MATERIAL SAFETY DATA SHEET

1. Chemical product and company identification

A. Product name **5-56® Multi-Purpose Lubricant**

Product code 05004K

B. Recommended use and Limitations on use

Recommended use Multi-purpose lubricant

C. Supplier information

Company name CRC Industries, Inc.

Address 885 Louis Dr.
Warminster PA 18974
United States

Telephone	General Information	215-674-4300
	Technical Assistance	800-521-3168
	Customer Service	800-272-4620
Email		
Emergency telephone number	24-Hour Emergency (CHEMTREC)	800-424-9300

2. Hazards identification

A. Hazard category/Classification

Physical hazards	Flammable aerosols	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
Environmental hazards	Not classified.	
Other hazards which do not result in classification	Not classified.	

B. Warning label items including precautionary statement

• Pictogram

• Signal word Danger

• Hazard statement

H222	Extremely flammable aerosol.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.

• Precautionary statement

Prevention

P210	Keep away from flames and hot surfaces. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Pressurized container: Do not pierce or burn, even after use.
P261	Avoid breathing mist or vapor.
P261	Avoid breathing gas.
P271	Use only outdoors or in a well-ventilated area.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves.

Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331	Do NOT induce vomiting.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P321	Specific treatment (see this label).
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.

P304 + P340
P312
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.

Storage

P403 + P233
P405
P410 + P412
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal

P501
Dispose of contents/container in accordance with local/regional/national/international regulations.

C. Other hazards not included in the hazard category criteria (e.g. dust explosion hazard)
None known.

3. Composition/information on ingredients

Chemical identity	Common and alternative names	CAS number	ID number	Content in percent (%)
Distillates (petroleum), hydrotreated light		64742-47-8	KE-12550	50 - 55
Liquefied Petroleum Gas		68476-86-8	KE-28192	20 - 25
Distillates (petroleum), solvent-refined heavy paraffinic		64741-88-4	KE-12614	10 - 15
n-Butyl stearate		123-95-5	KE-26345	1 - 5
Sorbitan oleate		1338-43-8	KE-31689	1 - 5
Methyl salicylate		119-36-8	KE-20378	0.3 - 5
Petrolatum		8009-03-8	KE-28170	0.1 - 5

4. First aid measures

A. In case of eye contact
Rinse with water. Get medical attention if irritation develops and persists.

B. In case of skin contact
Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

C. In case of inhalation
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.

D. In case of swallowing
Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

E. Note to physician
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General advice
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

A. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media
Alcohol resistant foam. Dry powder. Dry chemicals. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

B. Specific hazards arising from the chemical (example: hazardous combustion products)
Contents under pressure. Pressurized container may rupture when exposed to heat or flame. During fire, gases hazardous to health may be formed.

C. Specific methods of fire-fighting

Special protective equipment for firefighters
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 you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

General fire hazards
Extremely flammable aerosol.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire and/or explosion do not breathe fumes.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency measures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Avoid breathing gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.

B. Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

C. Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Stop leak if you can do so without risk. Use water spray to reduce vapors or divert vapor cloud drift. Isolate area until gas has dispersed. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the MSDS.

7. Handling and storage

A. Precautions for safe handling

Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing mist or vapor. Avoid breathing gas. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

B. Conditions for safe storage (including any incompatibilities)

Level 3 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials (see Section 10 of the MSDS).

8. Exposure controls/personal protection

A. Exposure limit values, biological limit values, etc

Korea. OELs. Standards for Exposure to Chemical Substances and Physically Hazardous Factors

Components	Type	Value
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)	TWA	200 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Distillates (petroleum), solvent-refined heavy paraffinic (CAS 64741-88-4)	TWA	5 mg/m3	Inhalable fraction.
n-Butyl stearate (CAS 123-95-5)	TWA	10 mg/m3	
Petrolatum (CAS 8009-03-8)	TWA	5 mg/m3	Inhalable fraction.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Korea OELs: Skin designation

Distillates (petroleum), hydrotreated light (CAS 64742-47-8)	Substance can be absorbed through membrane, eye and skin and can cause whole body effects (It does not mean skin irritant).

B. Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

C. Personal protective equipment

- **Respiratory protection** — Chemical respirator with organic vapor cartridge and full facepiece.
- **Eye protection** — Not available.
- **Hand protection** — Wear appropriate chemical resistant gloves.

• Body protection	Wear appropriate chemical resistant clothing.
Hygiene measures	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

A. Appearance	
Physical state	Liquid.
Form	Aerosol.
Color	Amber.
B. Odor	Pleasant.
C. Odor threshold	Not available.
D. pH	Not available.
E. Melting point/freezing point	
Melting point	-72.4 °F (-58 °C) estimated
Freezing point	-72.4 °F (-58 °C) estimated
F. Boiling point, initial boiling point, and boiling range	212 °F (100 °C) estimated
G. Flash point	145 °F (62.8 °C) Tag Closed Cup
H. Evaporation rate	Not available.
I. Flammability (solid, gas)	Not available.
J. Upper/lower limit on flammability or explosive limits	
Flammability limit - lower (%)	0.6 % estimated
Flammability limit - upper (%)	5.5 % estimated
Explosive limit - lower (%)	0.6 % estimated
Explosive limit - upper (%)	5.5 % estimated
K. Vapor pressure	1439.5 hPa estimated
L. Solubility	
Solubility (water)	Negligible.
M. Vapor density	> 1 (air = 1)
N. Specific gravity	0.75 estimated
O. n-octanol/water partition coefficient	Not available.
P. Auto-ignition temperature	456.8 °F (236 °C) estimated
Q. Decomposition temperature	Not available.
R. Viscosity	Not available.
S. Molecular weight	Not available.
Other data	
Density	6.26 lbs/gal estimated
Percent volatile	92.4 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
A. Stability and hazardous reaction potential	
Stability	Material is stable under normal conditions.
Hazardous reaction potential	No dangerous reaction known under conditions of normal use.
B. Conditions to avoid (e.g. static discharge, shock or vibration, etc)	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
C. Incompatible materials	Strong oxidizing agents.
D. Hazardous decomposition products	Carbon oxides. Sulfur oxides. Hydrocarbons.

11. Toxicological information

A. Information on likely routes of exposure

• Respiratory organs	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
• Skin	Causes skin irritation.
• Eyes	Direct contact with eyes may cause temporary irritation.
• Mouth	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

B. Information on health hazards

• Acute toxicity (list all possible routes of exposure)	May be fatal if swallowed and enters airways. Narcotic effects.

Product	Species	Test Results
5-56® Multi-Purpose Lubricant		
Acute		
Dermal		
LD50	Rabbit	2949.6785 mg/kg estimated
Inhalation		
LC50	Rat	15.2401 mg/l, 4 hours estimated
Oral		
LD50	Rat	6782.2524 mg/kg estimated
Subchronic		
Oral		
LD50	Rat	3061.5386 g/kg, 14 days estimated

• Corrosivity or irritation to the skin	Causes skin irritation.
• Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
• Respiratory sensitization	Not available.
• Skin sensitization	This product is not expected to cause skin sensitization.
• Carcinogenic properties /Carcinogenicity	Not available.
• Mutagenic properties /Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
• Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
• Specific target organ toxicity - single exposure	May cause drowsiness and dizziness.
• Specific target organ toxicity - repeated exposure	Not classified.
• Aspiration hazard	May be fatal if swallowed and enters airways.

12. Ecological information

A. Ecotoxicity

Product		Species	Test Results
5-56® Multi-Purpose Lubricant			
Aquatic			
Crustacea	EC50	Daphnia	6993.0068 mg/l, 48 hours estimated
Fish	LC50	Fish	1803.1013 mg/l, 96 hours estimated
Components		**Species**	**Test Results**
Sorbitan oleate (CAS 1338-43-8)			
Aquatic			
Acute			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	> 1000 mg/l, 96 hours

Hazardous to the aquatic environment, acute hazard	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Hazardous to the aquatic environment, long-term hazard	Not available.
B. Persistence/degradability	No data is available on the degradability of this product.
C. Bioaccumulative potential	No data available.

Bioaccumulative potential

Octanol/water partition coefficient log Kow	
Methyl salicylate	2.55

D. Mobility in soil	This product is miscible in water.
E. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

A. Method of disposal	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose in accordance with all applicable regulations. Dispose of contents/container (in accordance with related regulations).
B. Disposal considerations (including disposal of contaminated containers or packaging)	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

IATA

A. UN number	UN1950
B. UN proper shipping name	Aerosols, flammable, Limited Quantity
C. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
D. Packing group	Not applicable.
E. Environmental hazards	No.
ERG Code	10L
F. Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

A. UN number	UN1950
B. UN proper shipping name	AEROSOLS, LIMITED QUANTITY
C. Transport hazard class(es)	
Class	2
Subsidiary risk	-
D. Packing group	Not applicable.
E. Environmental hazards	
Marine pollutant	No.
EmS	Not applicable.
F. Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

IATA; IMDG

15. Regulatory information

A. Restrictions under the Industrial Safety and Health Law

Harmful Substances Prohibited from Manufacturing

Not regulated.

Harmful Substances Requiring Permission for Manufacture or Use

Not regulated.

Controlled Hazardous Substances

Not regulated.

Harmful Substances Requiring Special Medical Examination

Not regulated.

Workplace Environmental Monitoring Harmful Materials

Not regulated.

Occupational Exposure Limit

Distillates (petroleum), hydrotreated light (CAS 64742-47-8)

B. Restrictions under the Toxic Chemicals Control Law

Accidental Release Prevention Substances

Not regulated.

Banned Toxic Chemicals

Not regulated.

Observational Chemicals

Not regulated.

Restricted Chemical Substances

Not regulated.

Toxic Chemicals

Not regulated.

C. Restrictions under the Dangerous Substance Safety Management Act

D. Restrictions under the Wastes Control Act

Halogenated Materials in Waste Organic Solvents

Not regulated.

Hazardous Substances

Not regulated

E. Restrictions under other foreign or domestic laws

Clean Air Conservation Act

Air Pollutants

Liquefied Petroleum Gas (CAS 68476-86-8)
Petrolatum (CAS 8009-03-8)

Specific Air Pollutants

Not regulated.

Further information This material safety data sheet was prepared in accordance with Article 41 of the Industrial Safety and Health Law.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Korea	Existing Chemicals List (ECL)	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

A. Source of information	ACGIH EPA: AQUIRE database NLM: Hazardous Substances Data Base US. IARC Monographs on Occupational Exposures to Chemical Agents Korea. Accidental Release Prevention Substances (Presidential Decree of Toxic Chemical Control Law, Executive Order No. 19203) Korea. Dangerous Substances Threshold Quantity (Presidential Decree of Dangerous Substances Safety Management Act No. 18406, Schedule 1) Korea. Harmful Substances Prohibited from Manufacturing (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 29) Korea. Harmful Substances Requiring Permission for Manufacture or Use (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 30) Korea. Non-Toxic Chemicals List (National Institute of Environment Research (NIER) Public Notice No. 1997-10, as amended) Korea. Observational Chemicals (Ministerial Decree of TCCL Article 6) Korea. OELs. Regulation for Permitted Concentration of Hazardous Substances (Ministry of Labor (MOL) Public Notice No. 1986-45, as amended) Korea. Prohibited Chemical Substances (TCCL Article 11) Korea. Regulated volatile organic compounds (VOCs) (MOE Notice No. 2001-36, March 8, 2001, as amended) Korea. Restricted Chemical Substances (TCCL Article 11) Korea. Toxic Chemical Control Law (TCCL), Existing Chemicals Inventory (KECI) Korea. Toxic Chemical Control Law (TCCL), pre-1997 List Korea. Toxic Chemicals (TCCL Article 10) Korea. Toxic Release Inventory (TRI) Chemicals (TCCL Article 14)
B. Issue date	02-27-2015
C. Number of revisions and date of most recent revision	Not applicable.
D. Other	Not available.
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