

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Nukote Metal Prime I Side-A

SECTION I - COMPANY IDENTIFICATION

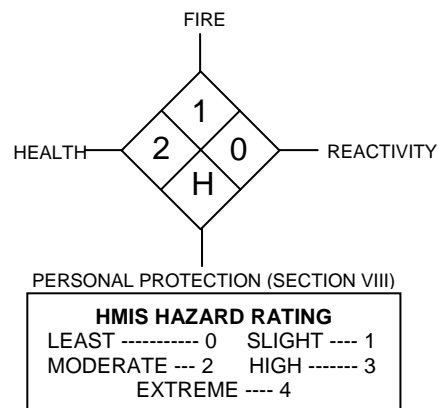
COMPANY NAME: Nukote Coating Systems

ADDRESS: Suite 7H, Aihe Mansion, No. 629 Lingling Road, Shanghai 200030, China
704 228th Avenue NE, No. 736, Sammamish, WA 98074, USA

INFORMATION PHONE: (China) 021-54249811, (USA) 425-702-1973

EMERGENCY CONTACT: (CHEMTREC): 800-424-9300
Outside USA and Canada, call CHEMTREC collect: 703-527-3887

DATE REVISED: MAY 17, 2005



SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE	
	CAS NUMBER	OSHA PEL	ACGIH TLV	MFG TLV	mm Hg @ TEMP
BENZENEMETHANOL	100-51-6	N/E	N/E		
OXIRANE,2,2'-((1-METHYLETHYLIDENE) BIS(4,1-PHENYLENEOXYMETHYLENE))BIS	25085-99-8	N/E	N/E		
NEODECANOIC ACID, OXIRANYLMETHYL ESTER	26761-45-5	N/E	N/E		

* No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.
Information concerning non-hazardous ingredients is considered a Trade Secret.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: 401°F

SPECIFIC GRAVITY: (H₂O=1): N/A

COATING V.O.C.: 216 g/l

VAPOR DENSITY: Heavier than air

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: Slight

APPEARANCE AND ODOR: Amber clear

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >200°F

METHOD USED: TCC

EXTINGUISHING MEDIA: Dry chemical, foam, carbon dioxide, water fog

SPECIAL FIRE FIGHTING PROCEDURES: Water may be used to cool and protect exposed containers. Wear NIOSH approved self-contained breathing apparatus in positive pressure mode with full-face piece. Boots, gloves (neoprene), goggles, and full protective clothing are also required. Excessive pressure or temperature may cause explosive rupture of containers.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may rupture due to very high temperature or induced pressure.

SECTION V - REACTIVITY DATA

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: Heat, high temperature, open flame, sparks, oxidizing agent. Contact with incompatible materials in a closed system will cause buildup of pressure.

INCOMPATIBILITY (MATERIALS TO AVOID): This product will react with materials such as amines, aluminum, epoxides, alkalis, oxidizers, reducing agents, aldehyde, isocyanates, nitric acid, lewis acids, curing agents, mineral acids and nitrates. Some reactions can be violent.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Organic vapors and other thermal decomposition products.

HAZARDOUS POLYMERIZATION: Will not occur may polymerize in presence of aliphatic amines.

SECTION VI - HEALTH HAZARD DATA

SKIN CONTACT: Frequent and prolonged contact can cause irritation dermatitis, defatting, allergic response, severe skin irritation or burns. Possible sensitization to skin. Skin contact may result in dermal absorption of components of product which may cause central nervous system depression.

EYE CONTACT: Frequent and prolonged contact can cause conjunctivitis, blurred vision, tearing, redness, irritation or burns, corneal injury, blindness.

SKIN ABSORPTION: Systemically toxic concentrations of this product will probably be absorbed through human skin.

INGESTION: Ingestion may cause lung inflammation and damage, mouth and throat irritation, dizziness, vomiting, gastro-intestinal disturbances, central nervous system depression, intoxication, difficulty of breathing, burns of the mouth, throat, stomach.

INHALATION: Prolonged inhalation may induce coughing, mucous membrane irritation, headaches, dizziness, drowsiness, nausea, diarrhea, central nervous system depression, anesthetic effect, difficulty of breathing, respiratory tract burns, severe lung irritation or burns, liver damage, kidney damage or unconsciousness. Chronic exposures may result in permanent decreases in lung function.

