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1	0	0	-
Health	Flamma bility	Reactivit y	Other

MATERIAL SAFETY DATA SHEET

PRODUCT **BARRETT SNR-24** ISSUE DATE **12/13/90**
 PRODUCT CODE **13403** REVISED DATE **3/13/2001**
24 Hour Emergency Number: CHEMTREC(1-800-424-9300) 4

SECTION 1 :- PRODUCT IDENTIFICATION

TRADE NAME BARRETT SNR-24
 CHEMICAL FAMILY INORGANIC SALTS
 FORMULA Proprietary Mixture

HMIS RATING:

1 Health **0** Flammability
0 Reactivity **-** Other

(0 = Insignificant, 1 = Slight, 2 = Moderate, 3 = High and 4 = Extreme)

SECTION 2 :- HAZARDOUS INGREDIENTS

MacDermid Inc. has identified the following chemical ingredient(s) as hazardous.

Ingredient	CAS#	By Weight %
Nickel Sulfamate	13770-89-3	45 - 55

SECTION 3 :- PHYSICAL DATA

DENSITY	12.94 Lb/Gl	FORM	Liquid
SPECIFIC GRAVITY	1.552	PH	4.55
FREEZING POINT	<32.00 F / 0 C	FLASH POINT	NA
VAPOR PRESSURE		VOLATILE %	NOT DETERMINED
CHEMICAL OXYGEN DEMAND (COD)	NOT DETERMINED		
BIOLOGICAL OXYGEN DEMAND (BOD)	Not Determined		
SOLUBILITY IN WATER	Complete Solubility		
COLOR/ODOR	Green/odorless		

NOTE: These physical properties are typical values for this product.

SECTION 4 :- FIRE AND EXPLOSION DATA

FLASH POINT NA
 EXTINGUISHING MEDIA Dry chemical, carbon dioxide, foam, water. As appropriate for surrounding material.
 NEVER allow run-off to enter sewers or waterways.
 UNUSUAL FIRE & EXPLOSION HAZARDS Unknown. Wear self-contained breathing apparatus/protective clothing

SECTION 5 :- FIRST AID DATA

EYES Take the victim immediately to the nearest eyewash or shower Wash affected eyes under slowly running water for 15 minutes Seek

medical attention immediately.

SKIN Remove contaminated clothing. Wash skin with soap & water. If irritation develops, contact a physician.

INGESTION Do NOT induce vomiting. If conscious, have victim rinse mouth, then drink large amounts of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

INHALATION Remove victim to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician immediately.

CAUTION If unconscious - having trouble breathing - or in convulsions do not induce vomiting or give water.

Always clean contaminated clothing and gear prior to reuse. NEVER administer anything to an unconscious person.

SECTION 6 :- HEALTH EFFECTS DATA

Primary Route(s) of Exposure : Eye, Skin, Inhalation and Ingestion

EYE CONTACT (ACUTE) Brief contact with vapors will be severely irritating Intense watering of eyes will occur

EYE CONTACT (CHRONIC) May cause eye injury which may persist for several days.

SKIN CONTACT (ACUTE) May cause irritation and damage to skin

SKIN CONTACT (CHRONIC) SENSITIZATION/DERMATITIS Prolonged or repeated contact may cause irritation and absorption through the skin and may cause systemic illness such as skin sensitization. Persons susceptible to dermatitis (skin rash) may aggravate their condition by skin contact with this product.

INGESTION (ACUTE) Irritation and burning sensation of lips/mouth and throat The substance is moderately toxic if swallowed. Headache and general weakness may occur

INGESTION (CHRONIC) Stomach or abdominal pain may develop Systemic illness may develop from ingestion

INHALATION (ACUTE) Prolonged inhalation of vapors can be harmful. Can cause nausea, dizziness, vomiting, stupor or unconsciousness.

SECTION 7 :- PERSONAL PROTECTIVE DATA

RESPIRATORY PROTECTION If there is a value for OSHA-PEL/ACGIH-TLV in section 13 and it is exceeded, it is recommended that a NIOSH approved respirator be used. Consult with your Industrial Hygienist for appropriate cartridge selection and use. See 29CFR 1910.134 for details. For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a pressure demand, self contained breathing apparatus is recommended.

VENTILATION General ventilation is recommended. Additionally, local exhaust ventilation is recommended where vapors, dusts, mists or aerosols may be released.

PROTECTIVE EQUIPMENT Chemically resistant apron, boots and gloves. The availability of a safety shower is recommended. If clothing is contaminated remove clothing and thoroughly wash the affected body area. Launder contaminated clothing before reuse. Safety glasses and/or splash proof goggles, face shields and the availability of an eye wash is recommended. Consult with your Safety Professional/Industrial Hygienists for specific information regarding applications at your facility.

These are general recommendations to provide a safe level of protection for various material handling conditions. Consult with your Safety Professional/Industrial Hygienist for specific information regarding applications at your facility

SECTION 8 :- TOXICOLOGY DATA

TOXICITY STUDIES :

Toxicity studies have not been conducted on this product. However toxicity literature surveys have been conducted on the ingredient(s) in section 2. The results are as follows:

ACUTE ORAL TOXICITY Nickel Compound: LD50 = 1600 mg/kg (Rat)

ACUTE DERMAL TOXICITY Unknown

ACUTE RESPIRATORY TOXICITY unknown

Listed as suspected carcinogen by :

IARC YES

NTP YES

OSHA NO

SECTION 9 :- REACTIVITY DATA

INCOMPATIBILITY alkalis and oxidizing agents, direct heat, direct sunlight.

HAZARD DECOMPOSITION PRODUCTS Oxides of sulfur

STABILITY Stable

CONDITIONS TO AVOID Unknown

HAZARDOUS POLYMERIZATION No hazardous polymerization.

