MATERIAL SAFETY DATA SHEET

AEROSOL LUBRICANTS & PENETRANTS

10/12/12

PRODUCTS COVERED: AB-S, AC-G, AG-R, AG-W, AR-4, AR-B, AR-T, AS-H, AT-L

SECTION I–MANUFACTURER

Crest Industries, Inc., 1337 King Road, Trenton, MI 48183 **Phone:** (734) 479-4141 **FAX:** (734) 479-4040

24 HOUR EMERGENCY TELEPHONE (CHEMTEL): (800) 255-3924 **INTERNATIONAL CALLS:** (813) 248-0585

SECTION II–PRODUCTS

Stock Number	Product Name on Label	Numbers of Ingredients in Products	HMIS RATING H	F	R	Appearance and Odor	Solubility % in Water	Volatile Volume%
AB-S	Red Battery Terminal Protector	1,7,12,14,21,25	3*	3	0	Red liquid, strong solvent	10	60 to 70
AC-G	Clear Cheetah Grease	1,7,12,19,21,23,24,27	3*	4	0	Clear liquid, strong solvent	24	75 to 85
AG-R	Red Lube	6,8,12,20,21	3*	1	0	Red liquid, strong solvent	20	50 to 60
AG-W	White Lithium Grease	9,11,25,27,29,31	3*	3	0	White paste, mild solvent	<1	50 to 60
AR-4	Rustek Plus 4	8,10,21,26,28	3	3	0	Amber liquid, mild solvent	<1	40 to 50
AR-B	Rustek Penetrant Lubricant	2,4,25,27	2	4	0	Gray liquid, mild solvent	<1	15 to 25
AR-T	RusTerminator Cyberlube Penetrant	3,13,15,16,17,18	3	2	0	Yellow liquid, strong solvent	30	65 to 70
AS-H	Hi-Viscosity Silicone Spray	1,5,22,25	2	4	0	Clear liquid, strong solvent	35	95 to 98
AT-L	Dry Lubricant	1,7,12,30	2*	4	0	Cloudy liquid, mild solvent	<3	95 to 99

