






Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 2.0

MSDS Revision Date: 09/01/2009

1. PRODUCT IDENTIFICATION

CHEMICAL RESPONSE CARD: **21**

1.1	Product Name:	KAWACHEM AIR FILTER CLEANER, AEROSOL, 17oz	RESPONSE TEAM PPE:					
1.2	Chemical Name:	See ingredients listed in section 3	WHMIS:					
1.3	Synonyms:	None reported by the manufacturer	HEALTH:					3
1.4	Trade Names:	Kal Gard	FLAMMABILITY:					4
1.5	Product Use:	Foam Filter Cleaner	REACTIVITY:					0
1.6	Manufacturer's Name:	Four Star Chemical	PERSONAL PROTECTION:					B
1.7	Manufacturer's Address:	3137 26th Street, Los Angeles CA., 90023, USA						
1.8	Business Phone:	+1 (232) 266-7111						
1.9	Emergency Phone:	CHEMTREC +1 (800) 434-9300/ +1 (703) 527-3887						

2. HAZARD IDENTIFICATION

2.1	Hazard Identification:	This product is classified as a HAZARDOUS SUBSTANCE and as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia). Harmful by inhalation. Possible risk of irreversible effects.					
2.2	Routes of Entry:	Inhalation:	YES	Absorption:	YES	Ingestion:	NO
2.3	Effects of Exposure:	<p>EYES: May cause irritation, redness and tearing. Vapors may be irritating to the eyes.</p> <p>SKIN: May cause irritation, defatting, drying and cracking of skin. Prolonged and repeated contact may lead to dermatitis.</p> <p>INGESTION: May cause a burning sensation of the mouth and throat, abdominal pain, gastrointestinal irritation, nausea, vomiting and diarrhea. May also cause kidney damage, cardiac arrhythmia and Central Nervous System effects (see inhalation). Aspiration of material into the lungs may cause chemical pneumonitis, which can be fatal. Can be fatal if inhaled or ingested.</p> <p>INHALATION: Vapors may be irritating to nose, throat and respiratory tract. Excessive inhalation of vapors may cause kidney damage, cardiac arrhythmia and Central Nervous System effects including dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.</p>					
2.4	Symptoms of Exposure:	<p>EYES: Irritation, redness, swelling and tearing.</p> <p>SKIN: Irritation, defatting, drying and cracking of skin.</p> <p>INGESTION: Burning sensation of the mouth and throat, abdominal pain, gastrointestinal irritation, nausea, vomiting and diarrhea.</p> <p>INHALATION: Irritation to nose, throat and respiratory tract, dizziness, coughing, wheezing, weakness, fatigue, nausea, headache and possible unconsciousness.</p>					
2.5	Acute Health Effects:	<p>EYES: May cause irritation, redness and tearing. Vapors may be irritating to the eyes.</p> <p>SKIN: May cause irritation, defatting, drying and cracking of skin. Prolonged and repeated contact may lead to dermatitis.</p> <p>INGESTION: May cause a burning sensation of the mouth and throat, abdominal pain, gastrointestinal irritation, nausea, vomiting and diarrhea. May also cause kidney damage, cardiac arrhythmia and Central Nervous System effects (see inhalation), and cause mild to severe pulmonary injury, possible minimal toxicity. Aspiration of material into the lungs may cause chemical pneumonitis, which can be fatal. Can be fatal if inhaled or ingested.</p> <p>INHALATION: Vapors may be irritating to nose, throat and respiratory tract. Excessive inhalation of vapors may cause kidney damage, cardiac arrhythmia and Central Nervous System effects including dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.</p>					
2.6	Chronic Health Effects:	Prolonged or repeated skin contact may lead to dermatitis. This product contains a chemical(s) known to the state of California to cause cancer, birth defects and other reproductive harm.					
2.7	Target Organs:	None reported by the manufacturer.					

NA = Not Available; ND = Not Determined; NE = Not Established; NF = Not Found; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used. NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-2004 format.

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3. COMPOSITION & INGREDIENTS

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)								
					ACGIH		NOHSC			OSHA			OTHER
					ppm		ppm			ppm			
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
PROPRIETARY FORMULA	NA	NA	NA	≤ 99	NA	NA	NF	NF	NF	NA	NA	NA	
ALIPHATIC DISTILLATES	64742-88-7	WJ8930000	265-191-7	≥10	100	NA	NF	NF	NF	NA	NA	NA	
TETRACHLOROETHYLENE	127-18-4	KX3850000	204-825-9	≥1	25	100	NF	NF	NF	100	NA	NA	
AMINE ALKYL BENZEN SULFONATE	NA	NA	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA	