SECTION 10 :- SPILLS & DISPOSAL DATA

In case of Transportation Accidents, call the following 24 hour telephone number : **CHEMTREC** (1-800-424-9300)

SPILL CONTROL AND RECOVERY Soak up into inert absorbent material. DO NOT use sawdust or other organic materials. Collect for disposal in plastic recovery drum. Flush residue with plenty of water to chemical drain.

DISPOSAL

Dispose of by an approved method at an approved secure facility. Do not discharge to waterways or sewer systems without proper authorization.

Please ensure that packaging, including drums, are disposed of in a responsible manner and in accordance with federal, and your state's, solid/hazardous waste regulations. You may want to refer to www.reusablepackaging.org for further disposal guidance.

Due to more restrictive waste disposal regulations, NEVER wastetreat or dispose of material until you check your appropriate local, state, & federal regulations for requirements. Spills may REQUIRE notification to FEDERAL, STATE and/or LOCAL AUTHORITIES.

SECTION 11 :-		TRANSPORTATION DATA	
DOT PROPER SHIPPING NAME		NON-REGULATED	
HAZARD	0 / NON REGULATED		
UN/NA#	000000		
DOT REPORTABLE QUANTITY (RQ)	NOT APPLICABLE	Pkg	Grp
IMO NAME		PLATING SOLUTION 000000	
IMO Class/Sub Class	0/NON-REGULATED/0		
UN/NA#		Pkg	Grp
IATA NAME		PLATING SOLUTION	
IATA Cls/Sub Cls	NON-REGULATED/0/0		
UN/NA#	000000	Pkg	Grp

EXPORT LICENSE MAY BE REQUIRED TO EXPORT THIS PRODUCT

SECTION 12 :-		GENERAL STORAGE DATA	
STORAGE TEMPERATURE : Maximum: 120.00°F 48.88°C Minimum: 32 F 0 C			

Material should be stored in the properly sealed original container
Keep containers sealed until ready for use. Avoid excessive long term storage temperatures to prolong shelf life.

SECTION 13 :-		REGULATORY DATA	
The following regulations apply to this product.			

FEDERAL REGULATIONS

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:
Based on our evaluation, the following ingredients in this product are subject to this rule:

Chemical Name	CAS#	By Weight%	OSHA-PEL	ACGIH-TLV
Nickel Sulfamate	13770-89-3	45 - 55	N/A	N/A

CERCLA/SUPERFUND, 40 CFR 117, 302/304 : Notification of spills of this product is

required

SARA/SUPERFUND AMENDMENTS & REAUTHORIZATION ACT OF 1986 (TITLE III)

Sections 302, 311, 312 & 313

SECTION 302 : Extremely Hazardous Substances (40 CFR 355)

This product does not contain ingredient(s) as listed.

SECTIONS 311 & 312 - M.S.D.S REQUIREMENTS (40 CFR 370)

This product contains ingredient(s) that may require reporting under Hazardous Chemical Inventory Reporting

- Immediate (Acute) health hazard Sudden release of pressure hazard
 Delayed (Chronic) health hazard Reactive Hazard
 Fire hazard

Under Section 311, submittal of MSDS or a list of product names to the local emergency planning commission, state emergency response commission, the local fire department is required after October 17, 1987. Consult the regulation for pertinent changes and updates.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372)

This product does not contain ingredient(s) listed under 40 CFR 372.65

Ingredient	CAS#	By Weight %
Nickel Sulfamate	13770-89-3	45 - 55

TOXIC SUBSTANCE CONTROL ACT (TSCA)

The chemical ingredient(s) in this product are listed on the 8(b) Inventory list (40 CFR 372.65)

RESOURCE CONSERVATION & RECOVERY ACT (RCRA), 40 CFR 261 SUBPARTS C & D

Please refer to section 10, disposal information for pertinent data.

TOTAL TOXIC ORGANICS

This product does not contain ingredient(s) on the list of Total Toxic Organics.

OSHA PROCESS SAFETY (1910.119)

This product does not contain ingredient(s) listed in APPENDIX A of 29 CFR 1910.119 of Highly Hazardous Chemicals, Toxics, and Reactives of OSHA process safety management.

CLEAN AIR ACT

This product contains ingredient(s) listed on the Hazardous Air Pollutants of CAA 40 CFR 112(G).

Ingredient	CAS#	By Weight %
Nickel Sulfamate	13770-89-3	45 - 55

OZONE DEPLETING SUBSTANCES

This product does not contain ingredient(s) listed on Ozone Depleting Substances of CAA 40 CFR 82.

STATE REGULATIONS

CALIFORNIA PROPOSITION 65

This product complies with with the MSDS and labeling requirements of the Safe Drinking Water and Toxic Enforcement Act of 1986.

This product does not contain ingredient(s) listed on California Prop 65 List.

Ingredient	CAS#	By Weight %
Nickel Salts	Trade Secret	5 - 10

MICHIGAN CRITICAL MATERIALS

This product does not contain ingredient(s) listed on the Michigan Critical Material Register.

Ingredient	CAS#	By Weight %
Nickel Salts	Trade Secret	5 - 10

The information listed above does not include all Federal, State, and International regulations. The regulations listed above may change from time to time; it is the users responsibility to keep advised of current regulatory requirements.

Prepared by MacDermid Inc. Safety & Regulatory Compliance Department, based upon publicly available reference information.

SECTION 14 :- USER NOTIFICATION

To the best of our knowledge the information contained herein is correct. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. Users of any chemical should satisfy themselves that the conditions and methods of use assure that the chemical is used safely. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER NATURE ARE MADE HERE UNDER WITH RESPECT TO THE INFORMATION CONTAINED HEREIN OR THE CHEMICAL TO WHICH THE INFORMATION REFERS.

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