

Page 1 of 5

AEM-1-1000 Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards SDS Revision Date: 1/9/2015 1. PRODUCT & COMPANY IDENTIFICATION 1.1 Product Name **AEM DRYFLOW AIR FILTER CLEANER** 12 Chemical Name: See ingredients listed in section 3 1.3 Synonyms None reported by the manufacturer 1.4 Trade Names Synthetic Air Filter Cleaner 1.5 Product Use: Automotive - Cleaner Distributor's Name: 1.6 K&N Engineering, Inc. Distributor's Address: P.O. Box 1329, Riverside, CA 92502-1329 USA 1.7 1.8 Emergency Phone: CHEMTREC +1 (800) 424-9300 / +1 (703) 527-3887 (CCN 632715) Business Phone / Fax: 1.9 +1 (800) 858-3333 / +1 (951) 826-4001 2. HAZARDS IDENTIFICATION 2.1 Hazard Identification: This product is classified as a HAZARDOUS SUBSTANCE but not as DANGEROUS GOODS according to the classification criteria of NOHSC:1088 (2004) and ADG Code (Australia). WARNING! CAUSES SERIOUS EYE IRRITATION. Hazard Statements (H): H319 - Causes serious eye irritation. Precautionary Statements (P): P264 – Wash with soap and water thoroughly after handling. P280 - Wear protective gloves/ eye protection. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P337+P313 – If eye irritation persist: Get medical advice/attention. 22 Effects of Exposure: If product is swallowed, may cause nausea, vomiting and/or diarrhea. Ingestion: Moderately irritating to the eyes. Eyes: This product can cause mild, transient skin irritation with short-term exposure. This product can cause Skin: allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure. Vapors of this product may be irritating to the nose, throat and other tissues of the respiratory 2.3 Symptoms of Overexposure: Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. Overexposure in eyes may cause redness, itching and watering. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure. 2.4 Acute Health Effects: Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. 2.5 Chronic Health Effects The material may accentuate any pre-existing dermatitis condition. 2.6 Target Organs Eyes, skin & respiratory system. 3. COMPOSITION & INGREDIENT INFORMATION EXPOSURE LIMITS IN AIR (mg/m³) NOHSC **ACGIH** OSHA ppm ppm ppm ES-ES-TI V STEL STEL IDLH CHEMICAL NAME(S) CAS No. RTECS No. **EINECS No** STEI TWA PEAR PFI OTHER NΑ NA NΑ NA NΑ NA NF NF NF NA NA NA NON-IONIC SURFACTANT Eye Irrit. 2; H319 4. FIRST AID MEASURES DO NOT INDUCE VOMITING. Contact ChemTrec at +1 (703) 527-3887 or the nearest Poison Control First Aid: Ingestion: Center or local emergency telephone number for assistance and instructions. Seek immediate medical attention. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of If product gets in the eyes, flush eyes thoroughly with copious amounts of water for at least 15 minutes, Eyes: holding eyelid(s) open to ensure complete flushing. If the eyes or face become swollen during or following use, consult a physician or emergency room immediately. Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek Skin: prompt medical attention. Do not wear contaminated clothing until after it has been properly cleaned. Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek Inhalation: immediate medical attention. If breathing stops, perform artificial respiration. 4.2 Medical Conditions Pre-existing dermatitis, other skin conditions, and disorders of the **HEALTH** 2 Aggravated by Exposure: target organs (eyes, skin, and respiratory system). FLAMMABILITY 0 **PHYSICAL HAZARDS** 0 PROTECTIVE EQUIPMENT В

