

**MATERIAL SAFETY DATA SHEET
AEROSOL CLEANERS—WATER BASED**

6/17/05

PRODUCTS COVERED: AB-C, AG-C, AG-K, AG-N, AU-K

SECTION I—MANUFACTURER

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SECTION II—PRODUCTS

<u>Stock Number</u>	<u>Product Name on Label</u>	<u>Hazardous Ingredients in Products*</u>			<u>HMIS RATING</u>			<u>Appearance and Odor</u>
		<u>H</u>	<u>F</u>	<u>R</u>	<u>H</u>	<u>F</u>	<u>R</u>	
AB-C	Battery Terminal Cleaner	5,9	1	1	0			White foam, no odor
AG-C	Glass Cleaner	1,3,5	2	1	0			White foam, ammonia odor
AG-K	Glass Cleaner, Non-Ammonia Formula	2,3,4,6,8	2	1	0			White foam, pleasant odor
AG-N	Glass Cleaner, Non-Ammonia Formula	2,3,4,6,8	2	1	0			White foam, pleasant odor
AU-K	Action Foam Heavy Duty Spot & Carpet Cleaner	3,5,7,8	1	0	0			White foam, mild solvent

<u>Stock Number</u>	<u>Product Name on Label</u>	<u>Solubility in Water Weight%</u>		<u>Volatile Volume%</u>	
		<u>Weight%</u>	<u>Volume%</u>	<u>Weight%</u>	<u>Volume%</u>
AB-C	Battery Terminal Cleaner	90 to 95		5 to 10	
AG-C	Glass Cleaner	88 to 98		5 to 10	
AG-K	Glass Cleaner, Non-Ammonia Formula	88 to 98		5 to 10	
AG-N	Glass Cleaner, Non-Ammonia Formula	88 to 98		5 to 10	
AU-K	Action Foam Heavy Duty Spot & Carpet Cleaner	88 to 98		5 to 10	

SECTION III—HAZARDOUS INGREDIENTS

<u>Ingredients</u>	<u>CAS Number</u>	<u>Exposure Limits* in ppm (parts per million)</u>	<u>Flash Point</u>		<u>Vapor Pressure (mm Hg @ 20°C)</u>	<u>Evap. Rate (n-Butyl Acetate=1)</u>	<u>Boiling Point</u>		<u>Flammable Limits in %</u>		<u>Autoignition Point</u>	
			<u>°F</u>	<u>°C</u>			<u>°F</u>	<u>°C</u>	<u>Low'r</u>	<u>Upp'r</u>	<u>°F</u>	<u>°C</u>
1. Ammonium Hydroxide	1336-21-6	25 A, 50 O	< 32	< 0	>760	Unknown	-28	-33	16	25	1,204	651
2. n-Butane	106-97-8	1000 A, 800 N	<-40	<-40	>1500	114	31	-1	1.8	8.4	860	460
3. 2-Butoxyethanol	111-76-2	25 A, O Skin	165	74	0.9	0.1	340	171	-NA-		Unknown	
4. Ethanol	64-17-5	1000 A, O	54	12	44	1.9	165	74	3.3	19.0	685	363
5. Isobutane	75-28-5	1000 A, 800 N	<-40	<-40	>760	Unknown	11	-12	1.8	8.4	860	460
6. Morpholine	110-91-8	20 A, O Skin	100	38	6	<1	259	126	1.4	11.1	590	310
7. Nonoxynol-9	9016-45-9	Not Established	-NA-		NA	NA	-NA-		-NA-		-NA-	
8. Propane	74-98-6	1000 A, O	<-40	<-40	>760	Unknown	-44	-42	2.1	9.5	842	450
9. Sodium Bicarbonate	144-55-8	5 mg/m ³ A	None		NA	NA	-NA-		None		None	

*A means ACGIH TLV, O means OSHA PEL, N means NIOSH. Other abbreviations: > means greater than, < means less than, NA means Not Applicable. Skin means vapor exposure to the skin must also be considered.

SECTION IV—PHYSICAL DATA

Pressure of Can Contents: Maximum pressure less than 140 PSI GAUGE at 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. **Appearance and Odor:** See SECTION II

SECTION V—FIRE AND EXPLOSION DATA

Flammability Class: Non-Flammable Aerosol
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, and 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, and 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, and cessation of breathing and death.

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: INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING ANY SOLVENT VAPORS MAY BE HARMFUL OR FATAL!**

SKIN CONTACT:

Acute Exposure: Repeated or prolonged skin contact 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 over long periods of time may cause some or all of the symptoms as in acute exposure.

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 (except AB-C, which has no solvent) resulting in chemical pneumonia.

Chronic Exposure: Unknown.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: 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 over-exposure to the products on this MSDS.

CARCINOGENICITY: Products not listed by NTP, IARC or OSHA

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.

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

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

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.

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

Skin: Treat as any contact dermatitis.

Ingestion: Treat as for solvent ingestion (Except AB-C). Inducing vomiting is contraindicated because of the possibility of chemical pneumonia caused by aspiration of solvent liquid.

SECTION VIII-EMPLOYEE PROTECTION RECOMMENDATIONS

EYE PROTECTION: Desirable during use of aerosol products. Wear safety glasses. Contact lenses should not be worn.

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

VENTILATION AND RESPIRATORY PROTECTION: If ventilation sufficient to keep the airborne vapor concentrations of solvents and propellants below their respective TLV's is not possible, an OSHA/MSHA approved TC23C Respirator or TC19C Air Supplied Respirator must be used. **A dust mask DOES NOT provide protection against vapors!** 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!**

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

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 sawdust, vermiculite, Fuller's Earth or other absorbent material. Collect material 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 for the **contents** of containers. **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, flammable and/or pressure producing residue.

DO NOT PUT AEROSOL CONTAINERS IN A HOME TRASH COMPACTOR!

RCRA STATUS: Since these products contain ignitable and toxic materials (AB-C contains ignitable propellant only), they

are hazardous when discarded.

SECTION XI-SPECIAL PRECAUTIONS AND 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.

HAZARDOUS INGREDIENTS IN

AEROSOL CLEANERS-WATER BASED

APPROXIMATE PERCENTAGES BY WEIGHT

Ingredients (Chemicals)	CAS Number	Stock Numbers			
		ABC	AGC	AGK, AGN	AUK
1. Ammonium Hydroxide	1336-21-6	—	>1	—	—
2. n-Butane	106-97-8	06	—	03	—
3. 2-Butoxyethanol	111-76-2	—	05	03	>1
4. Ethanol	64-17-5	—	—	02	—
5. Isobutane	75-28-5	—	04	—	>1
6. Morpholine	110-91-8	—	—	02	—
7. Nonoxynol-9	9016-45-9	—	—	—	>1
8. Propane	74-98-6	05	—	02	>1
9. Sodium Bicarbonate	144-55-8	>1	—	—	—
Physical Hazard-Fire		11	09	10	09
Physical Hazard-Pressure Release		11	04	05	04
Health Hazard-Acute		11	09	10	09
Health Hazard-Chronic		—	—	—	—
Physical Hazard-Reactivity		None have this hazard.			
		Stock Numbers			
		ABC	AGC	AGK, AGN	AUK
Aerosol Level		1	1	1	1

SECTION XIII-VOLATILE ORGANIC COMPOUND

(V.O.C.) CONTENT OF AEROSOL CLEANERS-WATER BASED ACCORDING TO THE FEDERAL EPA

Stock Numbers	ABC	AGC	AGK	AGN	AUK
Percent by Weight	10.9	9.0	11.9	11.9	10.0
Pounds per Gallon	0.88	0.713	0.942	0.942	0.643
Grams per Liter	106	85	113	113	77
Pounds per can	0.102	0.128	0.141	0.170	0.113

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: **NONE**

SECTION XV-OZONE DEPLETION IN THE UPPER ATMOSPHERE

None of the products on this MSDS contains upper atmosphere ozone depleting substances

DISCLAIMER: The information contained in this MSDS is believed to be accurate and reliable as of the date indicated. **Crest Industries, Inc.** assumes no legal responsibility and makes no representation, warranty or guarantee, expressed or implied, as to the completeness or accuracy of the information. It is offered solely for your consideration, investigation and verification. The user is ultimately responsible for the safe use of the material in accordance with applicable federal, state, provincial and local laws and regulations.