HEALTH HAZARDS: ACUTE: Exposure may cause mucous membrane and respiratory tract irritation, tightness of chest, headache, shortness of breath, and a dry cough. The effects of acute exposure may be delayed in onset up to 12-24 hours. **CHRONIC:** Repeated exposure above current occupational limits may cause an allergic sensitization of the respiratory tract. This is characterized by an asthma-like response upon re-exposure to the chemical. The symptoms may include coughing, wheezing, shortness of breath and chest tightness.

CARCINOGENICITY: NTP: No

IARC Monographs: No

OSHA Regulated: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Eye, Skin, respiratory disorders, lung disorders, asthma or asthmatic bronchitis, allergic disease, chronic respiratory disease, sinusitis, headache and dizziness.

EMERGENCY AND FIRST AID PROCEDURES: EYE CONTACT: Immediately flush eyes with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes, esp. under lids. Have eyes examined and treated by medical personnel. **INHALATION:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is labored, give oxygen. Consult medical personnel. **SKIN CONTACT:** Wash material off the skin with plenty of soap and water. If any product remains, gently rub with petroleum jelly, vegetable or mineral/baby oil onto skin. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse. Dispose of contaminated leather items. Such as shoes and belts. **INGESTION:** Get medical treatment immediately. Give 1 or 2 glasses of water and induce vomiting. Keep victim's head below hips while vomiting to prevent aspiration of liquid into the lungs. Never give anything by mouth to an unconscious person.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Ventilate area. Eliminate all sources of ignition. Use non-sparking tools, Evacuate all unnecessary personnel. Wear skin, eye, and respiratory protection during cleanup. Wet down spilled material with water. Soak up material with absorbent and shovel into a chemical waste container and remove from work area. Keep salvageable material and rinse water out of sewers and water courses. Residues from spill cleanup may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, shut off leak – if safe to do so, dike and contain spill, pump to storage or salvage vessels, or call CHEMTREC (Chemical Transportation Emergency Center) at 800-424-9300.

WASTE DISPOSAL METHOD: Residues may still be subject to RCRA storage and disposal requirements. Dispose off in compliance with all relevant local, state, and federal laws and regulations regarding treatment. Avoid to discharge to natural waters.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in tightly sealed original containers to protect from atmospheric moisture. Store in a cool dry area. Isolated storage is desirable. Keep away from heat, sparks and open flame.

OTHER PRECAUTIONS: Prevent skin and eye contact. Avoid breathing of vapors. Use only with adequate ventilation. Do not take internally. Wash hands thoroughly after handling, esp. before eating or smoking. Workers should shower and change to fresh clothing after each shift. Individuals with existing respiratory disease such as chronic bronchitis, emphysema, or asthma should not be exposed. These individuals should be identified through baseline and annual evaluation and removed from further exposure. Medical examination

should include medical history, vital capacity, and forced expiratory volume at one second. Keep containers tightly closed and upright when not in use. Empty containers may contain hazardous residues.

SECTION VIII - CONTROL MEASURES

VENTILATION: Use local exhaust ventilation to keep airborne concentrations below the TLV. Follow guidelines in the ACGIH publication "Industrial Ventilation". Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Use explosion-proof equipment.

RESPIRATORY PROTECTION: Control environmental concentrations below applicable exposure standards when in use. Avoid breathing vapor or mists. If exposure may or does exceed occupational exposure limits (Sec. II), use a NIOSH/MSHA approved elastomeric sealing-surface face piece respirator outfitted with organic vapor cartridges and paint spray (dust/mist) pre-filters to prevent overexposure. Determine the proper level of protection by conducting appropriate air monitoring. Check with 29 CFR 19010.134 for selecting respirator.

PROTECTIVE CLOTHING: Gloves determined to be impervious under the conditions of use should be worn always when working with this product. Depending on conditions of use, additional protection may be required such as apron, arm covers, or full body suit. Wash contaminated clothing before re-wearing. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH.

EYE PROTECTION: Chemical tight goggles and full-face shield.

OTHER PROTECTIVE EQUIPMENT AND MEASURES: Unhindered access to safety shower and eye wash stations. As a general hygienic practice, wash hands and face after use. Showers and cleaning of clothes are recommended.

SECTION IX - REGULATORY INFORMATION

DOT PROPER SHIPPING NAME: protect from freezing

STATE REGULATIONS: CALIFORNIA – None

TOXIC SUBSTANCE CONTROL ACT: All chemicals comprising this product are listed on the TSCA inventory.