EYES

SKIN



Page 2 of 5 **AEM-1-1000**

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards

SDS Revision: 2.0

SDS Revision Date: 1/9/2015

		E FIDEFICUTING MEAGURES	
<u> </u>	le ae / · · ·	5. FIREFIGHTING MEASURES	
5.1	Fire & Explosion Hazards:	This material can burn but will not readily ignite. This material will release vapors (toxic fumes of sodium oxide) when heated above the flash point temperature that can ignite when exposed to a source of ignition. Toxic fumes of sodium oxide.	
5.2	Extinguishing Methods:	Dry chemical, foam, carbon dioxide, and water fog.	
5.3	Firefighting Procedures:	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 boil over. 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.	2 0
		6. ACCIDENTAL RELEASE MEASURES	
6.1	Spills:	Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate	Personal Protective
		Equipment. CAUTION – may be slippery if spilled. For small spills (e.g., < 1 gallon (3.8 L)) wear appropriate personal protective equipment (e.g., goggles, gloves). Maximize ventilation (open doors and windows) and secure all sources of ignition. Remove spilled material with absorbent material and place into appropriate closed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with plenty of warm water and soap. Remove any contaminated clothing and wash thoroughly before reuse. For large spills (e.g., ≥ 1 gallon (3.8 L)), deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g., sand or earth). Use ONLY non-sparking tools for recovery and cleanup. Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for proper disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.	
		7. HANDLING & STORAGE INFORMATION	
7.1	Work & Hygiene Practices:	Use normal hygiene practices. Avoid direct skin contact. Wash hands thoroughly after using this	product and before
		eating, drinking, or smoking. Good personal hygiene practices, such as washing any skin contact a contaminated clothing, are recommended.	
7.2	Storage & Handling:	Keep away from sources of heat. <u>Maximum Recommended Shelf-Life: 24 months</u>	
7.3	Special Precautions:	Follow all instructions on product label. Keep container closed when not in use. Keep this and all chemicals out of reach of children.	
		8. EXPOSURE CONTROLS & PERSONAL PROTECTION	
8.1	Ventilation & Engineering Controls:	Not required under normal conditions of use. Use with adequate ventilation (e.g., open doors exhaust ventilation).	and windows, local
8.2	Respiratory Protection:	Not required under normal conditions of use. In instances where vapors or sprays of this product are generated, and respiratory protection is needed, 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:	Avoid eye contact. Protective eyewear that conforms to ANSI Z87.1 (or other applicable and appropriate standards) should be used when handling any chemical product.	
8.4	Hand Protection:	Use gloves constructed of chemical resistant materials such as neoprene or heavy nitrile rubber if frequent or prolonged contact is expected.	
8.5	Body Protection:	Not required under normal conditions of use. Use appropriate protective equipment (e.g., apron) as necessary to prevent or reduce exposure if frequent or prolonged contact is expected.	
		9. PHYSICAL & CHEMICAL PROPERTIES	
9.1	Appearance:	Clear, colorless liquid	
9.2	Odor:	NA NA	
9.3	Odor Threshold:	NA	
9.4	pH:	12-13	
9.5	Melting Point/Freezing Point:	NA	
9.6	Initial Boiling Point/Boiling Range: Flashpoint:	NA NA	
9.8	Upper/Lower Flammability	NA .	
9.9	Limits: Vapor Pressure:	NA NA	
9.10	Vapor Density:	NA NA	
9.11	Relative Density:	NA	



Page 3 of 5 **AEM-1-1000**

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards SDS Revision: 2.0 SDS Revision Date: 1/9/2015 9. PHYSICAL & CHEMICAL PROPERTIES - cont'd 9.12 Solubility Soluble 9.13 Partition Coefficient (log Pow): NA 9.14 Autoignition Temperature NA 9.15 Decomposition Temperature: NA Viscosity NA Other Information: 9.17 NA 10. STABILITY & REACTIVITY Stability: 10.1 Stable under normal conditions of use 10.2 Hazardous Decomposition None known. Products: Hazardous Polymerization: 10.3 Will not occur. Conditions to Avoid 10.4 Strong oxidizers and reducing agents. 10.5 Incompatible Substances: Strong oxidizing agents, strong acids and bases. 11. TOXICOLOGICAL INFORMATION 11.1 Routes of Entry Inhalation: YES Absorption: NO Ingestion: YES 11.2 Toxicity Data: This product has NOT been tested on animals to obtain toxicology data 11.3 Acute Toxicity: See section 2.4 Chronic Toxicity: 11.4 See section 2.5 11.5 Suspected Carcinogen: No. 11.6 Reproductive Toxicity: This product is not reported to produce reproductive toxicity in humans. Mutagenicity This product is not reported to produce mutagenic effects in humans Embryotoxicity This product is not reported to produce embryotoxic effects in humans. Teratogenicity This product is not reported to produce teratogenic effects in humans. Reproductive Toxicity: This product is not reported to produce reproductive effects in humans 117 Irritancy of Product: See section 2.3 11.8 Biological Exposure Indices: NE 11.9 Physician Recommendations: Treat symptomatically. 12. ECOLOGICAL INFORMATION Environmental Stability: 12.1 There are no specific data available for this product 12.2 Effects on Plants & Animals: There are no specific data available for this product. 12.3 Effects on Aquatic Life There are no specific data available for this product; however, very large releases of this product may be harmful or fatal to overexposed aquatic life. 13. DISPOSAL CONSIDERATIONS 13.1 Waste Disposal: Review current local, state and federal laws, codes, statutes and regulations to determine current status and appropriate disposal method for the ingredients listed in Section 2. Any disposal practice must be in compliance with local, state, and federal laws and regulations 13.2 Special Considerations: NA 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 49 CFR (GND): 14.1 **NOT REGULATED** 14.2 IATA (AIR): **NOT REGULATED** IMDG (OCN): 14.3 **NOT REGULATED** TDGR (Canadian GND): 14.4 **NOT REGULATED** 14.5 ADR/RID (EU): **NOT REGULATED** 14 6 SCT (MEXICO): **NOT REGULATED** 14.7 ADGR (AUS): **NOT REGULATED**



