compatible	Compatible	Compatible	Compatible	Unknown	Unknown
Chlorosulfonated PE	Compatible	Compatible	Compatible	Compatible	Compatible	Unknown	Unknown
Neoprene	Compatible	Compatible	Compatible	Compatible	Compatible	Unknown	Unknown
EPDM	Compatible	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Butyl Rubber	Compatible	Compatible	Compatible	Compatible	Compatible	Unknown	Unknown
Buna N	Compatible	Compatible	Marginal	Compatible	Incompatible	Incompatible	Incompatible
Urethane	Compatible	Compatible	Marginal	Compatible	Compatible	Unknown	Unknown
Buna S	Compatible	Compatible	Marginal	Compatible	Compatible	Unknown	Unknown
Polychloroprene	Unknown	Unknown	Marginal	Unknown	Unknown	Unknown	Unknown
Silicone	Compatible	Compatible	Marginal	Compatible	Compatible	Incompatible	Incompatible
Natural Rubber	Compatible	Compatible	Marginal	Compatible	Compatible	Unknown	Unknown
Kalrez	Swelling	Swelling	Swelling	Swelling	Swelling	Swelling	Swelling
Ryton	Unknown	Unknown	Unknown	Unknown	Unknown	Compatible	Compatible
PTFE w/EPDM	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
PTFE w/Neoprene	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
Hypalon	Unknown	Unknown	Unknown	Compatible	Incompatible	Incompatible	Incompatible
Viton	Swelling	Swelling	Swelling	Swelling	Swelling	Swelling	Swelling
Fluorosilicone	Unknown	Unknown	Unknown	Unknown	Incompatible	Incompatible	Incompatible

*The data presented here is for guidance only. MicroCare recommends that all materials be tested as close to actual in-use conditions before use. Material composition varies depending upon compounding agents, plasticizers, process, etc. Specific materials should be tested for compatibility with solvent. Elastomer swelling and shrinking will, in most cases, revert to within a few percent of original size after drying.

Product Selector



MicroCare[®]



Thank you