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**SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION**

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**Product ID:** 70-1014FF00145  
**Product Name:** Nukote EP Prime II, A-Side  
**Revision Date:** Apr 30, 2015 **Date Printed:** Jan 14, 2016  
**Version:** 1.0 **Supersedes Date:** N.A.  
**Manufacturer's Name:** Nukote Coating Systems  
**Address:** 4730 Consulate Plaza Dr. Suite 100, Houston, TX, US, 77032  
**Emergency Phone:** Chemtrec:800-424-9300 (account:CCN1217) OR International:703-527-3887 (account:CCN1217)  
Information Phone (832)770-7100  
**Fax:** (281) 227-0909

**Product/Recommended Uses:** For Further Information, Refer to the Product Technical Data Sheet.

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**SECTION 2) HAZARDS IDENTIFICATION**

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**Classification:**

Specific Target Organ Toxicity - Repeated Exposure - Category 2

Skin Irritation - Category 2

Skin Sensitizer - Category 1

Carcinogenicity - Category 2

Eye Irritation - Category 2

Chronic aquatic toxicity - Category 2

Acute aquatic toxicity - Category 2

**Pictograms:****Signal Word:**

Warning

**Hazardous Statements - Health:**

H373 - May cause damage to organs through prolonged or repeated exposure.

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer.

H319 - Causes serious eye irritation

**Hazardous Statements - Environmental:**

H401 - Toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

**Precautionary Statements - General:**

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read label before use.

**Precautionary Statements - Prevention:**

- P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
- P264 - Wash thoroughly after handling.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P273 - Avoid release to the environment.

**Precautionary Statements - Response:**

- P314 - Get Medical advice/attention if you feel unwell.
- P302 + P352 - IF ON SKIN: Wash with plenty of water.
- P321 - Specific treatment (see section 4 on this SDS).
- P332 + P313 - If skin irritation occurs: Get medical advice/attention.
- P362 + P364 - Take off contaminated clothing. And wash it before reuse.
- P333 + P313 - If skin irritation or a rash occurs: Get medical advice/attention.
- P308 + P313 - IF exposed or concerned: Get medical advice/attention.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 - If eye irritation persists: Get medical advice/attention.
- P391 - Collect spillage.

**Precautionary Statements - Storage:**

- P405 - Store locked up.

**Precautionary Statements - Disposal:**

- P501 - Dispose of contents/ container to an approved waste disposal plant.

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**SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS**

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CAS	Chemical Name	% By Weight
0025068-38-6	BISPHENOL A EPOXY RESIN	35% - 65%
0001332-58-7	KAOLIN	13% - 25%
0014808-60-7	SILICA, CRYSTALLINE	11% - 20%
0002461-15-6	OXIRANE, 2-[[2-EHTYLHEXYL)OXY]METHYL]-	9% - 17%
0000103-23-1	DI(2-ETHYLHEXYL)ADIPATE	1.5% - 3%
0001333-86-4	CARBON BLACK	0.3% - 0.5%

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**SECTION 4) FIRST-AID MEASURES**

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**Inhalation:**

Remove source of exposure or move person to fresh air and keep comfortable for breathing.  
 If exposed/feel unwell/concerned: Call a POISON CENTER/doctor.

**Skin Contact:**

Rinse/wash with lukewarm, gently flowing water and mild soap for 15-20 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.  
 IF exposed or concerned: Get medical advice/attention.

**Eye Contact:**

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

**Ingestion:**

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If vomiting occurs naturally, lie on your side, in the recovery position.

Give 1 or 2 glasses of milk or water to drink and refer person to medical personnel. Do not give anything by mouth to an unconscious person.

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## SECTION 5) FIRE-FIGHTING MEASURES

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### Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

### Specific Hazards in Case of Fire:

Excessive pressure or temperature may cause explosive rupture of containers.

### Fire-fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

### Special Protective Actions:

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Care should always be exercised in dust/mist areas.

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## SECTION 6) ACCIDENTAL RELEASE MEASURES

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### Emergency Procedure:

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

### Recommended Equipment:

Positive pressure, full-face piece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

### Personal Precautions:

Avoid breathing vapors. Avoid contact with skin, eyes or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

### Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

### Methods and Materials for Containment and Cleaning up:

Soak up material with absorbent and shovel into a chemical waste container. Cover container, but do not seal, and remove from work area. Residues from spill cleanup may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, call CHEMTREC (Chemical Transportation Emergency Center) at 800-424-9300.

