

# SAFETY DATA SHEET

### 1. Identification

Product identifier Nukote PP300, Side A

Other means of identification None.

Recommended use Coating.

Recommended restrictions -

Manufacturer/Importer/Supplier/Distributor information

Supplier

Company name Nukote Coating Systems International

Address 4730 Consulate Plaza Dr.

Suite 100

Houston, TX. 77032

**Telephone** 832-770-7100

Email SDS@nukoteglobal.com

Emergency Phone Number Chemtrec: 800-424-9300 (Account: CCN16118) or International: 703-527-3887 (Account:

CCN16118)

# 2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Acute toxicity, inhalation Category 2

Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2
Sensitization, respiratory Category 1
Sensitization, skin Category 1
Carcinogenicity Category 2

Specific target organ toxicity, single exposure Category 3 respiratory tract irritation

Specific target organ toxicity, repeated

exposure

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Fatal if inhaled. Causes skin irritation. Causes serious eye irritation. May cause allergy or asthma

symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing cancer. May cause respiratory irritation. Causes damage to organs through prolonged or

Category 1

repeated exposure.

Precautionary statement

**Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read

and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear respiratory protection. Wear

protective gloves/protective clothing/eye protection/face protection.

Response If exposed or concerned: Get medical advice/attention. If on skin: Wash with plenty of water. If

skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation

persists: Get medical advice/attention.

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Store in a well-ventilated place. Keep container tightly closed. Store locked up. **Storage** 

Dispose of contents/container in accordance with local/regional/national/international regulations. Disposal

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

None.

# 3. Composition/information on ingredients

### **Mixtures**

Chemical name	CAS number	%
Polymethylene polyphenyl isocyanate	9016-87-9	30 - 56
4,4'-Methylene diphenyl diisocyanate	101-68-8	22 - 41
Polyurethane prepolymer	68092-58-0	8 - 14
Diisocyanate methylenediphenyl	26447-40-5	7 - 13

### **Composition comments**

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. For more detailed chemical composition, refer to the certificate of analysis.

## 4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Coughing. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information** 

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

# 5. Fire-fighting measures

Suitable extinguishing media Unsuitable extinguishing media

Dry chemical. Foam. Carbon dioxide (CO2).

Water.

If water is used, use large amounts as the reaction between hot Isocyanates and water can be vigorous.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed. Reaction between water and hot isocyanate may be vigorous.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Nukote PP300, Side A SDS US Fire fighting equipment/instructions

Keep unnecessary personnel away. Use water spray to cool unopened containers. Move containers from fire area if you can do so without risk. Use water spray to reduce vapors or divert vapor cloud drift. Caution should be exercised when using water or foam as frothing may occur, especially if directed onto containers of hot or burning material. Control contaminated fire water to minimize release to the environment.

Specific methods

General fire hazards

Use standard firefighting procedures and consider the hazards of other involved materials.

Vapors may travel considerable distance to a source of ignition and flash back. Due to reaction with water producing CO2-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Containers may burst if overheated.

### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Isolate area. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Stop the flow of material, if this is without risk. Cover container, but do not seal, and remove from work area. Prepare a decontamination solution of 2.0% liquid detergent and 3-8% concentrated ammonium hydroxide in water (5-10% sodium carbonate may be substituted for the ammonium hydroxide). Treat the spill area with the decontamination solution, using about 10 parts of the solution for each part of the spill, and allow it to react for at least 15 minutes. Carbon dioxide will be evolved, leaving insoluble polyureas. Residues from spill cleanup, even when treated as described may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. Slowly stir the isocyanate waste into the decontamination solution described above. Let stand for 48 hours, allowing the evolved carbon dioxide to vent away, 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.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

**Environmental precautions** 

Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

# 7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide adequate ventilation. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Persons susceptible to allergic reactions should not handle this product. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store in a well-ventilated place. Protect from direct sunlight. Protect from moisture. Protect against physical damage. Store away from incompatible materials (see Section 10 of the SDS). Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Use explosion-proof ventilation equipment. Take precautionary measures against static discharges. Ground/bond container and equipment. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