4. FIRST AID MEASURES

4.1	<p>First Aid:</p> <p>EYES: Immediately flush eyes with plenty of running water for at least 15 minutes, lifting upper and lower lids, occasionally. If irritation persists, repeat flushing. Get medical attention.</p> <p>SKIN: Wash thoroughly with soap and water. If irritation persists, seek medical attention. Remove contaminated clothing and wash before reuse.</p> <p>INGESTION: Do not induce vomiting. Never give an unconscious person anything to ingest. If vomiting spontaneously occurs, have victim lean forward with head down to avoid breathing in the vomitus (vapors from vomit) into the lungs. Rinse out mouth and administer more water. Guard against aspiration into the lungs. Aspiration of material into lungs due to vomiting may cause chemical pneumonitis which can be fatal. Get immediate medical attention.</p> <p>INHALATION: Using proper respiratory protection, remove affected person to fresh air. If breathing is difficult, administer oxygen. If breathing stops give artificial respiration. Keep person warm, quiet and get medical attention.</p>
4.2	<p>Medical Conditions Aggravated by Exposure:</p> <p>Health studies have shown that many hydrocarbons pose potential health risks which may vary from person to person.</p>

5. FIREFIGHTING MEASURES

5.1	Flashpoint & Method:	
5.2	Autoignition Temperature:	Not known
5.3	Flammability Limits:	Lower Explosive Limit (LEL): 1.0 Upper Explosive Limit (UEL): 6.0
5.4	<p>Fire & Explosion Hazards:</p> <p>Level 3 Aerosol, (TCC). This material can burn but will not readily ignite. This material will release vapors well below ambient temperatures and are readily forms flammable mixtures with air exposed to an ignition source. It will burn in the open or be explosive in confined spaces. If vapors are heavier than air and may travel a long distances to a point of ignition, and then flash back. Alkenes/chlorine gas mixtures will produce explosions. Odor is not an adequate warning of potentially hazardous concentration in air, releases of these gases may cause a flammable atmosphere with explosion potential.</p>	
5.5	<p>Extinguishing Methods:</p> <p>Carbon dioxide, dry chemical powder, halogenated agent, stop gas flow.</p>	
5.6	<p>Firefighting Procedures:</p> <p>Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Avoid spraying water directly into storage containers because of danger of boilover. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Allow fire to burn itself out, all equipment and surfaces exposed to the fire should be cooled with water to prevent over-heating, flash-backs, or explosions. Gas fires should not be extinguished, control fire until gas supply can be shut off. Remove containers from heat in order to avoid excessive pressure.</p>	

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6. ACCIDENTAL RELEASE MEASURES

6.1	Spills: When accidentally discharged, prevent the product from flowing. Contain spillage with sand or inert absorbent and arrange safe disposal. Prevent from fire and explosion risk. Eliminate any possible cause of fire. Absorb in earth or sand, skim on water surface. Elimination treatment will have to be made by an agreed collector.
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7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices: Wear gloves, glasses and self-contained mask. Warn about risk of vapor inhalation. Wash hands with water and soap immediately after handling then rinse in case of contact. When using, do not eat, drink or smoke.
7.2	Storage & Handling: Use and keep away from flame, heat sources and functioning electrical devices. Use in a well ventilated area. Store in original packaging. Keep out of reach of children. Do not store in temperatures above 120°F, (49°C). Keep out of direct sunlight.
7.3	Special Precautions: Do not spray on a naked flame or any incandescent material. When using do not smoke. Avoid breathing vapors or spray mists. Avoid any contact. Odor is not an adequate warning of potentially hazardous concentration in air, releases of these gases may cause a flammable atmosphere with explosion potential.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Ventilation & Engineering Controls: Avoid breathing the vapors generated by this product. Use in a well-ventilated location (e.g., local exhaust ventilation, fans), whenever this product is used in a confined space, or is heated above ambient temperatures, or is agitated. Do not eat, drink, or smoke while handling this product. Ensure that safety shower, hand washing sink and eye bath are near work area.
8.2	Respiratory Protection: Use respiratory protection approved by NIOSH/MSHA, (e.g., organic vapor-acid gas cartridge respirator). Use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member states, or Australia.
8.3	Eye Protection: Face shield and goggles or chemical goggles.
8.4	Hand Protection: Solvent resistant or other impervious gloves. Wear boots, clothing with long sleeves, etc. as appropriate.
8.5	Body Protection: Wear protective clothing (e.g., apron)

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Density:	0.79
9.2	Boiling Point:	NA
9.3	Melting Point:	NA
9.4	Evaporation Rate:	NA
9.5	Vapor Pressure:	NA
9.6	Molecular Weight:	NA
9.7	Appearance & Color:	Solvent Liquid
9.8	Odor Threshold:	NA
9.9	Solubility:	NIL
9.10	pH	NA
9.11	Viscosity:	NA
9.12	Other Information:	NA

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10. STABILITY & REACTIVITY

10.1	Stability: This product is chemically stable under normal conditions of storage and use.
10.2	Hazardous Decomposition Products: None reported by the manufacturer.
10.3	Hazardous Polymerization: Will not occur.
10.4	Conditions to Avoid: Do not expose this product to temperatures above 140°C.
10.5	Incompatible Substances: Strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

11.1	Toxicity Data: None reported by the manufacturer.
11.2	Acute Toxicity: None reported by the manufacturer.
11.3	Chronic Toxicity: None reported by the manufacturer.
11.4	Suspected Carcinogen: No
11.5	Reproductive Toxicity:
	Mutagenicity: This product is not reported to cause mutagenic effects in humans.
	Embryotoxicity: This product is not reported to cause embryotoxic effects in humans.
	Teratogenicity: This product is not reported to cause teratogenic effects in humans.
	Reproductive Toxicity: This product is not reported to cause reproductive harm in humans.
11.6	Irritancy of Product: See section 2.3
11.7	Biological Exposure Indices: NA
11.8	Physician Recommendations: Treat symptomatically.

