

Technical Data Sheet

Max-Kleen™ Tri-V

The extra-strength, nonflammable cleaner with high dielectric

PRODUCT DESCRIPTION

Max-Kleen™ Tri-V is ideal for removal of all types of soils including oxidized oil and grease from electronic / electrical motors and relays. Tri-V nPB replacement chemistry is a novel new chemistry that does not contain any n-propyl bromide, TCE, any hazardous air pollutants or ozone depleting compounds. It is the ideal solvent for most electronic / electrical applications. This extra-strength cleaner evaporates quickly without leaving a residue behind.

- Quickly removes all types of tough soils including oxidized oil and grease
- Best product for electrical applications
- Dielectric strength of >30 kV (liquid)
- Does not contain n-propyl bromide, trichloroethylene, perchloroethylene, HAP's, or any ozone depleting compounds
- Nonflammable, no flash point
- Stabilized for metals such as aluminum, magnesium, titanium, and brass
- Noncorrosive, safe for sensitive metals
- Leaves no residue

TYPICAL APPLICATIONS

Max-Kleen™ Tri-V can be used for all repair, maintenance, and manufacturing applications including:

- Removes grease, oil, lubricants, wax and tar
- Cleans contacts, relays and switches, circuit breakers and fuse blocks
- All repair and maintenance cleaning including: controls, conveyors and gear drives controllers
- Cleans electric motors and logic controllers

COMPATIBILITY

Max-Kleen™ Tri-V is compatible with most metals. As with any solvent, compatibility with plastics should be determined on a non-critical area prior to use. Materials such as polystyrene, ABS, polycarbonate and PVC are not compatible with the cleaning solvent in Max-Kleen™ Tri-V.

TYPICAL PRODUCT DATA AND PHYSICAL PROPERTIES

Boiling Point	
Liquid	108° F/42° C
Aerosol	118° F/48° C
Evaporation Rate (butyl acetate=1)	>1
Flash Point (TCC)	None
Specific Gravity	
Liquid	1.26
Aerosol	1.22
Vapor Pressure @68°F	
Liquid	405 mmHg
Aerosol	175mmHg
Appearance	Clear, colorless liquid
Odor	Mild
Solubility in Water	Negligible
Dielectric Breakdown (ASTM D-877)	
Liquid	32 kV
Aerosol	8kV
Kauri-Butanol (KB) Number	128
Shelflife	Aerosol - 5 years from DOM Liquids - 2 years after opening
VOC* Content:	Liquid Aerosol
CARB	100% 73%
SCAQMD	1138 g/L 854g/L
Federal	90% 70%

*Volatile Organic Compound (VOC) information is calculated on a weight basis using the VOC definition of California Air Resources Board (CARB) Consumer Product Regulations, South Coast Air Quality Management District (SCAQMD) Rule 102 and the Federal definition published in 40 CFR 51.100(s).

Material	Compatibility
ABS	Non-Compatible
Buna-N	Fair
EPDM	Fair
Graphite	Excellent
HDPE	Excellent
LDPE	Good
Lexan™	Poor
Neoprene	Fair
Noryl®	Poor
Nylon™ 66	Excellent
Cross-Linked PE	Excellent
Polypropylene	Excellent
Polystyrene	Non-Compatible
PVC	Excellent
Silicone Rubber	Poor
Teflon™	Excellent
Viton™	Fair

ultrasonic or soak applications, be sure to cover tank when not in use to prevent evaporation.

As with all vapor degreaser equipment and processes, observe all safety precautions, guidelines and operating rules associated with these units. Failure to do so may put operations personnel at risk. Avoid excessive vapor losses, loss of refrigeration, excessive boil sump heat, etc. Make sure all equipment is operated in accordance with the manufacturer's guidelines and instructions. If in doubt, contact your manufacturer immediately.

Soak applications - Allow the soiled article to soak in Max-Kleen™ Tri-V for 5 - 10 minutes, then remove and loosen any remaining soils with a Controlwipes™ Wipe. For wipe applications, wet a Controlwipes™ Wipe with Max-Kleen™ Tri-V and wipe away soils.