Page 4 of 5 **AEM-1-1000**

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards

SDS Revision: 2.0

SDS Revision Date: 1/9/2015

15. REGULATORY INFORMATION				
15.1	SARA Reporting Requirements:	This product does not contain any substances subject to SARA Title III, section 313 reporting requirements.		
15.2	SARA Threshold Planning Quantity:	There are no specific Threshold Planning Quantities for the components of this product.		
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:	This material does not contain any hazardous air pollutants. None of the components in this product are listed as priority pollutants under the CWA. None of the components in this product are listed as toxic pollutants under the CWA.		
15.6	Other Canadian Regulations:	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. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List. WHMIS D2B (Other Toxic Effects)		
15.7	State Regulatory Information:	No ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI).		
15.8	Other Requirements:	The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC: Irritant (Xi). Risk Phrases (R): 36/38 – Irritating to eyes and skin. Safety Phrases (S): 2-36/37-46 – Keep out of reach of children. Wear suitable protective clothing and gloves. If swallowed, seek medical advice immediately and show this container or label.		
		16. OTHER INFORMATION		
16.1	Other Information:	WARNING! CAUSES SERIOUS EYE IRRITATION. Wash exposed skin areas thoroughly with soap and water after handling. Avoid eye contact. Wear protective gloves/eye protection/face protection. IF ON SKIN: Wash with soap and		
		water. IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If skin irritation or a rash occurs – Get medical advice/attention. Store in a well-ventilated place.		
		Keep cool. Use only as directed. KEEP OUT OF REACH OF CHILDREN.		
16.2	Terms & Definitions:	See next page of this Safety Data Sheet.		
16.3	Disclaimer:	This 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 and K&N Engineering, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are 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:	K&N Engineering, Inc. P.O. Box 1329 Riverside, CA 92502-1329 USA Tel: +1 (800) 858-3333 Fax: +1 (951) 826-4001 E-Mail: tech@knfilters.com http://www.knfilters.com		
16.5	Prepared by:	ShipMate, Inc. P.O. Box 787 Sisters, Oregon 97759-0787 USA Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 http://www.shipmate.com		



Page 5 of 5 **AEM-1-1000**

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards

SDS Revision Date: 1/9/2015

DEFINITION OF TERMS

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

GENERAL INFORMATION:

CAS No. Chemical Abstract Service Number	

EXPOSURE LIMITS IN AIR:

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

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.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

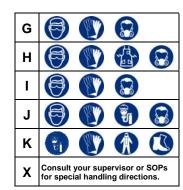
HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

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

HEALTH FLAMMABILITY PHYSICAL HAZARDS PERSONAL PROTECTION

PERSONAL PROTECTION RATINGS:

Α			
В			
С		The state of the s	
D			
Е			
F		THE PARTY OF THE P	





Face Shield & Splash Goggles Protective Eyewear



Synthetic Apron





Full Face Respirator

Dust & Vapor Half-Mask Respirator

Full Face

ð Airline Hood/Mask or SCBA

OTHER STANDARD ABBREVIATIONS:

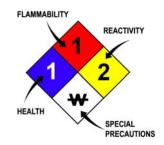
ML	Maximum Limit	
NA	Not Available	
ND	ND Not Determined	
NE	Not Established	
NF Not Found		
NR	No Results	
SCBA	Self-Contained Breathing Apparatus	

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:		
Autoignition	Minimum temperature required to initiate combustion in air with no other	
Temperature	re 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	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
ОХ	Oxidizer
TREFOIL	Radioactive
IREFUIL	Radioactive