***Chronic health effects may occur from ingredients **10, 36**. **See NOTES in SECTION VI.**

SECTION III–HAZARDOUS INGREDIENTS

Ingredients	CAS Number	Exposure Limits* in ppm (parts per million)	Flash Point °F	Flash Point °C	Vapor Pressure (mm Hg at 20°C)	Evap. Rate (n-Butyl Acetate=1)	Boiling Point °F	Boiling Point °C	Flammable Limits in % Lower	Flammable Limits in % Upper	Autoignition Pt. °F	Autoignition Pt. °C
1. Acetone	67-64-1	750 A, O	-4	-20	185	7.7	132	56	2.6	12.8	869	465
2. Calcium Dinonyl-naphthalene Sufonate	57855-77-3	NE	>200	>93	<0.01	<0.01	1120	605	Unknown		Unknown	
3. Carbon Dioxide	124-38-9	5000 A,10000 O	None		>45000	NA	-108	-78	-NA-		None	
4. Heavy Aliphatic Naphtha	68551-20-2	5 mg/m^3 A mist	>200	>93	<0.01	<0.1	Unknown		Unknown		Unknown	
5. Heptane (**or** n-Heptane)	142-82-5	400 A, 500 O	25	4	45	4.5	201	94	1.2	6.7	433	223
6. Heptane Isomers	64742-49-0	NE	-4	-20	180	1.1	140	60	1.1	7.0	500	260
7. Hexane (**or** n-Hexane)**	110-54-3	50 A, 500 O**	-7	-22	140	8.1	156	69	1.2	7.4	437	225
8. Hydrotreated Kerosene	64742-47-8	100 mg/m^3 N	148	64	0.4	Unknown	350	177	1.0	8.0	Unknown	
9. Isobutane	75-28-5	1000 A, 800 N	<-40		>1500	>114	11	-12	1.6	8.4	860	460
10. Kerosene	8008-20-6	100 mg/m^3 N	148	64	0.4	Unknown	350	177	1.0	8.0	Unknown	
11. Light Petroleum Distillate	64742-89-8	400 E	<20	<-7	60	3.9	206	97	1.2	6.8	536	280
12. Liquid (**or** Liquefied) Petroleum Gas	68476-86-8	1000 A, O	<-40		>760	>164	-45	-43	2.1	9.5	842	450
13. Medium Aromatic Hydrocarbons	64742-94-5	5 mg/m^3 A mist	>200	>93	0.12	<0.1	Unknown		Unknown		Unknown	
14. Metalworking Fluid Additive	(Mixture)	100 A, O	>200	>93	<0.01	<0.01	Unknown		Unknown		Unknown	
15. 2-Methoxymethyl-ethoxypropanol	34590-94-8	100 (Skin) A, O	>200	>93	0.4	<0.1	Unknown		Unknown		Unknown	
16. Methyl Acetate	79-20-9	200 A, O	4	-15	180	6.2	132	56	3.1	16.0	934	501
17. Mineral Spirits 140-Flash	64742-88-7	100 A, O	140	60	0.5	<0.01	355	179	1.4	6.8	Unknown	
18. Naphthalene	91-20-3	10 A, O	189	87	<1	<1	424	218	0.9	5.9	979	526
19. Petrolatum	8009-03-8	5 mg/m^3 A mist	>200	>93	<0.01	<0.1	Unknown		Unknown		Unknown	
20. Petroleum Hydorcarbon	64742-57-0	5 mg/m^3 A mist	>200	>93	<0.01	<0.1	Unknown		Unknown		Unknown	
21. Petroleum Oil	64742-52-5	5 mg/m^3 A mist	>200	>93	<0.01	<0.1	Unknown		Unknown		Unknown	
22. Polydimethylsiloxane	63148-62-9	5 mg/m^3 A mist	>200	>93	<1	<0.1	Unknown		Unknown		Unknown	
23. Polytetrafluoroethylene (PTFE)	9002-84-0	NE	>200 -NA-	>93	NA NA	NA NA	Unknown -NA-		Unknown -NA-		Unknown -NA-	
24. Polyisobutylene	9003-29-6	NE										
25. Propane	74-98-6	1000 A, O	<-40		>1500	>114	-44	-42	2.1	9.5	919	493
26. Propane/Isobutane/ n-Butane	68476-86-8	1000 A, O	<-40		>760	>164	-45	-43	2.1	9.5	842	450
27. Solvent Dewaxed Heavy Paraffinic Distilate (mineral oil)	64742-65-0	5 mg/m^3 A mist	>200	>93	<0.01	<0.01	Unknown		Unknown		Unknown	
28. Stoddard Solvent	8052-41-3	100 A, 500 O	104	40	3	0.2	318	159	0.7	6.0	>394	>201
29. Tetrachloroethylene**	127-18-4	50 A, 25 O**	None		13	2.1	250	121	None		None	
30. Xylene (Dimethylbenzene)	1330-20-7	100 A, O	80	27	10	.08	281	138	1.0	6.4	810	432
31. Zinc Oxide	1314-13-2	10 mg/m^3 A, 10 (5 Respirable Dust Fraction) O	-NA-		NA	NA	-NA-		-NA-		-NA-	

***A means ACGIH TLV, N means NIOSH, O means OSHA PEL. Other abbreviations: > means greater than, < means less than, Lt. Means Light, NA means Not Applicable, NE means Not Established. ****See NOTES in SECTION VI.**

SECTION IV–PHYSICAL DATA

Pressure of Can Contents: Maximum pressure less than 140 PSI GAUGE @ 130°F (54°C). **Evaporation Rate:** See SECTIONS II, III. **Vapor Density:** Heavier than air. **Solubility in Water (Wt%):** See SECTION II. **Volatile Volume %:** See SECTION II.
Approximate Boiling Point: See SECTIONS II, III.
Product Density (water=1): Less than 1 (AGW is greater than 1).
Ingredients (except 2, 29, 31): Less than 1.
Appearance and Odor: See SECTION II.

SECTION V–FIRE AND EXPLOSION DATA

Flash Point (Tag Closed Cup Method): See SECTIONS II, III.
Approximate Flammable Limits: See SECTIONS II, III.
Autoignition Temperature: See SECTIONS II, III.
Extinguishing Media: Foam, carbon dioxide, dry chemical.
Special Fire Fighting Procedures: Full protective equipment, including self-contained breathing apparatus, is recommended because highly toxic gasses may be generated by combustion or thermal decomposition. Water from fog nozzles may be used to cool closed containers to prevent pressure build up (containers may leak or burst when heated).
Unusual Fire and Explosion Hazards: Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, electric motors, smoking or other ignition sources at locations far from material handling point. At elevated temperatures [130°F (54°C) or over] containers may vent, rupture or burst.