### 8. Exposure controls/personal protection

## Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	
4,4'-Methylene diphenyl diisocyanate (CAS 101-68-8)	Ceiling	0.2 mg/m3	
		0.02 ppm	
Diisocyanate methylenediphenyl (CAS 26447-40-5)	Ceiling	0.2 mg/m3	

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# US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value
		0.02 ppm
US. ACGIH Threshold Lim	it Values	
Components	Туре	Value
4,4'-Methylene diphenyl diisocyanate (CAS 101-68-8)	TWA	0.005 ppm
Diisocyanate methylenediphenyl (CAS 26447-40-5)	TWA	0.005 ppm
US. NIOSH: Pocket Guide	to Chemical Hazards	
Components	Туре	Value
4,4'-Methylene diphenyl diisocyanate (CAS 101-68-8)	Ceiling	0.2 mg/m3
		0.02 ppm
	TWA	0.05 mg/m3
		0.005 ppm
Diisocyanate methylenediphenyl (CAS 26447-40-5)	Ceiling	0.2 mg/m3
,		0.02 ppm
	TWA	0.05 mg/m3
		0.005 ppm
logical limit values	No biological exposure limits noted for	r the ingredient(s).
propriate engineering atrols	applicable, use process enclosures, lo	sed. Ventilation rates should be matched to conditions. If ocal exhaust ventilation, or other engineering controls to mended exposure limits. Provide eyewash station and safe
ividual protection measures	s, such as personal protective equipme	ent
Eye/face protection	Wear safety glasses, sealed eyewear hazard of task. In addition to goggles, possible.	, unvented tight fitting goggles or face shield depending or wear a face shield where a splash to the face is reasonab
Skin protection		
Hand protection	recommended. Use disposable gloves closest to the skin. Suitability and duration of contact, chemical resistant	gloves. Nitrile, neoprene, PVC or rubber gloves are is protecting against isocyanates along with cotton gloves ability of a glove is dependent on usage, e.g. frequency ar ce of glove material, glove thickness, dexterity. Frequent oves should be replaced. Suitable gloves can be
Skin protection		
Other		clothing. Use of rubber boots and an impervious apron, rain recommended. Impervious body suit, protective clothing reoprene, nitrile rubber or PVC.
Respiratory protection	Wear positive pressure self-contained	•
Thermal hazards	Wear appropriate thermal protective of	clothing, when necessary.
neral hygiene		uirements. Always observe good personal hygiene

# 9. Physical and chemical properties

# **Appearance**

considerations

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Contaminated work clothing must not be allowed out of the workplace.

measures, such as washing after handling the material and before eating, drinking, and/or

smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Physical state Liquid. Amber liquid. **Form** Color Amber. Aromatic. Odor **Odor threshold** Not available. Not available. Melting point/freezing point Not available.

Initial boiling point and boiling

range

392 °F (200 °C)

302.0 °F (150.0 °C) Flash point Slower than ether. **Evaporation rate** Not applicable. Flammability (solid, gas)

Upper/lower flammability or explosive limits Flammability limit - lower

(%)

Not available.

Flammability limit - upper

(%)

Not available.

Not available. Vapor pressure Heavier than air. Vapor density 1.23 (H20=1) Relative density

Solubility(ies)

Reacts with water. Solubility (water) Partition coefficient

(n-octanol/water)

Not available.

Not available. **Auto-ignition temperature** Not available. **Decomposition temperature** Not available. **Viscosity** 

Other information

**Density** 10.24 lb/gal **Explosive properties** Not explosive. Oxidizing properties Not oxidizing. 0 lb/gal

# 10. Stability and reactivity

This product will react with any material containing active hydrogens, such as water, alcohol, Reactivity

> ammonia, amines, alkalis and acids, the reaction with water is slow under 50°C, but is accelerated at higher temperature and in the presence of alkalis, tertiary amines, and metal compounds.

