1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	**K & N POWER KLEEN™**
1.2	Chemical Name:	See ingredients listed in section 3
1.3	Synonyms:	K & N Air Filter Cleaner™
1.4	Trade Names:	K & N Power Kleen™
1.5	Product Use:	Automotive – Cleaner
1.6	Distributor's Name:	K&N Engineering, Inc.
1.7	Distributor's Address:	P.O. Box 1329, Riverside, CA 92502-1329 USA
1.8	Emergency Phone:	**CHEMTREC +1 (800) 424-9300 / +1 (703) 527-3887 (CCN 632715)**
1.9	Business Phone / Fax:	+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 SKIN IRRITATION. CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY IRRITATION.

Classification: Skin Irrit. 2, Eye Irrit. 2B, Acute Tox. Oral 5, STOT SE 3

Hazard Statements (H): H303 - May be harmful if swallowed. H315 - Causes skin irritation. H320 - Causes eye irritation. H335 - May cause respiratory irritation.

Precautionary Statements (P): P264 - Wash hands and exposed skin areas with soap and water thoroughly after handling. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P321 - Specific treatment (see section 4 of this SDS). P332+P313 - If skin irritation occurs: Get medical advice/attention. P362 - Take off contaminated clothing and wash before reuse. P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P271 - Use only outdoors or in a well-ventilated area. P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312 - Call a POISON CENTER or doctor/physician if you feel unwell. 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 persists: Get medical advice/attention. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of contents/container in accordance with local regulations.

2.2 Effects of Exposure:

Ingestion: If product is swallowed, may cause nausea, vomiting and/or diarrhea.
Eyes: Moderately irritating to the eyes.
Skin: This product can cause mild, transient skin irritation with short-term exposure. This product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.
Inhalation: Vapors of this product may be irritating to the nose, throat and other tissues of the respiratory system.

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/m^3)								
					ACGIH		NOHSC			OSHA			
					ppm		ppm			ppm			
CHEMICAL NAME(S)	**CAS No.**	**RTECS No.**	**EINECS No.**	**%**	**TLV**	**STEL**	**ES-TWA**	**ES-STEL**	**ES-PEAK**	**PEL**	**STEL**	**IDLH**	**OTHER**
SODIUM METASILICATE PENTAHYDRATE	6834-92-0	VV9275000	229-912-9	1-5	NA	NA	NF	NF	NF	NA	NA	NA	
	Acute Tox. 4; Skin Corr. 1B; Serious Eye Dam. 1; STOT SE 3; H302, H314, H335												
CI 45170 (BASIC VIOLET 10)	81-88-9	BP3675000	201-383-9	0-0.1	NA	NA	NF	NF	NF	NA	NA	NA	
	Acute Tox. Oral 4; Eye Dam. 1; Acute Aq. Tox. 3; Chronic Aq. Tox. 3; H302, H318, H402, H412												

4. FIRST AID MEASURES

4.1	First Aid:	Ingestion: **DO NOT INDUCE VOMITING.** Contact ChemTrec at +1 (703) 527-3887 or the nearest Poison Control 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 aspiration. Eyes: Flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If irritation persists, seek immediate medical attention. Skin: Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt medical attention. Do not wear contaminated clothing until after it has been properly cleaned. Inhalation: Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate medical attention. If breathing stops, perform artificial respiration.
4.2	Medical Conditions Aggravated by Exposure:	Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, and respiratory system).

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARDS	0
PROTECTIVE EQUIPMENT	B

EYES	SKIN		

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.

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 areas and removing contaminated clothing, are recommended.
7.2	Storage & Handling:	Keep away from sources of heat. Maximum Recommended Shelf-Life: 24 months
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 and windows, local exhaust ventilation).	
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:	Pink liquid
9.2	Odor:	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:	> 100 °C (212 °F)
9.7	Flashpoint:	> 100 °C (212 °F)
9.8	Upper/Lower Flammability Limits:	NA
9.9	Vapor Pressure:	NA
9.10	Vapor Density:	NA
9.11	Relative Density:	1.020
9.12	Solubility:	Soluble
9.13	Partition Coefficient (log P_{ow}):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	NA
9.17	Other Information:	NA

10. STABILITY & REACTIVITY

10.1	Stability:	Stable under normal conditions of use.
10.2	Hazardous Decomposition Products:	None known.
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	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:	NO	Absorption:	YES	Ingestion:	YES
11.2	Toxicity Data:	This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, is available for some of the components of the product but is not presented below.					
11.3	Acute Toxicity:	See section 2.4					
11.4	Chronic Toxicity:	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.					
11.7	Irritancy of Product:	See section 2.3					
11.8	Biological Exposure Indices:	NE					
11.9	Physician Recommendations:	Treat symptomatically.					

12. ECOLOGICAL INFORMATION

12.1	Environmental Stability:	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.

14.1	49 CFR (GND):	NOT REGULATED
14.2	IATA (AIR):	NOT REGULATED
14.3	IMDG (OCN):	NOT REGULATED
14.4	TDGR (Canadian GND):	NOT REGULATED
14.5	ADR/RID (EU):	NOT REGULATED
14.6	SCT (MEXICO):	NOT REGULATED
14.7	ADGR (AUS):	NOT REGULATED

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): 36/37/38 – Irritating to eyes, skin and respiratory system. 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! MAY BE HARMFUL IF SWALLOWED. CAUSES SKIN IRRITATION. CAUSES EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION.** Wash hands and exposed skin areas with soap and water thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of soap and water. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Store in a well-ventilated place. Keep container tightly closed. Store locked up. **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

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	American Conference on Governmental Industrial Hygienists
C	Ceiling Limit
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:

A	
B	
C	
D	
E	
F	

G	
H	
I	
J	
K	
X	**Consult your supervisor or SOPs for special handling directions.**

Safety Glasses | **Splash Goggles** | **Face Shield & Protective Eyewear** | **Gloves**

Boots | **Synthetic Apron** | **Protective Clothing & Full Suit** | **Dust Respirator**

Full Face Respirator | **Dust & Vapor Half-Mask Respirator** | **Full Face Respirator** | **Airline Hood/Mask or SCBA**

OTHER STANDARD ABBREVIATIONS:

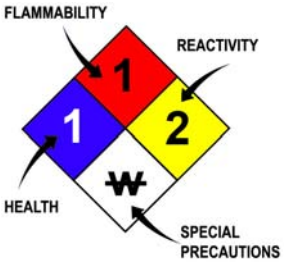
ML	Maximum Limit
NA	Not Available
ND	Not Determined
NE	Not Established
NF	Not Found
NR	No Results
SCBA	Self-Contained Breathing Apparatus

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:	
Autoignition 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
TREFOIL	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_{Lo}	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD_{Lo}, LD_{Lo}, & LD_{o} or TC, TC_{o}, LC_{Lo}, & LC_{o}	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
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)
WGK	Wassergefährdungsklassen (German Water Hazard Class)

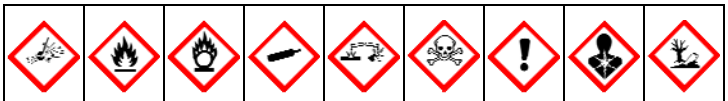
WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

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:

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

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



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