SECTION VI–HEALTH HAZARD DATA

PRIMARY ROUTES OF EXPOSURE: Inhalation, Skin contact, Eye contact.

SIGNS AND SYMPTOMS OF EXPOSURE:

INHALATION:

Acute Exposure: Solvent vapors at concentrations above the TLV can irritate the respiratory tract (nose, throat, lungs) causing a burning sensation, runny nose, sore throat, coughing, chest discomfort (tightness). May cause central nervous system depression with the following progressive symptoms: headache, dizziness, nausea, staggering gait, confusion, unconsciousness, cessation of breathing and death. **NOTE: Do not smoke while using Dry Lube (AT-L) or Cheetah Grease (AC-G).** Wash hands thoroughly before smoking. **Heating particles of Polytetrafluoroethylene (PTFE)** in burning tobacco will result in fumes which, when inhaled with the tobacco smoke, can cause a temporary influenza-like condition called polymer fume fever.

Chronic Exposure: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Symptoms include: loss of memory, loss of intellectual ability and loss of coordination. **NOTE: Prolonged and/or repeated overexposure to Hexane (n-Hexane) that is contained in AB-S, ACG and AT-L** may cause Peripheral Neuropathy (damage to nerve tissue of the arms or legs) resulting in muscular weakness and loss of sensation in some or all of the following: fingers, hands, arms, toes, feet or legs. **NOTE: INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING ANY SOLVENT VAPORS MAY BE HARMFUL OR FATAL.**

SKIN CONTACT:

Acute Exposure: Repeated or prolonged skin contact with solvents can result in dry, defatted and cracked skin causing increased susceptibility to infection. Skin irritation may develop into contact dermatitis.

Chronic Exposure: Exposure to small amounts of solvent over long periods of time may cause some or all of the symptoms as in acute exposure to solvents.

EYE CONTACT:

Acute Exposure: Irritation of the eyes with itching, burning, redness and even permanent tissue damage if sprayed directly into the eyes and not flushed out immediately.

Chronic Exposure: Irritation of the eyes with itching, burning, redness.

INGESTION:

Acute Exposure: (Not likely unless deliberately sprayed into mouth.) Irritation to the mouth, and if swallowed, to the esophagus, stomach tissue and digestive tract. If swallowed, vomiting may cause breathing of liquid solvent resulting in chemical pneumonia.

Chronic Exposure: Unknown.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: (See NOTES) None specifically known to Crest Industries, Inc. but it is possible that eye, respiratory tract, skin, liver, kidney, blood cell formation, nervous system and brain diseases may be aggravated by overexposure to the products on this MSDS.

CARCINOGENICITY: Products not listed by **NTP, IARC** or **OSHA**. **NOTE: 29. Tetrachloroethylene (contained AG-W) has been designated a carcinogen by OSHA. Risk to health depends on level and duration of exposure.** Be especially careful to minimize breathing the solvent vapors from AG-W. Use products outdoors, if possible. If you must use indoors, open all windows and doors or use other means to assure fresh air movement during application and drying. If properly used, a respirator (NIOSH/MSHA approved) may offer additional protection. Get professional advice for respirator use. **A dust mask does not provide protection against vapors!** Clean up rags and other waste immediately and allow solvent vapors to evaporate outdoors. **DO NOT use in basement or other unventilated area!**

SECTION VII–EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention.

SKIN CONTACT: Remove contaminated clothing immediately. Wash affected areas thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse. Seek medical attention if irritation develops or persists.

EYE CONTACT: Flush with clean, lukewarm water (low pressure) for at least 15 minutes while lifting eyelids. Refer person to physician for immediate attention.

INGESTION: DO NOT INDUCE VOMITING! Consult physician, hospital emergency room or poison control center immediately. Have list of ingredients available.

NOTES TO PHYSICIAN:

Inhalation: Treat as for solvent vapor inhalation. Bronchodilators, expectorants and antitussives may help.

Skin: Treat as any contact dermatitis.

Eyes: May cause conjunctivitis. Stain for evidence of corneal injury.

Ingestion: Treat as for solvent ingestion. Inducing vomiting is contraindicated because of the possibility of chemical pneumonia caused by aspiration of solvent liquid.

SECTION VIII–EMPLOYEE RECOMMENDATIONS

VENTILATION AND RESPIRATORY PROTECTION: If exhaust ventilation sufficient to keep the airborne concentrations of solvents and propellants below their respective TLV's is not possible, an NIOSH/MSHA approved Respirator must be used. Observe OSHA regulations (29 CFR 1910.134) for respirator use.