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## SECTION 7) HANDLING AND STORAGE

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### General:

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Individuals with existing respiratory disease such as chronic bronchitis, emphysema, or asthma should not be exposed.

### Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

### Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.

Store in tightly sealed containers to protect from atmospheric moisture. Store in a cool dry area. Store liquid in containers above ground and surround by dikes to contain spills or leaks.

Do not cut, drill, grind, weld, or perform similar operations on or near containers.

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## SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Eye Protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

### Skin Protection:

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over- boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

### Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

Use either an atmosphere supplying respirator or an air-purifying respirator for organic vapors.

### Appropriate Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA Tables (Z1, Z2, Z3)	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
CARBON BLACK		3.5			1				3.5a			1
KAOLIN		[15]; [5 (a)];			1				10,5a			
SILICA, CRYSTALLINE	a	[10 mg/m3 percent SiO2+2 / 250 percent SiO2+5 mppcf]; [30 mg/m3 percent SiO2+2];			[1,3]; [3];				0.05e			1

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)	ACGIH Carcinogen	ACGIH TLV Basis	ACGIH Notations
CARBON BLACK		3 (I)			A3	Bronchitis	A3
KAOLIN		2 (E,R)			A4	Pneumococcosis	A4
SILICA, CRYSTALLINE		0.025 (R)			A2	Pulmonary fibrosis; lung cancer	A2

(I) - Inhalable fraction, A2 - Suspected Human Carcinogen, A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans, A4 - Not Classifiable as a Human Carcinogen

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## SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

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### Physical and Chemical Properties

Density

11.13 lb/gal

Specific Gravity	1.33
VOC Regulatory	0.00 lb/gal

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VOC Part A & B Combined	N.A.
Appearance	Pigmented Liquid
Odor Threshold	N.A.
Odor Description	Mild chemical odor
pH	N.A.
Water Solubility	N.A.
Flammability	N/A
Flash Point Symbol	N.A.
Flash Point	200 °F
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	N.A.
Vapor Density	Heavier than air
Freezing Point	N.A.
Melting Point	N.A.
Low Boiling Point	464 °F
High Boiling Point	N.A.
Auto Ignition Temp	N.A.
Decomposition Pt	0
Evaporation Rate	Slower than ether
Coefficient Water/Oil	N.A.

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## SECTION 10) STABILITY AND REACTIVITY

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### Stability:

Material is stable at standard temperature and pressure.

### Conditions to Avoid:

Heat, high temperature, open flame, sparks, and moisture. Contact with incompatible materials in a closed system will cause buildup of pressure.

### Hazardous Reactions/Polymerization:

Will not occur but aliphatic amine will cause irreversible polymerization with considerable heat build up.

### Incompatible Materials:

This product will react with materials such as amines, alkalis and acids. Avoid strong oxidizing agents. Some reactions can be violent.

### Hazardous Decomposition Products:

Combustion products: organic vapors and thermal decomposition fragments.

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## SECTION 11) TOXICOLOGICAL INFORMATION

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### Skin Corrosion/Irritation:

Repeated skin contact may cause a persistent irritation or dermatitis. May also aggravate an existing skin condition.

Causes skin irritation

### Serious Eye Damage/Irritation:

Causes serious eye irritation

### Respiratory/Skin Sensitization:

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. 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.

May cause an allergic skin reaction

### Carcinogenicity:

Suspected of causing cancer.

**Germ Cell Mutagenicity:**

No data available

**Reproductive Toxicity:**

No data available

**Specific Target Organ Toxicity - Single Exposure:**

No data available

**Specific Target Organ Toxicity - Repeated Exposure:**

Repeated exposure generally aggravates the following medical conditions : Cardiovascular disease and Chronic respiratory disease.

May cause damage to organs through prolonged or repeated exposure.

**Aspiration Hazard:**

No data available

**Acute Toxicity:**

Ingestion : Irritation or chemical burns of the mouth, pharynx, esophagus and stomach can develop following ingestion.

0001333-86-4 CARBON BLACK

LC50 (rat): 6750 mg/m3 (4-hour exposure); cited as 27000 mg/m3 (27 mg/L) (1-hour exposure) (3)

**Potential Health Effects - Miscellaneous**

0001332-58-7 KAOLIN

The following medical conditions may be aggravated by exposure: asthma, dermatitis. Repeated or prolonged inhalation may cause any of the following: lung injury.