USER'S RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions, in addition to those described herein, are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

DISCLAIMER: The information contained herein is, to the best of our knowledge and belief, accurate and current as of the date of this MSDS. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. 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. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Nukote Metal Prime I Side-B

SECTION I - COMPANY IDENTIFICATION

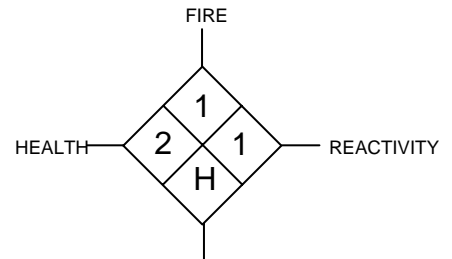
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PERSONAL PROTECTION (SECTION VIII)

HMIS HAZARD RATING	
LEAST ----- 0	SLIGHT ---- 1
MODERATE --- 2	HIGH ----- 3
EXTREME ---- 4	

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE	
	CAS NUMBER	OSHA PEL	ACGIH TLV	MFG TLV	mm Hg @ TEMP
BENZENEMETHANOL	100-51-6	N/E	N/E		
1,2-ETHANEDIAMINE	107-15-3	10ppm (8-Hour TWA)	10ppm (8-Hour TWA)		
2-PENTANONE, 4-METHYL-	108-10-1	100ppm (8-Hour TWA)	510ppm (8-Hour TWA)		
1,2-ETHANEDIAMINE, N,N'-BIS (1,3-DIMETHYLBUTYLIDENE)-	25707-70-4	N/E	N/E		
PHENOL, 2,4,6-TRIS (DIMETHYLAMINO)METHYL-	90-72-2	N/E	N/E		

* No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.
Information concerning non-hazardous ingredients is considered a Trade Secret.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: 100°C (212°F)

SPECIFIC GRAVITY: (H₂O=1): N/A

COATING V.O.C.: 830 g/l

VAPOR DENSITY: Heavier than air

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: Slightly

APPEARANCE AND ODOR: Amber clear

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 135°F

METHOD USED: TCC

EXTINGUISHING MEDIA: Dry chemical, foam, carbon dioxide, water spray.

SPECIAL FIRE FIGHTING PROCEDURES: Water may be used to cool and protect exposed containers. Wear NIOSH approved self-contained breathing apparatus in positive pressure mode with full-face piece. Boots, gloves (neoprene), goggles, and full protective clothing are also required. Excessive pressure or temperature may cause explosive rupture of containers.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may rupture due to very high temperature or induced pressure.

SECTION V - REACTIVITY DATA

STABILITY: Stable under normal conditions in closed containers.

CONDITIONS TO AVOID: Heat, high temperature, open flame, sparks, oxidizing agent. Contact with incompatible materials in a closed system will cause buildup of pressure.

INCOMPATIBILITY (MATERIALS TO AVOID): This product will react with materials such as amines, aluminum, epoxides, alkalis, oxidizers, reducing agents, aldehyde, isocyanates, nitric acid, lewis acids, curing agents, mineral acids and nitrates. Some reactions can be violent.

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INGESTION: Ingestion may cause lung inflammation and damage, mouth and throat irritation, dizziness, vomiting, gastro-intestinal disturbances, central nervous system depression, intoxication, difficulty of breathing, burns of the mouth, throat, stomach.

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CARCINOGENICITY: NTP: No IARC Monographs: No OSHA Regulated: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Eye, Skin, respiratory disorders, lung disorders, asthma or asthmatic bronchitis, allergic disease, chronic respiratory disease, sinusitis, headache and dizziness.

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OTHER PROTECTIVE EQUIPMENT AND MEASURES: Unhindered access to safety shower and eye wash stations. As a general hygienic practice, wash hands and face after use. Showers and cleaning of clothes are recommended.

SECTION IX - REGULATORY INFORMATION

DOT PROPER SHIPPING NAME: corrosive liquid, flammable, n.o.s., 8, UN2920, PGII,(ethylenediamine, methyl isobutyl ketone.)

STATE REGULATIONS: CALIFORNIA – None.

TOXIC SUBSTANCE CONTROL ACT: All chemicals comprising this product are listed on the TSCA inventory.

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