NOTE: THERE MUST ALWAYS BE ENOUGH VENTILATION TO KEEP VAPOR CONCENTRATION BELOW THE LOWER FLAMMABLE LIMIT!

SKIN PROTECTION: Cover as much of the skin as possible with appropriate clothing. Wear solvent resistant gloves.

EYE PROTECTION: Desirable during use of aerosol products. Wear safety glasses, splash goggles or face shield. Contact lenses should not be worn.

OTHER PROTECTIVE MEASURES: Eyewash stations should be available. Educate and train employees in safe use of products. Follow all label instructions.

SECTION IX–REACTIVITY DATA

STABILITY: Stable under normal room conditions.

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY (Materials to Avoid): Strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: By high heat and fire: carbon dioxide, carbon monoxide, hydrocarbon fumes, smoke. AG-R and AG-W will also give off hydrogen chloride, chlorine, phosgene and chlorinated hydrocarbon vapors.

SECTION X–SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Put on protective equipment including respiratory protection. Prevent further spillage. Evacuate nonessential personnel. Remove all sources of ignition and ventilate the area. Keep spill from reaching sewers and waterways. Cover the spill with vermiculite, Fuller's Earth or other absorbent material. Collect material with non-sparking tools and put in a tightly sealed container. Remove container to a safe place.

WASTE DISPOSAL METHOD: Follow all federal, state and local environmental control regulations. Incineration is the preferred method. **DO NOT PUT AEROSOL CONTAINERS IN A HOME TRASH COMPACTOR! DO NOT INCINERATE (OR BURN) AEROSOL CONTAINERS EVEN WHEN EMPTY!** Containers may become pressurized and burst even if they will not spray. Containers must be handled with care due to toxic and/or flammable and pressure producing residue.

RCRA STATUS: Since these products are ignitable and toxic they are hazardous when discarded.

SECTION XI–SPECIAL PRECAUTIONS & STORAGE DATA

STORAGE TEMPERATURE

MINIMUM / MAXIMUM: 50°F (10°C) / 120°F (49°C)

RECOMMENDED SHELF LIFE: One year

PRECAUTIONS TO BE TAKEN IN HANDLING, STORAGE AND USE: Keep away from heat, sparks and open flame. Do not store in temperatures above 120°F (49°C) or in direct sunlight. Do not inhale vapors or spray mist. Avoid contact with skin and eyes. Wash hands after use and before eating, drinking, smoking or using the toilet. Employee education and training in the safe use and handling of these materials are required under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

KEEP OUT OF THE REACH OF CHILDREN

SECTION XII–ENVIRONMENTAL PROTECTION AGENCY (EPA) REGULATORY INFORMATION

The following percentage table is to be used to meet Environmental Protection Agency (EPA) Regulations:

1. 40 CFR Part 370 Emergency and Hazardous Chemical Inventory Forms and Community Right-to-Know Reporting Requirements.
2. Title III Section 313 Toxic Chemical Release Reporting Requirements. **Note:** All the chemicals listed must be considered for 1. above. Only the ones marked with an asterisk (*****) fall under 2. The numbers in the following tables are good for all shipments until further notice.**Note:** This page is legally required to be sent with the previous two pages of this MSDS.