0001333-86-4 CARBON BLACK

Is an IARC, NTP or OSHA carcinogen. Has shown carcinogenic activity in laboratory animals at high doses. Significance to man is unknown. The following medical conditions may be aggravated by exposure: asthma, respiratory disease. WARNING: This chemical is known to the State of California to cause cancer.

0014808-60-7 SILICA, CRYSTALLINE

Is an IARC, NTP or OSHA carcinogen. Repeated overexposure to crystalline silica may lead to x-ray changes and chronic lung disease. Inhalation of high dust concentrations may cause: breathing difficulties, lung injury. WARNING: This chemical is known to the State of California to cause cancer.

0025068-38-6 BISPHENOL A EPOXY RESIN

The following medical conditions may be aggravated by exposure: skin disorders. Laboratory studies with rats have shown that petroleum distillates can cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guin

**Chronic Exposure**

0001333-86-4 CARBON BLACK

CARCINOGENIC EFFECTS: In 1996, the IARC reevaluated Carbon Black as a Group 2B carcinogen. This evaluation is given to carbon black for which there is inadequate human evidence, but sufficient animal evidence.

Prolonged inhalation of Carbon black can result in lung disease. Symptoms include coughing, shortness of breath, wheezing and reduced pulmonary function.

0014808-60-7 SILICA, CRYSTALLINE

Prolonged inhalation of respirable crystalline silica dust can result in lung disease (i.e. silicosis and/or lung cancer). Symptoms include coughing, shortness of breath, wheezing and reduced pulmonary function.

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**SECTION 12) ECOLOGICAL INFORMATION**

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**Toxicity:**

Toxic to aquatic life

Toxic to aquatic life with long lasting effects

**Mobility in Soil:**

No data available.

**Other Adverse Effects:**

No data available.

**Bio-accumulative Potential**

A relevant bioaccumulation potential of carbon black is not expected based on its insolubility in organic solvents and in water. Furthermore, since the aggregate diameter of carbon black varies between 80 nm and 810 nm, bioaccumulation of particulate carbon black is not likely owing to the large diameter of the solid aggregate particles.

### Persistence and Degradability

0001333-86-4 CARBON BLACK

Carbon Black's insolubility in water results in it not being biodegradable in any medium or by biota. It is considered persistent in the natural environment.

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## SECTION 13) DISPOSAL CONSIDERATIONS

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### Waste Disposal:

Under RCRA, it is the responsibility of the user of the product, to determine a the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

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## SECTION 14) TRANSPORT INFORMATION

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### U.S. DOT Information:

Not regulated.

### IMDG Information:

UN/NA #: 3082

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS BISPHENOL A EPOXY RESIN)

Class: 9

Packing group: III

Marine Pollutant : Yes

### IATA Information:

UN/NA #: 3082

UN Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS BISPHENOL A EPOXY RESIN)

Class: 9

Packing group: III

Placard: Class 9

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## SECTION 15) REGULATORY INFORMATION

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CAS	Chemical Name	% By Weight	Regulation List
0025068-38-6	BISPHENOL A EPOXY RESIN	35% - 65%	DSL,SARA312,TSCA
0001332-58-7	KAOLIN	13% - 25%	DSL,SARA312,TSCA
0014808-60-7	SILICA, CRYSTALLINE	11% - 20%	DSL,SARA312,TSCA,California Proposition 65
0002461-15-6	OXIRANE, 2-[[2-EHTYLHEXYL)OXY] METHYL]-	9% - 17%	DSL,SARA312,TSCA
0000103-23-1	DI(2-ETHYLHEXYL) ADIPATE	1.5% - 3%	DSL,SARA312,TSCA
0001333-86-4	CARBON BLACK	0.3% - 0.5%	DSL,SARA312,TSCA,California Proposition 65

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## SECTION 16) OTHER INFORMATION

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### OTHER INFORMATION:

Note: As per GHS, category 1 is the greatest level of hazard within each class.