TECHNICAL & APPLICATION ASSISTANCE

Chemtronics provides a technical hotline to answer your technical and application related questions.

The toll free number is:

1-800-TECH-401.

AVAILABILITY

VVV2279	20oz aerosol
VVV179	1 gallon liquid
VVV579	5 gallon liquid
VVV5579	53 gallon liquid

NOTE:

This information is believed to be accurate. It is intended for professional end users having the skills to evaluate and use the data properly. CHEMTRONICS does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.

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KENNESAW, GA 30152

1-770-424-4888 REV B (05/16)

DISTRIBUTED BY:

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Performance

Soil Removal – Vapor Degreasing

Lubrizol Corrosion Inhibitor	100% Removal
Unilube All Purpose Grease	91.3% Removal
5W30 Synthetic Oil	100% Removal
Fire Resistant Hydraulic Fluid	100% Removal
Chain Lubricant	100% Removal
Silicone Fluid	100% Removal

Soil Removal – Ultrasonic Cleaning

Lubrizol Corrosion Inhibitor	100% Removal
Unilube All Purpose Grease	100% Removal
5W30 Synthetic Oil	100% Removal
Fire Resistant Hydraulic Fluid	100% Removal
Chain Lubricant	100% Removal
Silicone Fluid	100% Removal

USAGE INSTRUCTIONS

Read MSDS carefully prior to use.

For aerosol usage - Spray 4-6 inches from surface to clean. Wash parts from top to bottom, allowing the liquid to flush away dissolved soils. For precise application use attached extension tube.

For vapor degreasing or ultrasonic cleaning application, charge sump tank with solvent. For

	Max-Kleen™ Tri-V	n-Propyl Bromide (nPB)	Trichloroethylene (TCE)	Perchloroethylene (Perc)	Methylene Chloride
PHYSICAL PROPERTIES					
Flash Point	None	None	None	None	None
KB Valu	128	125	129	90	136
Dielectric Strength (kV)	32	24	30	45.7	24
Surface Tension (dynes/cm)	22	24	29	32	27
Evaporation Rate (n-butyl acetate =1)	>1	0.28	4.45	1.5	7
Boiling Point	108°F / 42°C	158°F / 70°C	189°F / 87°C	250°F / 121°C	104°F / 40°C
Specific Gravity @ 20°C	1.26	1.35	1.46	1.62	1.31
Vapor Pressure (mm Hg) @ 20°C	405	111	58	14	355
Heat of Vaporization (cal/g)	68	59	57.2	50.1	78.7

ENVIRONMENTAL & HEALTH REGULATORY

Ozone Depleting Potential (ODP)	0	0.016-0.019	0	0	0
Global Warming Potential (GWP)	Low	0.31	140	Negligible	8.7
Volatile Organic Compounds (VOC)	Yes	Yes	Yes	Exempt	Exempt
SNAP Approved	Yes	Yes	Yes	Yes	Yes
Hazardous Air Pollutant (HAP)	No	Proposed	Yes	Yes	Yes
Prop 65 Chemical	No	Yes	Yes	Yes	Yes
Carcinogen (or suspected)	No	Yes	Yes	Yes	Yes
Threshold Limit Value (ppm) (TLV)	200	10	25	Suspected	Suspected

MATERIAL COMPATIBILITY

	++ = Excellent + = Good O = Fair - = Poor - - = Not Compatible				
ABS	-	O	-	-	-
Buna-N	O	+	-	-	-
EPDM	O	-	-	-	-
Graphite	++	++	++	++	++
HDPE	++	++	O	O	O
LDPE	++	O	-	-	-
Lexan	-	-	-	-	-
Neoprene	O	O	-	-	-
Noryl	-	+	-	-	-
Nylon 66	+	++	O	O	O
Cross-Linked PE	+	++	+	O	O
Polypropylene	++	+	-	-	-
Polystyrene	-	-	-	-	-
PVC	+	+	-	-	-
Silicone Rubber	O	-	-	-	-
Teflon	++	++	++	++	++
Viton	+	++	++	++	++