



G.K. Chemical Specialties Co. Inc.  
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## SAFETY DATA SHEET (SDS)

<b>PRODUCT NAME:</b> G-460 ENGINE SHAMPOO	
<b>HEALTH HAZARD RATING:</b>	(1)- SLIGHT HAZARD
<b>FLAMMABILITY HAZARD RATING:</b>	(2)- MODERATE HAZARD
<b>REACTIVITY HAZARD RATING:</b>	(0)- MINIMAL HAZARD
<b>PERSONAL PROTECTION:</b>	H - (Splash goggles, Gloves, Synthetic apron, Vapor respirator)
<b>HAZARD ALERT SIGN:</b>	  

<b>SECTION 1 – IDENTIFICATION</b>	
<b>PRODUCT IDENTIFIER</b>	
<b>PRODUCT NAME</b>	G-460 ENGINE SHAMPOO
<b>MANUFACTURER'S NAME AND ADDRESS</b> <b>EMERGENCY PHONE NO.</b>	G.K. Chemical Specialties Co. Inc. 90 Barbados Blvd. Scarborough, Ontario M1J 1K9 (416) 261-7182 / 905 427-7605/ 416-526-4037
<b>SUPPLIER'S NAME AND ADDRESS</b> <b>EMERGENCY PHONE NO.</b>	
<b>CHEMICAL NAME</b>	NOT APPLICABLE
<b>CHEMICAL FAMILY</b>	NOT APPLICABLE
<b>TRADE NAME AND SYNONYMS</b>	NOT APPLICABLE
<b>MATERIAL USE</b>	INDUSTRIAL, COMMERCIAL CLEANING

G.K. Chemical Specialties Co. Inc. has compiled the information and recommendations contained in this

Safety Data Sheet from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the SDS was prepared. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation.

G.K. Chemical Specialties Co. Inc. extends no warranty and assumes no responsibility as to the accuracy of the content or sufficiency of the information and expressly disclaims all liability for reliance thereon. This SDS provides guidelines for the safe handling of this product. It does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required. Individuals exposed to this product should read and understand this information and be provided pertinent training prior to working with this product.

G.K. Chemical Specialties Co. Inc. assumes no responsibility for personal injury or property damage to vendors, users or third parties caused by the material. Such vendors or users assume all risks associated with the use of the material.

INGREDIENTS. This SDS, under section of Ingredients, contains all ingredients listed under INGREDIENT DISCLOSURE LIST P.C. 1987-2719, 20/1/88 CANADA GAZETTE PART II VOL. 122, No 2 of HAZARDOUS PRODUCT ACT.

Percentage range of concentration of ingredients is expressed as percentage by weight of the total weight of the product. Ingredient List does not necessarily list all ingredients in the formulation and does not necessarily list all ingredient range of concentration, other than ingredients under the Disclosure List.

T.L.V. (units) or Threshold Limit Values refer to the limiting concentrations recommended by the Ministry of Labour. These values were adopted by the American Conference of Governmental Industrial Hygienists (A.C.G.I.H.). The figures refer to time-weighted average concentrations as P.P.M. (V/V) or mg/m<sup>3</sup> for a normal working day or at any time for some materials.

“C.A.S REG. No.” means the identification number assigned to a chemical substance by the Chemical Abstracts Service Division of the American Chemical Society.

“LC 50” means the concentration of a substance in air that when administered by means of inhalation over a specified length of time in an animal assay, is expected to cause the death of 50 per cent of a defined animal population.

“LD 50” means the single dose of a substance that, when administered by a defined route in an animal assay, is expected to cause death of 50 per cent of a defined animal population.

FLASH POINT. The minimum temperature at which a substance gives off flammable vapors which in contact with spark or flame will ignite.