### GLOSSARY:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ - Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

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## **DISCLAIMER**

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



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**SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION**

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**Product ID :** Nukote EP Prime II, B-Side  
**Product Name :** Nukote EP Prime II, Side B  
**Revision Date :** May 01, 2015 **Date Printed :** May 06, 2015  
**Version:** 1.0 **Supersedes Date :** N.A.  
**Manufacturer's Name :** Nukote Coating Systems  
**Address :** 2100 Reliance Pkwy Bedford, TX, US, 76021  
**Emergency Phone :** Chemtrec:800-4249300 (account:CCN16118) OR International:703-5273887 (account:CCN16118)  
**Information Phone :** 682-5036799  
**Fax :** (682) 503-6512

**Product/Recommended Uses:** For Further Information, Refer to the Product Technical Data Sheet.

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**SECTION 2) HAZARDS IDENTIFICATION**

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**Classification:**

Specific Target Organ Toxicity - Repeated Exposure - Category 2  
Skin Irritation - Category 2  
Skin Sensitizer - Category 1B  
Carcinogenicity - Category 2  
Eye Irritation - Category 2  
Chronic aquatic toxicity - Category 3  
Acute aquatic toxicity - Category 2  
Acute toxicity Oral Category 5

**Pictograms:****Signal Word:**

Warning

**Hazardous Statements - Health:**

H303 - Maybe harmful if swallowed  
H373 - May cause damage to organs through prolonged or repeated exposure.  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H351 - Suspected of causing cancer.  
H319 - Causes serious eye irritation

**Hazardous Statements - Environmental:**

H401 - Toxic to aquatic life  
H412 - Harmful to aquatic life with long lasting effects

**Precautionary Statements - General:**

P101 - If medical advice is needed, have product container or label at hand.  
P102 - Keep out of reach of children.

P103 - Read label before use.

**Precautionary Statements - Prevention:**

- P273 - Avoid release to the environment.
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
- P264 - Wash thoroughly after handling.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.

**Precautionary Statements - Response:**

- P312 - Call a POISON CENTER/doctor if you feel unwell.
- P314 - Get Medical advice/attention if you feel unwell.
- P302 + P352 - IF ON SKIN: Wash with plenty of water.
- P321 - Specific treatment (see section 4 on this SDS).
- P332 + P313 - If skin irritation occurs: Get medical advice/attention.
- P362 + P364 - Take off contaminated clothing. And wash it before reuse.
- P333 + P313 - If skin irritation or a rash occurs: Get medical advice/attention.
- P308 + P313 - IF exposed or concerned: Get medical advice/attention.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 - If eye irritation persists: Get medical advice/attention.

**Precautionary Statements - Storage:**

- P405 - Store locked up.

**Precautionary Statements - Disposal:**

- P501 - Dispose of contents/ container to an approved waste disposal plant.

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**SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS**

---

CAS	Chemical Name	% by Weight
0007727-43-7	BARIUM SULFATE	26% - 49%
0013463-67-7	TITANIUM DIOXIDE	9% - 16%
0014808-60-7	SILICA, CRYSTALLINE	9% - 16%
0000100-51-6	BENZYL ALCOHOL	7% - 14%
0135108-88-2	FORMALDEHYDE, POLYMER WITH BENZENAMINE, HYDROGENATED	7% - 13%
0000103-23-1	DI(2-ETHYLHEXYL)ADIPATE	4% - 8%
0068953-36-6	Fatty acids, tall-oil, reaction products with tetraethylenepentamine	4% - 7%
0000090-72-2	2,4,6-TRI(DIMETHYLAMINOMETHYL) PHENOL	0.8% - 1.4%
0000112-57-2	TETRAETHYLENEPENTAMINE	0.7% - 1.2%
0001477-55-0	METHYLAMINE, M-PHENYLENE BIS	0.6% - 1.0%

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**SECTION 4) FIRST-AID MEASURES**

---

**Inhalation:**

- Remove source of exposure or move person to fresh air and keep comfortable for breathing.
- If exposed/feel unwell/concerned: Call a POISON CENTER/doctor.

**Skin Contact:**

- Rinse/wash with lukewarm, gently flowing water and mild soap for 15-20 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.
- IF exposed or concerned: Get medical advice/attention.

**Eye Contact:**

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

**Ingestion:**

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If vomiting occurs naturally, lie on your side, in the recovery position.

Give 3 or 4 glasses of water to drink. Never give anything by mouth to an unconscious person.

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## SECTION 5) FIRE-FIGHTING MEASURES

---

**Suitable Extinguishing Media:**

Dry chemical, foam, carbon dioxide water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

**Specific Hazards in Case of Fire:**

Excessive pressure or temperature may cause explosive rupture of containers.

