

Kerr Italia SpA

MATERIAL SAFETY DATA SHEET
 in accordance with communitary directive 2001/58/EC

Section I - Identification of Product and Company

Trade Product Name: Filter and reflector cleaning solution (Optical Maintenance Kit)	Preparation/Revision Date: 12/03
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Company Name: Demetron Research Corporation	Emergency phone: (+ 41)-91-61.00.639
Company Address: 5 Ye Olde Road – Danbury, CT 06810 - U.S.A.	Information phone: 00-800-41-050-505

Section II - Composition/Information on Ingredients

HAZARDOUS INGREDIENTS	%	SYMBOL	R	CAS N.	EINECS N.
Ethyl alcohol	10-20	F	11	64-17-5	200-578-6
2-Butoxy ethanol	3.9	Xn; Xi	20/21/22-36/38	111-76-2	203-905-0
Methyl alcohol	0.8	T; F	11-39/23/24/25	67-56-1	200-659-6

Section III - Hazards Identification

HAZARD CLASSIFICATION	None
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Section IV - First Aid Measures

Treatment for eye contact: Immediately flush with large amounts of water for at least 15 minutes while holding eyelids open. Get prompt medical attention.
Treatment for skin contact: Remove contaminated clothing and wash skin with plenty of water, follow by washing with soap and water. If irritation persists, seek medical attention.
Treatment for inhalation (breathing): Move victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.
Treatment for ingestion (swallowing): Do not induce vomiting. Contact local poison control or physician immediately.

Section V - Firefighting Measures

Suitable extinguishing media: CO₂, foam and/or dry chemical may be used.
Forbidden extinguishing media: Unknown.
Special firefighting measures: Containers should be cooled with water to prevent pressure build up. Use equipment or shielding, as required, to protect personnel from bursting rupturing or venting containers.
Unusual fire and explosion hazards: At elevated temperatures containers exposed to direct flame or heat contact should be cooled with water to prevent weakening of container structure.
Special protection equipment: Self contained breathing apparatus.

Section VI - Accidental Release Measures

Personal Precautions: Adopt same precautions of section VIII.
Environmental Precautions: Avoid that large amount of product flows in sewers (see section XVI too).
Reclaiming Methods: Soak up spill with an inert absorbent and place in a designated disposal container.

Section VII - Handling and Storage

Handling Precautions: Adopt same precautions of section VIII.
Precautions in case of Fire and Explosion: Not applicable.
Storage Conditions: Store at ambient temperature, in a cool and dry place, away from heat sources.
Suggested container(s): The original containers provided by manufacturer.
Indication for Combined Storage: Avoid the contact with strong oxidizing agents.
Other Precautions: Use according to directions.

Section VIII - Exposure controls/personal protection

Precautionary Measures	<u>Ventilation</u> Local Exhaust Ventilation: Adequate under normal circumstances. Special Ventilation: Using large amounts requires adequate ventilation. Mechanical (General) Ventilation: Not applicable. Other Ventilation: Not applicable.
Limits	TWA: 1000 ppm (Ethyl alcohol); 50 ppm (2-Butoxy ethanol) TLV: 1000 ppm (Ethyl alcohol); 25 ppm (2-Butoxy ethanol)
Respiratory Protection	No respiratory protection is required if good ventilation is maintained.
Hands Protection	Protective gloves recommended.
Eyes Protection	Chemical safety glasses recommended.
Skin Protection	Handle in accordance with good personal hygiene and safety practices. These practices include avoiding unnecessary exposure to uncured material.
Other Protective	Self contained breathing in case of elevated concentration of vapors.

Equipments:	
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Section IX - Physical and Chemical Properties

Boiling Point: Not determined (N/D) Vapor Pressure: N/D	Melting Point: N/D Specific Gravity: 0,95 g/ml
Evaporation Rate (n-butane= 1): < 1.0	Vapor Density (air= 1): > 1
Solubility in Water: Completely soluble.	
Appearance and Odor (Physical Form): Semi-stable white foam with a floral fragrance.	
Flash Point: N/D	Upper explosivity limit: N/D Lower explosivity limit: N/D

Section X - Stability and Reactivity

Stability: Stable if stored as directed.
Conditions to Avoid: Heat, sparks and flame.
Incompatibility (Materials to Avoid): Contact with strong oxidizing agents.
Hazardous Decomposition Products: Combustion may produce carbon monoxide, carbon dioxide and additional toxic chemicals may be produced in small amounts.
Hazardous Polymerization Products: None.

