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SECTION 1. IDENTIFICATION

Product identifier used on the label

: **GUNK HEAVY DUTY TIRE & WHEEL CLEANER**

Product Code(s) : TFWC22C

Recommended use of the chemical and restrictions on use

: Wheel cleaner.
Restrictions on use: Not available.

Chemical family : Mixture of: Water; salts; Surfactant; Propellant.

Name, address, and telephone number of the supplier:

Radiator Specialty Co., of Canada

3-3055 Dundas St West, Suite 50
Mississauga, ON, Canada
L5L 3R8

Supplier's Telephone # : (905) 625-9117 (Mon. - Fri., 8 am - 4 pm)

24 Hr. Emergency Tel # : Not available.

Name, address, and telephone number of the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

White foamy spray (aerosol). Mild, soapy odour.

Most important hazards:
Contents under pressure. Container may explode if heated.
Risk of serious damage to eyes. Irritating to skin. Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS.
Harmful to aquatic life. Avoid release to the environment. See Section 12 for more environmental information.

This product is packaged and sold as a consumer product. The Hazardous Products Act (HPA) does not apply to consumer products [Hazardous Products Act Section 12(j)]. The below WHMIS 2015 classification and labeling information is being provided for informational purposes.

This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).
Classification:
- Gas Under Pressure - Liquefied gas
- Skin corrosion/irritation - Category 2
- Eye damage/irritation - Category 1

Label elements

Hazard pictogram(s)

Signal Word

DANGER!

Hazard statement(s)

Contains gas under pressure; may explode if heated.
Causes skin irritation.
Causes serious eye damage.

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Precautionary statement(s)

Wash exposed skin thoroughly after handling.
Wear protective gloves and eye/face protection.

If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Protect from sunlight. Store in a well-ventilated place.

Other hazards

Other hazards which do not result in classification:
Toxic fumes, gases or vapours may evolve on burning. Mild respiratory irritant. May cause gastrointestinal irritation. Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	Common name and synonyms	CAS #	Concentration (% by weight)
Butane	Butyl hydride Methylethylethane	106-97-8	**1.0 - 5.0**
Propane	Dimethylmethane Propyl hydride	74-98-6	**1.0 - 5.0**
Sodium metasilicate	Silicic acid, disodium salt	6834-92-0	**0.5 - 5.0**
Polyethylene glycol monoundecyl ether	Alcohols, C11, ethoxylated	34398-01-1	**0.5 - 5.0**

The exact concentrations of the above listed chemicals are being withheld as a trade secret.

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

Ingestion : If ingested, do not induce vomiting. Consult a physician. Never give anything by mouth to an unconscious person.

Inhalation : If inhaled, move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. If irritation or symptoms develop, seek medical attention.

Skin contact : If on skin: Wash with plenty of water. Flush with large amounts of water for 15 minutes. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Flush eyes with water for at least 15 minutes. Immediately call a POISON CENTER or doctor/physician.

Most important symptoms and effects, both acute and delayed

: Causes skin irritation. Contact may cause redness, swelling and a painful sensation.
Causes serious eye damage. Symptoms may include severe pain, tearing, redness, swelling and blurred vision. May cause irreversible eye damage.
Mild respiratory irritant. May cause coughing and breathing difficulties.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.

Indication of any immediate medical attention and special treatment needed

: Immediate medical attention is required. Causes serious eye damage.
Provide general supportive measures and treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media : Dry chemical, foam, carbon dioxide and water fog.

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Unsuitable extinguishing media

: Not available

Special hazards arising from the substance or mixture / Conditions of flammability

: This product is contained under pressure, and could explode when exposed to heat and flame. Toxic fumes, gases or vapours may evolve on burning.

Hazardous combustion products

: Carbon oxides; Silicon oxides; Sodium oxides; formaldehyde; Other unidentified organic compounds.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire-fighting procedures

: Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Shield personnel to protect from venting or rupturing containers. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Wear appropriate protective equipment. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.

Methods and material for containment and cleaning up

: Ventilate area of release. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. For spilled liquids: absorb spill with inert, non-combustible material such as sand, then place into suitable containers. Keep in properly labelled containers. Notify the appropriate authorities as required.
Refer to Section 13 for disposal of contaminated material.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

: Use with adequate ventilation. Wear suitable protective equipment during handling. Wear protective gloves and eye/face protection. Avoid breathing fumes, mists or vapors. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Do not pierce or burn, even after use. Avoid contact with incompatible materials. Wash thoroughly after handling. Always replace cap after use.

Conditions for safe storage : Store in a cool, dry, well-ventilated area. Protect from sunlight and do not expose to temperatures exceeding 50 °C/122 °F. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Keep away from incompatibles.