HAZARDOUS INGREDIENTS IN AEROSOL LUBRICANTS & PENETRANTS—APPROXIMATE PERCENTAGES BY WEIGHT

Ingredients	CAS Number	ABS	ACG	AGR	AGW	AR4	ARB	ART	ASH	ATL
1. Acetone	67-64-1	10	20-30	–	–	–	–	–	35	25
2. Calcium Dinonylnaphthalene Sulfonate	57855-77-3	–	–	–	–	–	01	–	–	–
3. Carbon Dioxide	124-38-9	–	–	–	–	–	–	03	–	–
4. Heavy Aliphatic Naphtha	68551-20-2	–	–	–	–	–	75	–	–	–
5. Heptane (**or** n-Heptane)	142-82-5	–	–	–	–	–	–	–	45	–
6. Heptane Isomers	64742-49-0	–	–	30-40	–	–	–	–	–	–
*7. Hexane (**or** n-Hexane)**	110-54-3	30	20-30	–	–	–	–	–	–	25
8. Hydrotreated Kerosene	64742-47-8	–	–	1-10	–	20	–	–	–	–
9. Isobutane (Methylpropane)	75-28-5	–	–	–	07	–	–	–	–	–
10. Kerosene	8008-20-6	–	–	–	–	25	–	–	–	–
11. Light Petroleum Distillate	64742-89-8	–	–	–	06	–	–	–	–	–
12. Liquid (**or** Liquefied) Petroleum Gas	68476-86-8	15	20-30	10-20	–	–	–	–	–	55
13. Medium Aromatic Hydrocarbons	64742-94-5	–	–	–	–	–	–	46	–	–
14. Metalworking Fluid Additive	(Mixture)	05	–	–	–	–	–	–	–	–
15. 2-Methoxymethylethoxypropanol	34590-94-8	–	–	–	–	–	–	06	–	–
16. Methyl Acetate	79-20-9	–	–	–	–	–	–	24	–	–
17. Mineral Spirits 140-Flash	64742-88-7	–	–	–	–	–	–	17	–	–
*18. Naphthalene	91-20-3	–	–	–	–	–	–	04	–	–
19. Petrolatum	8009-03-8	–	5-10	–	–	–	–	–	–	–
20. Petroleum Hydrocarbon	64742-57-0	–	–	1-10	–	–	–	–	–	–
21. Petroleum Oil	64742-52-5	40	1-5	30-40	26	20	–	–	–	–
22. Poly (dimethylsilioxane)	63148-62-9	–	–	–	–	–	–	–	05	–
23. Polytetrafluoroethylene (PTFE)	9002-84-0	–	<1	–	–	–	–	–	–	>3
24. Polyisobutylene	9003-29-6	–	1-5	–	–	–	–	–	–	–
25. Propane	74-98-6	–	–	–	08	–	10	–	15	–
26. Propane/Isobutane/n-Butane	68476-86-8	–	–	–	–	20	–	–	–	–
27. Solvent-Dewaxed Heavy Paraffinic Petroleum Distillate (Mineral Oil)	64742-65-0	–	25	–	–	–	12	–	–	–
28. Stoddard Solvent	8052-41-3	05	–	–	–	15	–	–	–	–
*29. Tetrachloroethylene (Perchloroethylene)	127-18-4	–	–	–	48	–	–	–	–	–
30. Xylene (Dimethylbenzene)	1330-20-7	–	–	–	–	–	–	–	–	05
31. Zinc Oxide	1314-13-2	–	–	–	02	–	–	–	–	–
Physical Hazard-Fire		60	71	20	21	80	10	24	95	97
Physical Hazard-Pressure Release		15	24	02	15	20	10	03	15	45
Health Hazard-Acute		100	100	100	100	100	100	100	100	100
Health Hazard-Chronic		30	23	49	48	–	–	–	–	–
Physical Hazard-Reactivity		NONE OF THE AEROSOL LUBRICANTS HAVE THIS HAZARD.								
Aerosol Level		**3**	**3**	**1**	**2**	**3**	**3**	**3**	**3**	**3**
Ingredients	**CAS Number**	**ABS**	**ACG**	**AGR**	**AGW**	**AR4**	**ARB**	**ART**	**ASH**	**ATL**

SECTION XIII–VOLATILE ORGANIC COMPOUND (V.O.C.) CONTENT OF AEROSOL LUBRICANTS ACCORDING TO THE FEDERAL EPA

Stock Number	ABS	ACG	AGR	AGW	AR4	ARB	ART	ASH	ATL
Percent by Weight	49.3	48.0	0	22.0	48.8	85.3	50.0	60.0	74.9
Pounds per Gallon	3.00	2.82	0	1.81	3.12	5.52	3.61	3.49	3.94
Grams per Liter	359	338	0	216	373	661	4.33	418	472
Pounds per Can	0.362	0.39	0	0.179	0.374	0.667	0.375	0.384	0.47

SECTION XIV–CALIFORNIA PROPOSITION 65 WARNINGS

According to the California Safe Drinking Water and Toxic Enforcement Act (PROPOSITION 65) "No person in the course of doing business shall knowingly and intentionally expose any individual to a chemical known to the State of California to cause cancer, birth defects or reproductive toxicity without first giving clear and reasonable warning to such individuals of such an exposure". The following warnings apply:

Tetrachloroethylene containing products (AG-W):

WARNING: This product contains a chemical known to the State of California to cause cancer.

SECTION XV–OZONE DEPLETION IN THE UPPER ATMOSPHERE

None of the products on this MSDS contain Upper Atmosphere ozone depleting substances.