TOXICOLOGICAL INFORMATION:

LD ₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
	S
LC ₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD _{Io}	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD _{Io} , LD _{Io} , & LD _o or	Lowest dose (or concentration) to cause lethal or toxic effects
TC, TC _o , LC _{io} , & LC _o	
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	
PSL	Canadian Priority Substances List	
TSCA	TSCA U.S. Toxic Substance Control Act	
EU	J European Union (European Union Directive 67/548/EEC)	
WGK	Wassergefährdungsklassen (German Water Hazard Class)	

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

0	(*)	(2)	(3)	\odot	(18)		
Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

EC (67/548/EEC) INFORMATION:

		No.	*		*	X	×
С	E	F	N	0	Т	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

CLP/GHS (1272/2008/EC) PICTOGRAMS:

			\Diamond			\Diamond		\Partial
GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environment

<u>CHEMTREC</u>	
n-Country Dial Numbers	

Local # Provided in Country

Toll Free in Country*

Greeting Language

AFRICA							
CHEMTREC South Africa*		0-800-983-611	English				

SOUTH AMERICA							
CHEMTREC Argentina (Buenos Aires)	+(54)-1159839431		Latin American Spanish				
CHEMTREC Brazil (Rio De Janeiro)	+(55)-2139581449		Portuguese				
CHEMTREC Chile (Santiago)	+(56)-225814934		Latin American Spanish				
CHEMTREC Colombia *		01800-710-2151	Latin American Spanish				
CHEMTREC Mexico*		01-800-681-9531	Latin American Spanish				
CHEMTREC Peru (Lima)	+(51)-17071295		Latin American Spanish				

ASIA							
CHEMTREC China*	4001-204937		Mandarin				
CHEMTREC Hong Kong (Hong Kong)*		800-968-793	Cantonese				
CHEMTREC India *		000-800-100-7141	Hindi				
CHEMTREC Indonesia*		001-803-017-9114	Indonesian				
CHEMTREC Japan (Tokyo)	+(81)-345209637		Japanese				
CHEMTREC Malaysia *		1-800-815-308	Malay				
CHEMTREC Philippines *		1-800-1-116-1020	Tagalog				
CHEMTREC Philippines (Manila)	+(63) 632-395-3308		Tagalog				
CHEMTREC Singapore*		800-101-2201	English and Mandarin				
CHEMTREC Singapore	+(65)-31581349		English and Mandarin				
CHEMTREC South Korea*		00-308-13-2549	Korean				
CHEMTREC Taiwan*		00801-14-8954	Mandarin				
CHEMTREC Thailand *		001-800-13-203- 9987	Thai				

AUSTRALASIA							
CHEMTREC Australia (Sydney)	+(61)-290372994		English				
CHEMTREC New Zealand (Auckland)*	+(64)-98010034		English				

	EUROPE		
CHEMTREC Belgium (Brussels)	+(32)-28083237		French and Flemish
CHEMTREC Czech Republic (Prague)	+(420)-228880039		Czech
CHEMTREC Denmark	+(45)-69918573		Danish
CHEMTREC France	+(33)-975181407		French
CHEMTREC Germany *		0800-181-7059	German
CHEMTREC Hungary (Budapest)	+(36)-18088425		Hungarian
CHEMTREC Italy *		800-789-767	Italian
CHEMTREC Italy (Milan)	+(39)-0245557031		Italian
CHEMTREC Netherlands	+(31)-858880596		Dutch
CHEMTREC Poland (Warsaw)	+(48)-223988029		Polish
CHEMTREC Portugal	+(351)-308801773		Portuguese
CHEMTREC Russia*		8-800-100-6346	Russian
CHEMTREC Slovakia (Bratislava)	+(421)-233057972		Slovak
CHEMTREC Spain*		900-868538	European Spanish
CHEMTREC Sweden (Stockholm)	+(46)-852503403		Swedish
CHEMTREC Switzerland (Zurich)	+(41)-435016715		Swiss German, French and Italian
CHEMTREC UK (London)	+(44)-870-8200418		English

MIDDLE EAST						
CHEMTREC Bahrain (Bahrain)	+(973)-16199372		Arabic			
CHEMTREC Israel (Tel Aviv)	+(972)-37630639		Hebrew			

*Phone numbers for countries marked with an asterisk must be dialed within the country