**Fire-fighting Procedures:**

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

**Special Protective Actions:**

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Care should always be exercised in dust/mist areas.

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## SECTION 6) ACCIDENTAL RELEASE MEASURES

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**Emergency Procedure:**

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

**Recommended Equipment:**

Positive pressure, full-face piece self-contained breathing apparatus(SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

**Personal Precautions:**

Avoid breathing vapors. Avoid contact with skin, eyes or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

**Environmental Precautions:**

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

**Methods and Materials for Containment and Cleaning up:**

Soak up material with absorbent and shovel into a chemical waste container. Cover container, but do not seal, and remove from work area. Residues from spill cleanup may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, call CHEMTREC (Chemical Transportation Emergency Center) at 800-424-9300.

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## SECTION 7) HANDLING AND STORAGE

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**General:**

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Individuals with existing respiratory disease such as chronic bronchitis, emphysema, or asthma should not be exposed.

**Ventilation Requirements:**

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

**Storage Room Requirements:**

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.

Store in tightly sealed containers to protect from atmospheric moisture. Store in a cool dry area. Store liquid in containers above ground and surround by dikes to contain spills or leaks.

Do not cut, drill, grind, weld, or perform similar operations on or near containers.

**SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Eye Protection:**

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

**Skin Protection:**

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

**Respiratory Protection:**

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

In poorly ventilated areas, a cartridge mask NIOSH approved for organic vapors is recommended under the following conditions: emergency situations, when product vapor concentration is greater than 20 ppm for a period longer than 15 min., during repair and cleaning of equipment, during transfer or discharge of the product.

**Appropriate Engineering Controls:**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA-Tables-Z1,2,3	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
BARIUM SULFATE		[15]; [5 (a)];			1				10,5a			
METHYLAMINE, M-PHENYLENE BIS												
SILICA, CRYSTALLINE	a	[10 mg/m3 percent SiO2+2 / 250 percent SiO2+5 mppcf]; [30 mg/m3 percent SiO2+2];			1,3				0.05e			1
TITANIUM DIOXIDE		15			1			b				1

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)	ACGIH Carcinogen	ACGIH TLV Basis	ACGIH Notations
BARIUM SULFATE		5 (I)(E)			A4	Pneumococcosis	A4
METHYLAMINE, M-PHENYLENE BIS				C 0.1		Eye, skin, GI irr	Skin

SILICA, CRYSTALLINE		0.025 (R)			A2	Pulmonary fibrosis; lung cancer	A2
TITANIUM DIOXIDE		10			A4	LRT irr	A4

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## SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

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### Physical and Chemical Properties

Density	16.29 lb/gal
Specific Gravity	1.95
VOC Regulatory	0.00 lb/gal

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VOC Part A & B	N.A.
Appearance	White Liquid
Odor Threshold	N.A.
Odor Description	Aromatic
pH	N.A.
Water Solubility	N.A.
Flammability	N/A
Flash Point Symbol	N.A.
Flash Point	200 °F
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	N.A.
Vapor Density	N.A.
Freezing Point	N.A.
Melting Point	N.A.
Low Boiling Point	375 °F
High Boiling Point	N.A.
Auto Ignition Temp	N.A.
Decomposition Pt	N.A.
Evaporation Rate	N.A.
Coefficient Water/Oil	N.A.

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## SECTION 10) STABILITY AND REACTIVITY

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### Stability:

Material is stable at standard temperature and pressure.

### Conditions to Avoid:

Heat, high temperature, open flame, sparks, and moisture. Contact with incompatible materials in a closed system will cause buildup of pressure.

### Hazardous Reactions/Polymerization:

Will not occur.

### Incompatible Materials:

This product will react with epoxies, isocyanates, and strong oxidizing agents. Some reactions can be violent.

### Hazardous Decomposition Products:

Combustion products: organic vapors and thermal decomposition fragments.

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## SECTION 11) TOXICOLOGICAL INFORMATION

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### Skin Corrosion/Irritation:

Causes skin irritation

**Serious Eye Damage/Irritation:**

Any contact should not be left untreated.

Causes serious eye irritation

**Respiratory/Skin Sensitization:**

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. 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.

May cause an allergic skin reaction

**Carcinogenicity:**

Suspected of causing cancer.