12.1	Environmental Stability: None reported by the manufacturer.
12.2	Effect on Plants & Animals: None reported by the manufacturer.
12.3	Effect on Aquatic Life: None reported by the manufacturer.


13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal: Dispose of in a safe matter, in accordance with local and national regulations.
13.2	Special Considerations: If the material is unsuitable for recycling or reclamation, enclosed-controlled incineration is recommended unless otherwise prohibited by local ordinance.



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14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND): CONSUMER COMMODITY, ORM-D (x ≤ 5.0 L)	
14.2	IATA (AIR): CONSUMER COMMODITY, ORM-D (x ≤ 0.5 L)	
14.3	IMDG (OCN): UN1950, AEROSOLS, 2.1, LTD QTY (x ≤ 1.0 L)	
14.4	TDGR (CAN): MARK PACKAGE "LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE" (x ≤ 5.0 L)	
14.5	ADR/RID (EU): UN1950, AEROSOLS, 2.1, ADR, LTD QTY (x ≤ 1.0 L)	
14.6	SCT (MEX): UN1950, AEROSOLS, 2.1, CANTIDAD LIMITADA (x ≤ 1.0 L)	
14.7	ADGR (AUS): UN1950, AEROSOLS, 2.1, LTD QTY (x ≤ 1.0 L)	

15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements: This product does not contain any substances subject to SARA reporting requirements.	
15.2	SARA Threshold Planning Quantity: NA	
15.3	TSCA Inventory Status: The components of this product are listed on the TSCA inventory.	
15.4	CERCLA Reportable Quantity (RQ): NA	
15.5	Other Federal Requirements: NA	
15.6	Other Canadian Regulations All chemical substances of this product are listed on the CEPA DSL/NDSL or are exempt from list requirements. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.	
15.7	State Regulatory Information: NA	
15.8	European Union 67/548/EEC and Australia NOHSC:2011 (2003) Requirements: The primary components of this product are listed in Annex I of EU Directive 67/548/EEC. Propane: Highly Flammable (F+). R: 12 - Extremely flammable. S: 9-16-33 - Keep container in a well-ventilated place. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.	

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16. OTHER INFORMATION

16.1 Other Information:

NA

16.2 Terms & Definitions:

Please see last page of this MSDS.

16.3 Disclaimer:

This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & Kawasaki's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

16.4 Prepared for:

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Kawasaki

16.5 Prepared by:

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DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number
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EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
TLV	Threshold Limit Value
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
IDLH	Immediately Dangerous to Life and Health

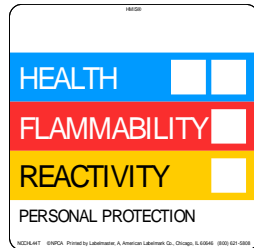
FIRST AID MEASURES:

CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
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HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

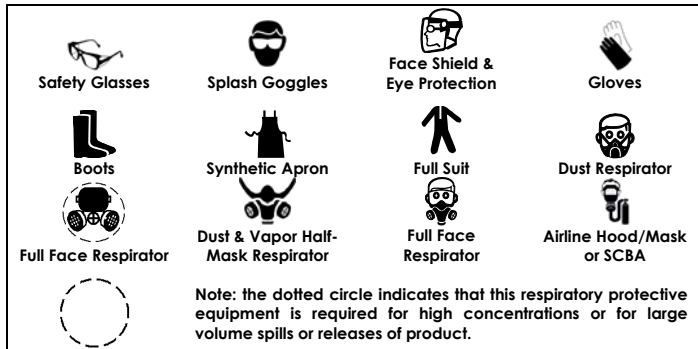
HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard



PERSONAL PROTECTION RATINGS:

A		G	
B		H	
C		I	
D		J	
E		K	
F		X	Consult your supervisor or S.O.P. for special handling directions.



OTHER STANDARD ABBREVIATIONS:

NA	Not Available
NR	No Results
NE	Not Established
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

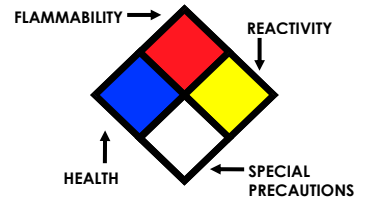
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

HAZARD RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
-W	Use No Water
OX	Oxidizer



TOXICOLOGICAL INFORMATION:

LD₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD₁₀	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD₁₀, LD₁₀, & LD₀ or TC, TC₀, LC₁₀, & LC₀	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL_m	Median threshold limit
log K_{ow} or log K_{oc}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NDSL	Canadian Non-Domestic Substance List
NOHSC	Australia National Occupational Health & Safety Code
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)

EC INFORMATION:

C	E	F	N	O	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful