



G.K. Chemical Specialties Co. Ltd.  
90 Barbados Blvd.  
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# Material SAFETY DATA SHEET

PRODUCT NAME: G-460 Engine Shampoo

<b>HEALTH HAZARD RATING:</b>	MINIMAL HAZARD - no significant risk to health
<b>FLAMMABILITY HAZARD RATING:</b>	MODERATE HAZARD - materials which must be moderately heated before ignition will occur, including flammable liquids with flash points at or above 100 °F and below 200 °F. (NFPA Class II and Class IIA)
<b>REACTIVITY HAZARD RATING:</b>	MINIMAL HAZARD – materials, which are normally stable, even under fire conditions, and which will not react with water.
<b>PERSONAL PROTECTION:</b>	Safety glasses + gloves
<b>HAZARD ALERT SIGN:</b>	HEALTH HAZARD – Normal material FIRE HAZARD – Below 200 °F REACTIVITY – Stable SPECIFIC HAZARD –

## SECTION I – MATERIAL IDENTIFICATION AND USE / IDENTIFICATION DE LA MATIÈRE ET USAGE

### MATERIAL NAME / IDENTIFIÉRIER – NOM / IDENTIFICATION DE LA MATIÈRE

#### G-460 Engine Shampoo

MANUFACTURER'S NAME AND ADDRESS/ NOM DU FABRICANT – ADRESSE EMERGENCY PHONE NO. / N° DE TÉLÉPHONE D'URGENCE	G.K. Chemical Specialties Co. Ltd. 90 Barbados Blvd. Scarborough, Ontario M1J 1K9 (416) 261-7182 / 905 427-7605
SUPPLIER'S NAME AND ADDRESS/ NOM DU FOURNISSEUR - ADRESSE EMERGENCY PHONE NO. / N° DE TELEPHONE DURGENGE	
CHEMICAL NAME / DÉNOMINATION CHIMIQUE	Not Applicable
CHEMICAL FAMILY / FAMILLE CHIMIQUE	Petroleum Distillate
CHEMICAL FORMULA / FORMULE CHIMIQUE	Not Applicable
TRADE NAME AND SYNONYMS / APPELLATION COMMERCIALE ET SYNONYMES	Not Applicable
MOLECULAR WEIGHT / POIDS MOLÉCULAIRE	Not Applicable
MATERIAL USE / UTILISATION DE LA MATIÈRE	Cleaning, Degreasing

G.K. Chemical Specialties Co. Ltd. has compiled the information and recommendations contained in this Material Safety Data Sheet from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS 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. Ltd. 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 MSDS 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. Ltd. 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 MSDS, 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.

**SECTION II – HAZARDOUS INGREDIENTS OF MATERIAL / INGRÉDIENTS DANGEREUX DE LA MATIÈRE**

HAZARDOUS INGREDIENTS / INGRÉDIENTS DANGEREUX	APPROXIMATE CONCENTRATION% CONCENTRATION APROXIMATIVE %	C.A.S., N.A. OR U.N. NUMBERS / NUMERO CAS NA OU CNU	LD50 {SPECIFY SPECIES & ROUTE} DL50 {PRÉCISER L'ESPECE ET LA VOIE D'ADMINISTRATION}	LC 50 {SPECIFY SPECIES & ROUTE} CL50 {PRÉCISER L'ESPECE ET LA VOIE D'ADMINISTRATION}
Petroleum Distillate	70-90	64742-47-8	LD 50 Oral, Rat 5000-15000 mg/kgm TLV 200 PPM	
Isopropylamine Alkyl-Lauryl Sulfonate	3-7	26264-05-1	Non Hazardous	
Alkyl Ethoxylate Non Ionic Surfactant	3-7	9016-45-9	LD 50 Oral, Rat 3000 mg/kgm LD 50 Dermal Rabbit 2830 mg/kgm	
			< = Less than	

**SECTION III – PHYSICAL DATA FOR MATERIAL / CARACTÉRISTIQUES PHYSIQUES DE LA MATIÈRE**

PHYSICAL STATE / ÉTAT PHYSIQUE	Liquid
ODOUR AND APPEARANCE / ODEUR ET APPARENCE	Clear to yellow liquid, Petroleum Odour
ODOUR THRESHOLD (P.P.M.) / SEUIL DE L'ODEUR (PPM)	1 PPM
SPECIFIC GRAVITY / DENSITÉ RELATIVE	0.84 ± 0.02 gm/cm <sup>3</sup>
VAPOUR PRESSURE [MM] / TENSION DE VAPEUR [MM]	0.4 at 20 °C
VAPOUR DENSITY [AIRE = 1] / DENSITÉ DE VAPEUR [AIR =1]	> 1
EVAPORATION RATE / TAUX D'ÉVAPORATION	< 0.2 n-Butyl Acetate=1
BOILING POINT [°C] / POINT D'ÉBULLITION [°C]	177-272 °C
FREEZING POINT [°C] / POINT DE CONGÉLATION [°C]	Not Applicable
SOLUBILITY IN WATER [20°C] / SOLUBILITÉ DANS L'EAU [20°C]	Soluble
% VOLATILE [BY VOLUME] / % VOLATILITÉ [PAR VOLUME]	90 ± 1%
PH	Not Applicable
COEFFICIENT OF WATER / OIL DISTRIBUTION / COEFFICIENT DE RÉPARTITION EAU / HUILE	Not Applicable

**SECTION IV – FIRE AND EXPLOSION HAZARD OF MATERIAL/RISQUES D'INCENDIE ET D'EXPLOSION DU MATÉRIEL**

FLAMMABILITY / INFLAMMABILITÉ <input checked="" type="checkbox"/> YES / OUI <input type="checkbox"/> NO/NON IF YES, UNDER WHICH CONDITIONS? / SI OUI, DANS QUELLES CONDITIONS?	Heat, Source of ignition
MEANS OF EXTINCTION / MOYENS D'EXTINCTION	Use alcohol foam, carbon dioxide, water spray or fog. Vapour may form an explosive mixture between upper and lower flammable limits.
SPECIAL PROCEDURES / MARCHE À SUIVRE SPÉCIALE	Do not use water except as fog. Wear self-contained breathing apparatus with a full-face piece operated in the positive pressure demand mode when fighting fires. Vapours from this product may travel or be moved by air currents and be ignited by pilot lights, or other ignition sources at locations distant from the point of handling.
FLASHPOINT [°C] AND METHOD / POINT D'ÉCLAIR [°C] ET MÉTHODE DE DÉTERMINATION	64 °C (148 °F) C.C.
UPPER EXPLOSION LIMIT [% BY VOLUME]/ SEUIL MAXIMAL D'INFLAMMABILITÉ [% PAR VOLUME]	1.0

LOWER EXPLOSION LIMIT [% BY VOLUME]/ SEUIL MINIMAL D'INFLAMMABILITÉ [% PAR VOLUME]	8.0
AUTOIGNITION TEMPERATURE [°C] / TEMPÉRATURE D'AUTO-INFLAMMATION [°C]	Not Established
HAZARDOUS COMBUSTION PRODUCTS / PRODUITS DE COMBUSTION DANGEREUX	CO, CO <sub>2</sub> , Aldehydes

### EXPLOSION DATA / DONNÉES SUR L'EXPLOSIBILITÉ

SENSITIVITY TO MECHANICAL IMPACT / SENSIBILITÉ AUX CHOCS	Yes, may ignite
SENSITIVITY TO STATIC DISCHARGE / SENSIBILITÉ AUX DÉCHARGES ÉLECTROSTATIQUES	Yes, may ignite

### SECTION V – REACTIVITY DATA / DONNÉES SUR LA RÉACTIVITÉ

CHEMICAL STABILITY / STABILITÉ CHIMIQUE <input checked="" type="checkbox"/> YES / OUI NO/NON IF NO, UNDER WHICH CONDITIONS? / SI NON, DANS QUELLES CONDISIONS?	
INCOMPATIBILITY TO OTHER SUBSTANCES / INCOMPATIBILITÉ AVEC D'AUTRES SUBSTANCES <input checked="" type="checkbox"/> YES / OUI NO/NON IF SO, WHICH ONES? / SI OUI, AVEC LESQUELLES?	Strong Oxidizing agents, alkaline materials mineral acids, halogens
REACTIVITY AND UNDER WHAT CONDITIONS / RÉACTIVITÉ – DANS QUELLES CONDITIONS?	With common material no reaction
HAZARDOUS DECOMPOSITION PRODUCTS / PRODUITS DE DÉCOMPOSITION DANGEREUX	Carbon Monoxide, Carbon Dioxide and Aldehydes on burning.

### SECTION VI – TOXICOLOGICAL PROPERTIES OF MATERIAL / PROPRIÉTÉS TOXICOLOGIQUES DE LA MATIÈRE

#### ROUTE OF ENTRY / VOIE D'ADMINISTRATION

SKIN CONTACT / CONTACT AVEC LA PEAU                       SKIN ABSORPTION / ABSORPTION PAR LA PEAU  
 EYE CONTACT / CONTACT OCULAIRE                               INHALATION ACUTE / INHALATION AIGUE  
 INHALATION CHRONIC / INHALATION CHRONIQUE               INGESTION

EFFECTS OF ACUTE EXPOSURE TO MATERIAL / EFFETS DE L'EXPOSITION AIGUE A LA MATIERE	EYE CONTACT: Will cause irritation SKIN CONTACT: will cause irritation, may cause defatting dermatitis. INGESTION: Moderately toxic may cause nausea, vomiting and diarrhea. Large amounts may cause serious harm. INHALATION: Breathing excessive amounts of vapours, may cause nasal and respiratory irritation
EFFECTS OF CHRONIC EXPOSURE TO MATERIAL / EFFETS DE L'EXPOSITION CHRONIQUE A LA MATIERE	Prolonged exposure to high concentrations of vapours may result in central nervous depression and narcosis.

### MATERIAL NAME / IDENTIFIER - NOM / IDENTIFICATION DE LA MATIÈRE ↓

**G-460 Engine Shampoo**

LD 50 OF MATERIAL [SPECIFY SPECIES & ROUTE] / LD50 DE LA MATIÈRE [PRÉCISER L'ESPECE ET LA VOIE D'ADMINISTRATION]	LD 50 Oral, Rat 5,000-15,000 mg/kgm
LC50 OF MATERIAL [SPECIFY SPECIES & ROUTE] LC50 DE LA MATIÈRE / [PRÉCISER L'ESPECE ET LA VOIE D'ADMINISTRATION]	Not Established
EXPOSURE [LIMITS] / LIMITS D'EXPOSITION	TLV 200 PPM short-term inhalation limits 2500 mg/m <sup>3</sup> for 60 min.
IRRITANCY OF MATERIAL/PROPRIÉTÉ IRRITANTE DE LA MATIÈRE	Eyes, Skin, respiratory tract
SENSITIZATION OF MATERIAL / SENSIBILISATION A LA MATIÈRE	Eyes, Skin, respiratory tract
SYNERGISTIC MATERIALS / MATÉRES SYNERGIQUES	None Known
CARCINOGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY, MUTAGENICITY / CANCÉROGÉNÉCITÉ, EFFETS NOCIFS SUR LA REPRODUCTION, TÉRATOGÉNÉCITÉ, MUTAGÉNÉCITÉ	None of the ingredients contained in this product are regulated as carcinogens by OSHA

## SECTION VII – PREVENTIVES MEASURES / MESURES PRÉVENTIVES

### PERSONAL PROTECTIVE EQUIPMENT / MATÉRIEL PERSONNEL DE PROTECTION

GLOVES (SPECIFY) GANTS [PRÉCISER]	Resistant such as: Neoprene, Nitrile Rubber
EYE [SPECIFY] / YEUX [PRÉCISER]	Glasses, goggles
RESPIRATORY (SPECIFY) / APPAREIL RESPIRATOIRE (PRÉCISÉR)	If workplace exposure limits of product or any component is exceeded, a NIOSH / MSHA approved air supplied respirator is advised in absence of proper environmental control.
OTHER (SPECIFY) / AUTRES (PRCISER)	Normal work clothing covering arms and legs.
ENGINEERING CONTYROLS [E.G. VENTILATION, ENCLOSED PROCESS, SPECIFY] / MÉCANISMES TECHNIQUES [EX. VENTILATION, OPÉRATION EN MILIEU FERMÉ, PRÉCISER]	Provide sufficient mechanical (general and/or local) ventilation to maintain exposure below TVLS
LEAK AND SPILL PROCEDURE / MESURES EN CAS DE FUITE OU DE DÉVERSEMENT	SMALL SPILL: Absorb liquid using absorbent material and transfer to hood. LARGE SPILL: Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent and shoveled into containers. Equipment used must be spark free.
WASTE DISPOSAL / ÉLIMINATION DES RÉSIDUS	SMALL SPILL: Allow volatile portion to evaporate in hood. Dispose of remaining material in accordance with applicable regulations. LARGE SPILL: Destroy by liquid incineration. Contaminated absorbent may be deposited in a landfill in accordance with local, provincial and federal regulation. Send to an approved reclaimer.
HANDLING PROCEDURES AND EQUIPMENTS / MÉTHODES ET ÉQUIPEMENT POUR LA MANUTENTION	Avoid any source of ignition. Keep out of reach of children. Avoid contact with eyes, skin, and clothing.
STORAGE REQUIREMENTS / EXIGENCES D'ENTREPOSAGE	Store in a cool place in closed containers away from any source of ignition.
SPECIAL SHIPPING INFORMATION / RENSEIGNEMENTS SPÉCIAUX POUR L'EXPÉDITION	None Required

## SECTION VIII – FIRST AID MEASURES / PREMIERS SOINS

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**SKIN CONTACTED:** Thoroughly wash exposed area with soap and water remove contaminated clothing. Launder contaminated clothing before re use.

**EYES CONTACTED:** Flush with large amounts of water, lifting upper and lower lids occasionally. Get medical attention if irritation persists.

**SWALLOWED:** Do not induce vomiting, keep person warm, quiet and get medical attention. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis, which can be fatal.

**BREATHED:** If affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration and get medical attention.

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<b>ADDITIONAL INFORMATION / RENSEIGNEMENTS SUPPLÉMENTAIRES</b>	
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## **SECTION IX – PREPARATION DATE OF M.S.D.S. / FICHE SIGNALÉTIQUE**

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**PREPARED BY:** Gus Kaklamanos - CHEMIST

**TELEPHONE NO.:** (416) 2617182

**DATE:** January 01, 2010

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### **ADDITIONAL NOTES OR REFERENCES / NOTES ADDITIONNELLES OU RÉFÉRENCES:**

Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. All five-gallon pails and larger metal containers including tank cars and tank trucks should be grounded when material is transferred. Containers of this product may be hazardous when emptied. Since emptied containers retain product residues (vapours, liquid, and/or solids), all hazard precautions given in the data sheet must be observed.

**WHMIS CLASSIFICATION:** CLASS B, DIV. 3