# Tergo<sup>™</sup> GCF

## **General Cleaning Fluid**

For the removal of both organic and inorganic soils; including cutting oils, drawing oils, rosin and no-clean flux residues.



#### The MicroCare<sup>®</sup> Signature Line of Precision Products

Cutting-edge cleaning fluids meticulously crafted for diverse industrial applications. Each Tergo" product boasts a distinctive formula and unparalleled operational attributes, all united by a common mission: to deliver efficient and sustainable performance.



### Introduction

*Tergo* General Cleaning Fluid (GCF) is an azeotrope-like mixture of trans 1,2-dichloroethylene, HFE and ethanol. It is ideally suited for use in vapor degreasing equipment. It offers improved solvency for both conventional oils and polar soils, such as salts and no-clean fluxes. It is a superior solvent compared to neat fluorocarbons, while maintaining excellent compatibility with most plastic, ceramic, and metal components. Typical applications include precision and specialty cleaning of components with mixed soils and/or mixed substrates.

*Tergo* GCF has "zero" ozone depletion potential, and low global warming potential. It can replace hydrofluorocarbons (HCFs), TCE and nPB in many applications. The components in *Tergo* GCF are accepted by the U.S. Environmental Protection Agency under the Significant New Alternatives Program (SNAP) program, as a substitute for ozone-depleting substances.

Its unique properties (Table 1) include a high density, low viscosity, and low surface tension for effective removal of a variety of soils.

Property <sup>1</sup>	Value
Boiling Point, °C (°F)	42 (107)
Liquid Density, g/cc (lb/gal)	1.35 (11.2)
Vapor Pressure, kg/cm @20C	0.49
Surface Tension, dyn/cm	18
Freezing Point (°F)	-58
Heat of Vaporization (at boiling point), cal/g	47.8
Viscosity, cPs @ 22C	0.46
Flash Point Closed Cup <sup>2</sup> Open Cup <sup>3</sup>	None None
Vapor Flammability in Air, vol% Lower Limit Upper Limit	None None

#### **Table 1. Physical Properties**

<sup>1</sup> At 25°C (77°F), except where indicated.

<sup>2</sup> Setaflash Closed Cup Tester (ASTM D 3278)

<sup>3</sup> Tag Open Cup Tester (ASTM D 1310)

## **Cleaning Process**

Vapor degreasing should be used for optimum cleaning effectiveness and economy. Modern vapor containment technology is recommended for both batch and in-line equipment. These systems have higher freeboard and a secondary set of low temperature (-29°C [-20°F]) condenser coils to greatly reduce vapor losses.

## **Plastic and Elastomer Compatibility**

Most plastics and elastomers can be safely cleaned in *Tergo* GCF. Tables 2 and 3 summarize test results on short-term exposures of unstressed plastics and elastomers simulating a typical cleaning cycle.

Long-term exposure data simulating exposure of vapor degreaser construction materials is available upon request.

Elastomer swelling and shrinking will, in most cases, revert to within a few percent of original size after air drying. Swell, shrinkage, and extractables are strongly affected by the compounding agents, plasticizers, and curing used in the manufacture of plastics and elastomers. Therefore, prior in-use testing is particularly important.

Compatible	
HDPE	PTFE / Teflon
LDPE	FEP
PP	Liquid Crystal Polymer
Polyester	PFA
PET	PVDF
РВТ	PEEK
Acetal	Phenolic
Nylon	

#### **Table 2: Plastic Compatibility**

#### **Table 3: Elastomer Compatibility**

Compatible		
High Density NBR	Butyl Rubber	
Neoprene	Polyurethane	
Kalrez	Viton®	

### **Metals and Other Compatibility**

*Tergo* GCF is compatible with common metals and most alloys. Initial compatibility testing on non-production parts is always recommended when using a new cleaning fluid.

Contact with highly basic process materials, pH 10 or above, is not recommended.

## Safety / Flammability

Tergo GCF exhibits no closed cup or open cup flash point, and is not classified as a flammable liquid by NFPA or DOT.

#### **Recovery**

This product is easily recoverable by off-line or in-line distillation equipment such as a vapor degreaser or still.

The presence of soil, however, may alter the characteristics of the material during the recovery operation. Recovery should be closely monitored to ensure operating levels are maintained.

Contact your MicroCare representative for assistance.

## **Storage/Handling**

*Tergo* GCF is thermally stable and does not oxidize or degrade during storage. Store in a clean, dry area. Protect from freezing temperatures. If solvent is stored below –10°C (14°F), mix by agitation prior to use. Do not allow stored product to exceed 44°C (111°F) to prevent leakage or potential rupture of container from pressure and expansion.

Consideration should be given to retrofit of existing, or purchase of new vapor degreasing equipment to provide vapor containment technology that enables safe and economical use of Tergo GCF.

Drum pumps are recommended to dispense Tergo GCF from its container. Refer to the Safety Data Sheet for specific handling precautions and instructions.

### **Specifications**

All ingredients are listed in the TSCA inventory



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#### MicroCare MicroCare.com

MicroCare, LLC 595 John Downey Drive New Britain, CT 06051 USA Tel: +1 860 827 0626 Toll Free: 1 800 638 0125 Email: TechSupport@MicroCare.com

#### MicroCare U.K. Ltd Unit 4, Whitehall Court Leeds LS12 5SN UK Tel: +44 (0) 113 3609019 Email: MCCEurope@MicroCare.com

MicroCare Asia Pte Ltd 102E, Pasir Panjang Road Citlink, #05-06 Singapore 118529 Tel: +65 6271 0182 Email: TechSupport@MicroCare.sg For more information
and to download SDS

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