Section XI - Toxicological Information

Carcinogenicity/Teratogenicity: No
<u>Effects and Hazards of Overexposure (Acute and Chronic)</u>
Effects and hazards of eye contact: May cause burning and irritation to eyes. Preexisting conditions may be aggravated by exposure.
Effects and hazards of skin contact: Prolonged or repeated skin contact may lead to drying, irritation and dermatitis. Possible skin absorption. Preexisting conditions may be aggravated by exposure.
Effects and hazards of Inhalation (Breathing): May cause irritation to the respiratory tract. High concentrations may produce headache, dizziness and nausea.
Effects and hazards of Ingestion (Swallowing): Irritation of the digestive tract, nausea, vomit, abdominal pains, diarrhea.
Effects for prolonged Exposure: May cause headache, general depressed state, weakness, sluggishness, giddiness, sleepiness, narcotic symptoms. Possible liver and kidney dysfunction.

Section XII - Ecological Information

There is no specific information on the product. Use according to good working practices, avoiding release of the product into environment.
Information on 2-Butoxy ethanol :
Biodegradability: BOD5/COD = > 70% in implants for waters re-flowed treatment (active mud).
Aquatic toxicity: LC50 fishes: 1575 mg/l/48h (Leuciscus idus)
Environmental effects for Ethyl alcohol:

Aquatic toxicity: LC50 > 10000 mg/l (fish)

Section XIII - Disposal Considerations

Dispose in accordance with local regulations.

Section XIV - Transport Information

SEA TRANSPORTATION									
IMCO Number		Not applicable							
UN Number		Not applicable							
Substance(s) determining hazard		None							
AIR TRANSPORTATION									
ICAO/IATA Class		Not applicable							
Substance(s) determining hazard		None							
TRANSPORTATION BY ROAD/RAILWAY									
RID/ADR Class	N/A	Item Number	N/A	Hazard Identification Number	N/A	Substance Identification Number	N/A	Hazard Label	N/A

Section XV - Regulatory Information

CLASSIFICATION IN ACCORDANCE WITH EC DIRECTIVES	
HAZARD IDENTIFICATION SYMBOL	None*
R Sentences	
None	
S Sentences	
None	
Ingredients determining the label	None*

* The product is not flammable because is water-based.

Section XVI - Other Information

2-Butoxy ethanol	LD ₅₀ (oral rat)	530 mg/kg
	LD ₅₀ (skin rabbit)	490 mg/kg
	LC ₅₀ (inhalation rat)	2.2 mg/l/4h
Ethyl Alcohol	LC ₅₀ (inhalation mouse/4hrs)	39g/m ³
	LC ₅₀ (inhalation rat/10hrs)	20000ppm
	LD _{Lo} (intraperitoneal dog)	3000mg/Kg
	LD ₅₀ (intraperitoneal guinea pig)	3414mg/Kg
	LD ₅₀ (intraperitoneal hamster)	5068mg/Kg
	LD ₅₀ (intraperitoneal mammal)	4300mg/Kg
	LD ₅₀ (intraperitoneal mouse)	933mg/Kg
	LD ₅₀ (intraperitoneal rat)	3750mg/Kg
	LD ₅₀ (intraperitoneal rabbit)	963mg/Kg
	LD _{Lo} (intravenous cat)	3945mg/Kg
	LD _{Lo} (intravenous chicken)	8216mg/Kg
	LD _{Lo} (intravenous dog)	1600mg/Kg
	LD ₅₀ (intravenous mouse)	1973mg/Kg
	LD ₅₀ (intravenous rat)	1440mg/Kg
	LD ₅₀ (intravenous rabbit)	2374mg/Kg

Ethyl Alcohol (continuation)	LD _{L0} (oral cat)	6000mg/Kg
	LD _{L0} (oral child)	2000mg/Kg
	LD _{L0} (oral dog)	5500mg/Kg
	LD ₅₀ (oral guinea pig)	5560mg/Kg
	LD _{L0} (oral human)	1400mg/Kg
	TD _{L0} (oral man)	700mg/Kg
	TD _{L0} (oral man)	50mg/Kg
	TD _{L0} (oral man)	1430mg/Kg
	LD ₅₀ (oral mouse)	7500mg/Kg
	LD ₅₀ (oral rat)	7060 mg/Kg
	LD ₅₀ (oral rabbit)	6300mg/Kg
	TD _{L0} (oral woman)	6300mg/Kg
	LD _{L0} (subcutaneous chicken)	5g/Kg
	LD _{L0} (subcutaneous dog)	6000mg/Kg
	LD _{L0} (subcutaneous frog)	7100mg/Kg
	LD _{L0} (subcutaneous infant)	19440mg/Kg
	LD _{L0} (subcutaneous mouse)	4g/Kg
LD _{L0} (subcutaneous pigeon)	5g/Kg	
LD _{L0} (skin rabbit)	20g/Kg	

CAUTION: PRODUCT FOR PROFESSIONAL USE

The information on this Safety Sheet is based on presently available data and to our best knowledge for the correct handling of the product under normal conditions. Any use of this product in any way not indicated on this Sheet or the use of this product together with any other process/procedure will be exclusively under the user's responsibility.