NIOSH- National institute for occupational safety and health

STEL- Short term exposure limit

TWA- Time-weighted average

PEL- Permissible exposure limit

ACGIH- American conference of governmental industrial hygienist

OSHA- Occupational safety and health act

## SECTION 2 – HAZARD IDENTIFICATION

Dangerous Goods- **WHMIS:** CLASS B, Div. 2, CLASS D, Div.2B  
**OSHA HAZARDS:** Flammable liquid, Target Organ Effect, Irritant  
Target Organs: Nerves, Kidney, Cardiovascular system, Gastrointestinal tract, Liver.  
**Signal Words: Danger.**

### GHS CLASSIFICATION

Flammable liquids- Category 3  
Acute toxicity – Inhalation- Category 4  
Skin corrosion / irritation- Category 2  
Serious eye damage/ eye irritation - Category 2b  
Specific target organ toxicity- single exposure (Narcotic effects) - Category 3.  
Aspiration hazard – Category 1

GHS Label Elements, including precautionary statements: Hazard Statements:



### HAZARD STATEMENTS

H226- Flammable liquid and vapor  
H304- May be fatal if swallowed and enters airways  
H316- Causes mild skin irritation  
H319- Causes serious eye irritation  
H336- May cause drowsiness or dizziness  
H302-Harmful if swallowed



### PREVENTION (see also section 4 –First aid and measures)

P210- Keep away from heat/sparks/open flames/hot surfaces  
P261- Avoid breathing dust/fumes/gas/mist/vapors/spray  
P280- Wear protective gloves / protective clothing / eye protection / face protection  
P264- Wash skin thoroughly after handling  
P242- Use only non-sparking tools.  
P243- Take precautionary measures against static discharge  
P405- Store locked up  
P233- Keep container tightly closed.



### RESPONSE

P305+P351+P338- IF IN EYES: Rinse cautiously with water for several minutes: Remove contact lenses if present and easy to do so. Continue rinsing.  
P337 + P313: If eye irritation persists: Get medical advice/attention  
P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
P301 + P310; IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician  
P303 + P361 + P353: IF ON SKIN (or hair): Remove/ take off immediately all contaminated clothing. Rinse skin with water/shower  
P370 + 378: In case of fire, use dry chemical to extinguish

### POTENTIAL HEALTH EFFECTS

**EYES:** Causes eye irritation

**INHALATION:** May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness. Can cause irritation of mucous membranes and central nervous system depression. Aspiration into lungs may cause pneumonia or death

**SKIN:** May be harmful if absorbed through skin. Causes skin irritation

**INGESTION:** May be harmful if swallowed

<b>SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS</b>				
<b>HAZARDOUS INGREDIENTS</b>	<b>APPROXIMATE CONCENTRATION%</b>	<b>C.A.S., N.A. OR U.N. NUMBERS</b>	<b>LD50 {SPECIFY SPECIES &amp; ROUTE}</b>	<b>LC 50 {SPECIFY SPECIES &amp; ROUTE}</b>
Distillates (petroleum), hydrotreated light	65 - 85	64742-47-8	Oral(Rat): >5,000 mg/kg Dermal(Rabbit):>2000mg/kg	Inhalation: Rat-4h: >5.28 mg/kg
Light Aromatic solvent Naphtha (C8-C10)	5 – 10	64742-95-6	Oral (Rat): >3,000 mg/kg Dermal(Rabbit):>3160mg/kg	100 ppm ACGIH
Alcohols, C9-C11, Ethoxylated	3 – 7	68439-46-3	Oral (Rat): 1,400 mg/kg Dermal(Rabbit):>2000mg/kg	
Isopropylamine Alkyl aryl Sulfonate	3 - 7	26264-05-1	Oral (Rat): 1,838 mg/kg	

<b>SECTION 4 – FIRST AID MEASURES</b>	
<b>SKIN CONTACT</b>	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary.
<b>EYE CONTACT</b>	Immediately hold eyelids open and flush with water for at least 15 minutes. Seek medical attention.
<b>INHALATION</b>	For excessive inhalation remove casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary
<b>INGESTION</b>	May be harmful if swallowed. Do not induce vomiting. Seek immediate medical attention. Never give anything by mouth to an unconscious or convulsing person. If vomiting occur spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Danger of aspiration of vomit into the lungs can cause serious damage and chemical pneumonitis.
<b>NOTES TO PHYSICIAN</b>	Treatment based on sound judgment of physician and individual reaction of patient. <b>Eye contact:</b> Causes serious eye irritation. <b>Inhalation:</b> Harmful if inhaled in excessive amounts. Can cause central nervous system depression. May cause drowsiness and dizziness. <b>Skin contact:</b> May cause skin irritation. <b>Ingestion:</b> Can cause central nervous system depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