Incompatible materials : Strong oxidizing agents; Acids.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Butane	1000 ppm (Butane, all isomers)	N/Av	800 ppm (final rule limit)	N/Av
Propane	N/Av	N/Av	1000 ppm (1800 mg/m³)	N/Av

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Sodium metasilicate	**N/Av**	**N/Av**	**N/Av**	**N/Av**
Polyethylene glycol monoundecyl ether	**N/Av**	**N/Av**	**N/Av**	**N/Av**

Exposure controls

Ventilation and engineering measures

: Provide adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection : If airbourne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with CSA Z94.4-02. Advice should be sought from respiratory protection specialists.

Skin protection : Wear protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Depending on conditions of use, an impervious apron should be worn. Wear suitable protective clothing.

Eye / face protection : Wear eye/face protection. Wear as appropriate: Tightly fitting safety goggles; Safety glasses with side shields. A full face shield may also be necessary.

Other protective equipment : An eyewash station and safety shower should be made available in the immediate working area. Other equipment may be required depending on workplace standards.

General hygiene considerations

: Avoid breathing fumes, mists or vapors. Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Wash contaminated clothing before reuse. Wash hands thoroughly after using this product, and before eating, drinking or smoking.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : White foamy spray (aerosol)

Odour : soapy

Odour threshold : N/Av

pH : 10.5 - 11.5

Melting/Freezing point : Melting point: N/Av
Freezing point: N/Av

Initial boiling point and boiling range

: 100°C (212°F)

Flash point : None.

Flashpoint (Method) : Tag closed cup

Evaporation rate (BuAe = 1) : < 1 (butyl acetate = 1)

Flammability (solid, gas) : Not applicable.

Lower flammable limit (% by vol.)

: N/Ap

Upper flammable limit (% by vol.)

: N/Ap

Oxidizing properties : No oxidizing properties.

Explosive properties : Aerosols are sensitive to mechanical impact. Closed containers are contained under pressure and may explode if exposed to excess heat for a prolonged period of time.

Vapour pressure : N/Av

Vapour density : N/Av

Relative density / Specific gravity

: Relative density: 1000 kg/m³
Specific Gravity: 1.0

Solubility in water : Soluble

Other solubility(ies) : N/Av

Partition coefficient: n-octanol/water or Coefficient of water/oil distribution

: N/Av

Auto-ignition temperature : N/Av

Decomposition temperature : N/Av

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Viscosity : N/Av

Volatiles (% by weight) : 5%

Volatile organic Compounds (VOC's)
: N/Av

Absolute pressure of container
: N/Av

Flame projection length : None.

Other physical/chemical comments
: Flashback Observed: NO
Chemical heat of combustion: 2.82 kJ/g (estimated)
Duration of flame (aerosol): No flame observed.
Maximum foam flame height (aerosol): No flame observed.
Alkali reserve = 0.184 g NaOH

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.

Chemical stability : Stable under the recommended storage and handling conditions prescribed.

Possibility of hazardous reactions
: Hazardous polymerization does not occur. No dangerous reaction known under conditions of normal use.

Conditions to avoid : Avoid heat and open flame. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials. Protect from sunlight and do not expose to temperatures exceeding 50 °C/122 °F.

Incompatible materials : Strong oxidizing agents; Acids.

Hazardous decomposition products
: Not available.
In the event of fire: Refer also to hazardous combustion products, Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

Routes of exposure skin absorption
: NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation
: Mild respiratory irritant. May cause coughing and breathing difficulties. In extremely high concentrations, product may act as an asphyxiant and cause increased breathing and pulse rates, fatigue and unconsciousness.

Sign and symptoms ingestion
: Not an expected route of entry under normal conditions of use. However, if the product is sprayed directly into mouth and large amounts of the liquid concentrate are swallowed, it may cause irritation to the mouth, throat and stomach. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Sign and symptoms skin : May cause moderate skin irritation. Contact may cause redness, swelling and a painful sensation. Prolonged contact, such as when trapped against the skin under clothing or jewelry, may be more irritating. If product is sprayed directly on skin, symptoms of frostbite may be experienced including numbness, prickling and itching.

Sign and symptoms eyes : Causes serious eye damage. Symptoms may include severe pain, tearing, redness, swelling and blurred vision. May cause irreversible eye damage.

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Potential Chronic Health Effects

: Prolonged skin contact may cause dermatitis (rash), characterized by red, dry, itching skin. Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.

Mutagenicity : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity : Not classifiable as a human carcinogen. No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

: This product is not expected to cause reproductive or developmental effects.

Sensitization to material : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects : According to the classification criteria of Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015), this product is not expected to cause specific target organ toxicity (STOT) through single or repeated exposures.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials : None known or reported by the manufacturer.

Toxicological data : Not classified for acute toxicity based on available data. No data is available on the product itself. See below for individual ingredient acute toxicity data.

Chemical name	LC_{50} (4hr) inh, rat	LD_{50} (Oral, rat)	LD_{50} (Rabbit, dermal)
Butane	276 000 ppm	N/Ap (gas)	N/Ap (gas)
Propane	N/Av	N/Ap (gas)	N/Ap (gas)
Sodium metasilicate	> 2.06 mg/L (mist) (No mortality)	1152 - 1349 mg/kg	> 5000 mg/kg
Polyethylene glycol monoundecyl ether	N/Av	> 1400 mg/kg (supplier)	> 2000 mg/kg

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : Harmful to aquatic life. No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. The product contains the following substances which are hazardous for the environment: Alcohols, C11, ethoxylated.