Reacts violently with strong oxidizers.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

Will not occur under normal conditions but under high temperatures in the presence of

alkalis, tertiary amines, and metal compounds will accelerate polymerization. Possible evolution of

carbon dioxide gas may rupture closed containers.

Conditions to avoid Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Moisture.

Contact with incompatible materials. Protect against direct sunlight. Generation of gas during

decomposition can cause pressure in closed systems.

Active hydrogen compounds. Water, moisture. Alcohols. Ammonia. Amines. Alkalis. Metal Incompatible materials

compounds. Strong oxidizing agents.

Hazardous decomposition

products

During combustion: Carbon dioxide (CO2). Carbon monoxide (CO). Nitrogen oxides (NOx). Trace

amounts of: Hydrogen cyanide. Unidentified organic compounds.

# 11. Toxicological information

# Information on likely routes of exposure

Fatal if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Causes Inhalation

damage to organs through prolonged or repeated exposure by inhalation.

Nukote PP300, Side A SDS US **Skin contact** Causes skin irritation. May cause an allergic skin reaction.

Isocyanates react with skin protein and moisture and can cause irritation. Prolonged contact can cause reddening, swelling, rash, scaling, blistering, and, in some cases, skin sensitization. Individuals who have developed a skin sensitization can develop these symptoms as a result of

contact with very small amounts of liquid material or as a result of exposure to vapor.

**Eye contact** Causes serious eye irritation.

**Ingestion** May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Coughing. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure

may cause chronic effects.

Information on toxicological effects

Acute toxicity Fatal if inhaled.

Components Species Test Results

4,4'-Methylene diphenyl diisocyanate (CAS 101-68-8)

<u>Acute</u>

Inhalation Aerosol

LC50 Rat 0.369 mg/l, 4 Hours

Polymethylene polyphenyl isocyanate (CAS 9016-87-9)

<u>Acute</u>

Dermal

LD50 Rabbit > 10000 mg/kg

Inhalation

Mist

LC50 Rat > 490 mg/m3, 4 Hours

Oral

LD50 Rat > 10000 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye

irritation

Causes serious eye irritation.

Respiratory or skin sensitization

**Respiratory sensitization** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin sensitization** May cause an allergic skin reaction. Persons already sensitized to diisocyanates may develop

allergic reactions when using this product.

**Germ cell mutagenicity**No data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

**Carcinogenicity** Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

4,4'-Methylene diphenyl diisocyanate (CAS 101-68-8) Diisocyanate methylenediphenyl (CAS 26447-40-5) 3 Not classifiable as to carcinogenicity to humans. 3 Not classifiable as to carcinogenicity to humans.

Polymethylene polyphenyl isocyanate (CAS 9016-87-9)

3 Not classifiable as to carcinogenicity to humans.

**NTP Report on Carcinogens** 

Not listed

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

**Reproductive toxicity**This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity -

single exposure

May cause respiratory irritation.

Specific target organ toxicity -

repeated exposure

Causes damage to organs through prolonged or repeated exposure.

**Aspiration hazard** Not an aspiration hazard.

Chronic effects Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be

harmful. Persons already sensitized to diisocyanates may develop allergic reactions when using

this product.

Nukote PP300, Side A SDS US

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the

possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability In the aquatic and terrestrial environment, material reacts with water forming predominantly

insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates. 10-day Window: Not applicable Biodegradation: 0 % Exposure time: 28 d Method:

OECD Test Guideline 302C or Equivalent.

Bioaccumulative potential No data available.

No data available. Mobility in soil

Other adverse effects This product contains one or more substances identified as hazardous air pollutants (HAPs) per

the US Federal Clean Air Act (see section 15).

### 13. Disposal considerations

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of **Disposal instructions** 

contents/container in accordance with local/regional/national/international regulations. When this product as supplied is to be discarded as waste, it may meet the definition of a RCRA waste under

40 CFR 261.

Local disposal regulations Dispose in accordance with all applicable regulations.

The waste code should be assigned in discussion between the user, the producer and the waste Hazardous waste code

disposal company.