<b>SECTION 5 – FIRE-FIGHTING MEASURES</b>	
<b>FLASH POINT ( °C)</b>	42°C (107.6°F)
<b>FLASH POINT METHOD</b>	Closed Cup or Tag
<b>AUTOIGNITION TEMPERATURE ( °C )</b>	236°C (456.8°F)
<b>UPPER FLAMMABLE LIMIT ( % VOL.)</b>	5.5 %
<b>LOWER FLAMMABLE LIMIT ( % VOL. )</b>	0.6 %
<b>HAZARDOUS COMBUSTION</b>	Carbon Dioxide ( CO <sub>2</sub> ), Carbon monoxide,

<b>PRODUCTS</b>	
<b>UNUSUAL FIRE/ EXPLOSION HAZARDS</b>	Explosive in presence of open flames, sparks, or heat. Containers can rupture and explode under fire conditions due to pressure and vapor buildup. Heated vapors may form explosive mixture with air. Vapors may travel across the ground and reach an ignition source.
<b>SENSITIVITY TO MECHANICAL IMPACT</b>	May be
<b>SENSITIVITY TO STATIC DISCHARGE</b>	yes
<b>EXTINGUISHING MEDIA</b>	Water spray, foam, dry powder or Carbon Dioxide. Use media appropriate for surrounding fire
<b>SPECIAL FIRE FIGHTING PROCEDURES</b>	Fire fighters should wear full protective clothing, including self-contained breathing equipment. Vapor may travel considerable distance to source of ignition and flash back. Cool exposed containers with water spray.

<b>SECTION 6 – ACCIDENTAL RELEASE MEASURES</b>	
<b>LEAK AND SPILL PROCEDURE</b>	<p>Stop leak and ventilate the area. Eliminate source of ignition. Move containers from spill area. Absorb spill with vermiculite or other noncombustible absorbent material. Place in a suitable container (with lid tightly covered) for disposal. Solvent soaked materials may spontaneously combust.</p> <p>For large spills, dike spill, recover free liquid, collect with an electrically protected vacuum cleaner or by wet-brushing. Use absorbent material to dry area. Put all material into appropriate waste containers. Rinse with water. Avoid contaminating ground and surface water.</p>
<b>ENVIRONMENTAL PRECAUTIONARY</b>	Prevent entry into sewers or streams. Any release to the environment may be subject to federal or local reporting requirements.
<b>PERSONAL PRECAUTIONARY MEASURES</b>	Wear protective clothing during cleanup. See section 8 for recommendations on the use of personal protective equipment. Avoid breathing vapors, mist or gas

<b>SECTION 7 – HANDLING AND STORAGE</b>	
<b>HANDLING PROCETURES</b>	<p>Avoid contact with eyes. Avoid ingestion. Do not breathe vapors. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Wear personal protective equipment appropriate to task. Use good industrial hygiene practices in handling this product. Keep container closed when not in use. Take measure to prevent the buildup of electrostatic charge. Use only non-sparking tools. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Eating, drinking and smoking should be prohibited in areas where this product is handled, stored and processed. Workers should wash hands and face before eating. Launder contaminated clothing prior to reuse. Do not cut, grind, weld or drill on or near containers.</p> <p><b>CAUTION:</b> Cloth or paper soaked in this product may undergo spontaneous ignition. Never discard wiping cloths soaked in this product carelessly. Do not put wet cloth or paper in a garbage bag or garbage container. Dry carefully before discarding.</p>
<b>STORAGE NEEDS</b>	Keep container tightly closed. Store in a cool area. Keep in the original container or an approved alternative. Store and use away from heat, sparks, open flame or any other ignition source. Store containers carefully and prevent leakage. Store separate from oxidizing materials.