See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Butane	106-97-8	N/Ap	N/Ap	N/Ap
Propane	74-98-6	N/Ap	N/Ap	N/Ap
Sodium metasilicate	6834-92-0	260 - 310 mg/L (Rainbow trout)	N/Av	None.
Polyethylene glycol monoundecyl ether	34398-01-1	1 - 10 mg/L (Fathead minnow) (supplier)	0.16 mg/L (Read-across)	None.

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Ingredients	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Butane	106-97-8	N/Ap	N/Ap	N/Ap
Propane	74-98-6	N/Ap	N/Ap	N/Ap
Sodium metasilicate	6834-92-0	1700 mg/L (Daphnia magna)	N/Av	None.
Polyethylene glycol monoundecyl ether	34398-01-1	1 - 10 mg/L (Daphnia magna) (supplier)	0.79 mg/L (Read-across)	None.

Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Butane	106-97-8	N/Ap	N/Ap	N/Ap
Propane	74-98-6	N/Ap	N/Ap	N/Ap
Sodium metasilicate	6834-92-0	> 345 mg/L/72hr (Green algae)	160 mg/L/72hr	None.
Polyethylene glycol monoundecyl ether	34398-01-1	1 - 10 mg/L/96hr (Green algae)	N/Av	None.

Persistence and degradability

: No data is available on the product itself.
Contains the following chemicals which are not readily biodegradable: Sodium metasilicate.
The following ingredients are considered to be readily biodegradable: Alcohols, C11, ethoxylated.

Bioaccumulation potential : No data is available on the product itself. See the following data for ingredient information.

Components	Partition coefficient n-octanol/water (log Kow)	Bioconcentration factor (BCF)
Butane (CAS 106-97-8)	2.89 (estimated)	33 (estimated)
Polyethylene glycol monoundecyl ether (CAS 34398-01-1)	0.97 - 8.43	12.7 - 387.5

Mobility in soil : No data is available on the product itself.

Other Adverse Environmental effects

: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal : Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8. This material and its container must be disposed of in a safe way.

Methods of Disposal : Dispose of in accordance with federal, provincial and local hazardous waste laws.

SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	UN1950	AEROSOLS	2.2	None	

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TDG Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Under the TDG, refer to Section 1.17 for additional exemption requirements, if shipping under this exemption.

Special precautions for user : Appropriate advice on safety must accompany the package. Keep away from heat, sparks and open flame. - No smoking.

Environmental hazards : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See Section 12 for more environmental information.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not applicable.

SECTION 15 - REGULATORY INFORMATION

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

Canadian National Pollutant Release Inventory (NPRI): This product contains the following substances listed on the NPRI:
Propane (Part 5: Individual Substances)

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	New Zealand IOC
Butane	106-97-8	203-448-7	Present	Present	(2)-4	KE-03751	Present	HSR000989
Propane	74-98-6	200-827-9	Present	Present	(2)-3	KE-29258	Present	HSR001010
Sodium metasilicate	6834-92-0	229-912-9	Present	Present	(1)-508	KE-12354	Present	HSR003511
Polyethylene glycol monoundecyl ether	34398-01-1	500-084-3	Present	Present	(7)-97	KE-28888	Present	May be used as a single component chemical under an appropriate group standard.

SECTION 16. OTHER INFORMATION

Legend :

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CAS: Chemical Abstract Services
CSA: Canadian Standards Association
EC50: Effective Concentration 50%
EINECS: European Inventory of Existing Commercial chemical Substances
ENCS: Existing and New Chemical Substances
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IBC: Intermediate Bulk Container
IECSC: Inventory of Existing Chemical Substances
IMDG: International Maritime Dangerous Goods
Inh: Inhalation
IOC: Inventory of Chemicals
KECI: Korean Existing Chemicals Inventory
KECL: Korean Existing Chemicals List

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LC: Lethal Concentration
LD: Lethal Dose
N/Ap: Not Applicable
N/Av: Not Available
NIOSH: National Institute of Occupational Safety and Health
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
PICCS: Philippine Inventory of Chemicals and Chemical Substances
RTECS: Registry of Toxic Effects of Chemical Substances
SCBA: Self-Contained Breathing Apparatus
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2018.
2. International Agency for Research on Cancer Monographs, searched 2019.
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2019 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2019.

Preparation Date (mm/dd/yyyy)

: 03/24/2019

Other special considerations for handling

:

Prepared for: Radiator Specialty Co. of Canada 3-3055 Dundas St West, Suite 50 Mississauga, ON, Canada, L5L 3R8 Telephone: 905-625-9117 (Mon. - Fri., 8 AM - 4 PM) Please direct all enquiries to Radiator Specialty.	
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