**Germ Cell Mutagenicity:**

No data available

**Reproductive Toxicity:**

No data available

**Specific Target Organ Toxicity - Single Exposure:**

No data available

**Specific Target Organ Toxicity - Repeated Exposure:**

Repeated exposure generally aggravates the following medical conditions : Cardiovascular disease and Chronic respiratory disease.

May cause damage to organs through prolonged or repeated exposure.

**Aspiration Hazard:**

No data available

**Acute Toxicity:**

If ingested : In humans, irritation or chemical burns of the mouth, pharynx, esophagus and stomach can develop following ingestion, and injury may be severe and cause death.

**Potential Health Effects - Miscellaneous**

0013463-67-7 TITANIUM DIOXIDE

Is an IARC, NTP or OSHA carcinogen. In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m<sup>3</sup> respirable titanium dust. Analysis of the titanium dioxide concentrations in the rat's lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m<sup>3</sup> level are not relevant to the workplace. Results of a DuPont epidemiology study showed that employees who had been exposed to Titanium Dioxide were at no greater risk of developing lung cancer than were employees who had not been exposed to Titanium dioxide. No pulmonary fibrosis was found in any of the employees and no association was observed between Titanium dioxide exposure and chronic respiratory disease or x-ray abnormalities. Based on the results of this study DuPont concludes that titanium dioxide will not cause lung cancer or chronic respiratory disease in humans at concentrations experienced in the workplace.?

0014808-60-7 SILICA, CRYSTALLINE

Is an IARC, NTP or OSHA carcinogen. Repeated overexposure to crystalline silica may lead to x-ray changes and chronic lung disease. Inhalation of high dust concentrations may cause: breathing difficulties, lung injury. WARNING: This chemical is known to the State of California to cause cancer.

**Chronic Exposure**

0014808-60-7 SILICA, CRYSTALLINE

Prolonged inhalation of respirable crystalline silica dust can result in lung disease (i.e. silicosis and/or lung cancer). Symptoms include coughing, shortness of breath, wheezing and reduced pulmonary function.

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**SECTION 12) ECOLOGICAL INFORMATION**

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**Toxicity:**

Toxic to aquatic life

Harmful to aquatic life with long lasting effects

**Persistence and Degradability:**

No data available.

**Bioaccumulative Potential:**

No data available.

**Mobility in Soil:**

No data available.

**Other Adverse Effects:**

No data available.

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**SECTION 13) DISPOSAL CONSIDERATIONS**

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**Waste Disposal:**

Under RCRA, it is the responsibility of the user of the product, to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

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**SECTION 14) TRANSPORT INFORMATION**

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**U.S. DOT Information:**

Not regulated.

**IMDG Information:**

Not regulated.

**IATA Information:**

Not regulated.

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**SECTION 15) REGULATORY INFORMATION**

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CAS	Chemical Name	% By Weight	Regulation List
0000090-72-2	2,4,6-TRI (DIMETHYLAMINOMETHYL) PHENOL	0.8% - 1.4%	SARA312,TSCA
0000100-51-6	BENZYL ALCOHOL	7% - 14%	SARA312,VOC,TSCA
0000103-23-1	DI(2-ETHYLHEXYL) ADIPATE	4% - 8%	SARA312,TSCA
0000112-57-2	TETRAETHYLENEPENTA MINE	0.7% - 1.2%	SARA312,VOC,TSCA
0001477-55-0	METHYLAMINE, M- PHENYLENE BIS	0.6% - 1.0%	SARA312,TSCA
0007727-43-7	BARIUM SULFATE	26% - 49%	SARA312,TSCA
0013463-67-7	TITANIUM DIOXIDE	9% - 16%	SARA312,TSCA,CA_Prop65 - California Proposition 65
0014808-60-7	SILICA, CRYSTALLINE	9% - 16%	SARA312,TSCA,CA_Prop65 - California Proposition 65
0068953-36-6	Fatty acids, tall-oil, reaction products with tetraethylenepentamine	4% - 7%	SARA312,TSCA
0135108-88-2	FORMALDEHYDE, POLYMER WITH BENZENAMINE, HYDROGENATED	7% - 13%	SARA312,TSCA

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**SECTION 16) OTHER INFORMATION**

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**OTHER INFORMATION:**

Note: As per GHS, category 1 is the greatest level of hazard within each class.

**GLOSSARY:**

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ - Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

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