<b>SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION</b>	
<b>VENTILATION REQUIREMENTS</b>	Good ventilation is recommended. Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering- STOP- ventilation is inadequate. Leave area immediately. When TLV (Threshold Limit Value over 8 hours of work) is greater than 100 ppm (245 mg/ m <sup>3</sup> ) provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective TLV. STEL (Short Term Exposure Limit) 1000 ppm (2500 mg/m <sup>3</sup> ) for 60 minutes
<b>PROTECTIVE EQUIPMENT</b>	Ensure that eyewash stations are proximal to the work-station location. The selection of personal protective equipment will vary depending on the condition of use
<b>EYE/TYPE</b>	Splash goggles, safety glasses or face shields are recommended to safeguard against potential eye contact, irritation, or injury.
<b>RESPIRATORY/TYPE</b>	Approved/ certified vapor respirator
<b>GLOVE/TYPE</b>	Nitrile, Vinyl impervious gloves
<b>FOOTWEAR/TYPE</b>	Boots
<b>BODY/TYPE</b>	Protective clothing is required. Use impervious clothing (apron, coveralls). The selection of personal protective equipment will vary depending on the conditions of use.

<b>SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES</b>	
<b>APPEARANCE – PHYSICAL STATE</b>	Clear to light yellowish thin liquid
<b>ODOUR</b>	Petroleum
<b>ODOUR THRESHOLD (PPM)</b>	1 ppm
<b>PH</b>	Not available
<b>MELTING POINT ( °C)</b>	See freezing point
<b>BOILING POINT ( °C )</b>	158°C (316.4° F) INITIAL – 194° C (381.2° F)
<b>FREEZING POINT ( °C )</b>	-58°C (-72.4° F)
<b>EVAPORATION RATE</b>	<1 (n-Butyl Acetate=1)
<b>FLAMMABILITY</b>	Flammable
<b>FLASH POINT ( °C)</b>	42°C (107.6°F)
<b>AUTO IGNITION TEMPERATURE</b>	236°C (456.8°F)
<b>DECOMPOSITION TEMPERATURE</b>	Not available
<b>VAPOUR DENSITY</b>	(air= 1) 4.5
<b>VAPOUR PRESSURE</b>	@ 20°C) 2mmHg
<b>SOLUBILITY</b>	partially soluble in water
<b>VISCOSITY</b>	Thin liquid
<b>% VOLATILE BY VOLUME</b>	90 %
<b>SPECIFIC GRAVITY</b>	0.80 ± 0.02 gm / cm <sup>3</sup>

<b>SECTION 10 – STABILITY AND REACTIVITY</b>	
<b>REACTIVITY</b>	Not self-reactive, self-heating
<b>CHEMICAL STABILITY</b>	Stable
<b>POSSIBILITY OF HAZARDOUS REACTIONS</b>	Under normal conditions of storage and use, hazardous reaction will not occur.
<b>CONDITIONS TO AVOID</b>	Keep away from heat, flame and sparks. Avoid incompatible materials. Do not allow vapors to accumulate in low or confined areas.
<b>INCOMPATIBLE MATERIALS</b>	Strong oxidizing agents. May attack some plastic materials
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	Carbon Dioxide (CO <sub>2</sub> ), Carbon monoxide,

<b>SECTION 11 –TOXICOLOGICAL INFORMATION</b>	
<b>TOXICITY EFFECTS ON ANIMALS</b>	<p><b>For Distillates (petroleum), hydrotreated light (64742-47-8):</b> Acute oral toxicity LD50 (Rat): &gt;5000 mg/kg. Acute Dermal Toxicity LD50 (Rabbit):&gt;2,000 mg/kg.</p> <p><b>For Light Aromatic solvent Naphtha (C8-C10) (64742-95-6):</b> Acute Oral Toxicity LD50 (Rat): &gt;3,000 mg/kg. Acute Dermal Toxicity LD50 (Rabbit): &gt;3,160 mg/kg.</p> <p><b>For Alcohols, C9-C11, Ethoxylated (68439-46-3):</b> Acute Oral Toxicity LD50 (Rat): 1,499 mg/kg. Acute Dermal Toxicity LD50 (Rabbit): &gt;5,000 mg/kg.</p> <p><b>For Isopropylamine Alky aryl Sulfonate (26264-05-12):</b> Acute Oral Toxicity LD50 (Rat); 1,838 mg/kg</p>
<b>TOXIC EFFECTS ON HUMANS</b>	Hazardous in case of ingestion or inhalation. Slightly hazardous in case of skin contact. <b>Skin</b> contact can cause redness, irritation and drying. Severity depends on the amount and duration of exposure. <b>Eyes:</b> Vapors may be irritating to the eyes. Liquid contact will cause stinging and tearing. <b>Inhalation:</b> Excessive inhalation of high concentrations may be harmful. Mist or vapor can irritate the throat and lungs. Breathing excessive amount of this product may cause central nervous system depression, intoxication, may cause drowsiness, headaches, dizziness. <b>Ingestion:</b> If swallowed this material may irritate the mucous membranes of the mouth throat and esophagus. Aspiration of this material into the lungs may result in damage or death.
<b>CHRONIC EFFECTS ON HUMANS</b>	Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. May cause anemia, bone marrow, liver damage. Repeated or prolonged skin contact may cause redness, irritation, and scaling of the skin.
<b>CARCINOGENICITY</b>	No known significant effects or critical hazards.
<b>TERATOGENICITY</b>	No evidence
<b>MUTAGENICITY</b>	No evidence
<b>REPRODUCTIVE EFFECTS</b>	No evidence

<b>SECTION 12 –ECOLOGICAL INFORMATION</b>	
<b>ECOTOXICITY DATA</b>	<p>Product expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. <b>MOBILITY:</b> Mostly volatile material and will partition rapidly to air. Not expected to partition to sediment and wastewater solids.</p> <p><b>For Distillates (petroleum), hydrotreted light (64742-47-8):</b> Acute Toxicity to fish</p>

	<p>LC50: 18-25 mg / L/96 h. Acute Toxicity to aquatic invertebrates EC50: 1.4-21 mg/L/ 48 h . Acute Toxicity to Algae/aquatic plants EC50: 5.0-11 mg / L / 72 h.</p> <p><b>For Light Aromatic solvent Naphtha (C8-C10) (64742-95-6):</b> No data found. Product expected to be toxic to aquatic organisms.</p> <p><b>For Alcohols, C9-C11, Ethoxylated (68439-46-3):</b> Acute Toxicity to fish LC50, Fathead minnow (Pimephales promelas): 8.5 mg/ L / 96 h. Acute Toxicity to aquatic invertebrates EC50, Daphnia magna (Water flea): 5.8 mg / L /48 h. Ingredient is readily BIODEGRADABLE.</p> <p><b>For Isopropylamine Alkyl aryl Sulfonate (26264-05-1):</b> No data found</p>
<b>BIODEGRADABILITY</b>	Expected to be inherently biodegradable
<b>PRODUCTS OF DEGRADATION</b>	

<b>SECTION 13 – DISPOSAL CONSIDERATIONS</b>	
<b>WASTE DISPOSAL</b>	Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations
<b>INFORMATION ON SAFE HANDLING FOR DISPOSAL INCLUDING ANY CONTAMINATED PACKAGING</b>	Suitable waste facility

<b>SECTION 14 – TRANSPORT INFORMATION</b>	
<b>UN NUMBER</b>	1268
<b>UN PROPER SHIPPING NAME</b>	PETROLEUM PRODUCTS, N.O.S. (Naphtha solvent 90%)
<b>TRANSPORT HAZARD CLASS</b>	CLASS 3: Flammable liquid
<b>PACKAGING GROUP</b>	Pk: III
<b>ENVIRONMENTAL HAZARDS</b>	Marine pollutant
<b>TRANSPORT IN BULK, if applicable</b>	NOT AVAILABLE
<b>SPECIAL PRECAUTIONS</b>	Guide to Canadian transportation. Emergency Response Guidebook (ERG): # 128

<b>SECTION 15 – REGULATORY INFORMATION</b>	
<b>SAFETY HEALTH &amp; ENVIRONMENTAL REGULATIONS SPECIFIC TO THE PRODUCT</b>	<p>U.S. TSCA inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) INVENTORY List or exempt.</p> <p>Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL) or exempt.</p>

<b>SECTION 16 – OTHER INFORMATION</b>	
<b>PREPARED BY:</b>	Gus Kaklamanos - Chemist
<b>TELEPHONE NO.:</b>	416-261-7182
<b>DATE OF THE LATEST REVISION OF SDS:</b>	October 5, 2017