Waste from residues / unused

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Since emptied containers may retain product residue, follow label warnings even after container is Contaminated packaging

emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. DO NOT pressurize, cut, heat, or weld containers; they may explode and cause injury or death. Empty product containers may contain product residue. DO NOT reuse empty containers without commercial cleaning or reconditioning. All containers should be disposed of in an

environmentally safe manner and in accordance with governmental regulations.

# 14. Transport information

DOT

UN2810 **UN** number

**UN proper shipping name** Transport hazard class(es) Toxic, liquids, organic, n.o.s. (4,4'-Methylene diphenyl diisocyanate RQ = 12195 LBS)

6.1(PGI, II)

Subsidiary risk Label(s) 6.1 Packing group Ш

**Environmental hazards** 

No Marine pollutant

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IB2, T11, TP2, TP13, TP27 Special provisions

153 Packaging exceptions Packaging non bulk 202 243 Packaging bulk

**IATA** 

UN2810 **UN number** 

UN proper shipping name Toxic liquid, organic, n.o.s. (4,4'-Methylene diphenyl diisocyanate)

Transport hazard class(es)

Class 6.1(PGI, II)

Subsidiary risk **Packing group** Ш **Environmental hazards** No 6L **ERG Code** 

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

**IMDG** 

**UN** number UN2810

TOXIC LIQUID, ORGANIC, N.O.S. (4,4'-Methylene diphenyl diisocyanate) UN proper shipping name

Nukote PP300, Side A SDS US Transport hazard class(es)

6.1(PGI, II) Class

Subsidiary risk П Packing group

**Environmental hazards** 

Marine pollutant No F-A, S-A **EmS** 

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to

Annex II of MARPOL 73/78 and

the IBC Code

# 15. Regulatory information

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication **US federal regulations** 

Standard, 29 CFR 1910.1200.

Not established.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### TSCA Chemical Action Plans, Chemicals of Concern

4,4'-Methylene diphenyl diisocyanate (CAS 101-68-8) Methylene Diphenyl Diisocyanate (MDI) And Related Compounds

Action Plan [RIN 2070-ZA15]

Diisocyanate methylenediphenyl (CAS 26447-40-5) Methylene Diphenyl Diisocyanate (MDI) And Related Compounds

Action Plan [RIN 2070-ZA15]

Methylene Diphenyl Diisocyanate (MDI) And Related Compounds Polymethylene polyphenyl isocyanate (CAS 9016-87-9)

Action Plan [RIN 2070-ZA15]

### **CERCLA Hazardous Substance List (40 CFR 302.4)**

4,4'-Methylene diphenyl diisocyanate (CAS 101-68-8) Listed. Diisocyanate methylenediphenyl (CAS 26447-40-5) Listed.

### SARA 304 Emergency release notification

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

### SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous Yes

chemical

**Classified hazard** Acute toxicity (any route of exposure)

Skin corrosion or irritation categories

Serious eye damage or eye irritation Respiratory or skin sensitization

Carcinogenicity

Specific target organ toxicity (single or repeated exposure)

### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.	
4,4'-Methylene diphenyl diisocyanate	101-68-8	22 - 41	
Diisocyanate methylenediphenyl	26447-40-5	7 - 13	
Polymethylene polyphenyl isocyanate	9016-87-9	30 - 56	

### Other federal regulations

# Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

4.4'-Methylene diphenyl diisocyanate (CAS 101-68-8) Diisocyanate methylenediphenyl (CAS 26447-40-5)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act Not regulated.

(SDWA)

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### **US** state regulations

### **US. Massachusetts RTK - Substance List**

4,4'-Methylene diphenyl diisocyanate (CAS 101-68-8) Diisocyanate methylenediphenyl (CAS 26447-40-5)

# US. New Jersey Worker and Community Right-to-Know Act

4,4'-Methylene diphenyl diisocyanate (CAS 101-68-8) Diisocyanate methylenediphenyl (CAS 26447-40-5)

Polymethylene polyphenyl isocyanate (CAS 9016-87-9)

# US. Pennsylvania Worker and Community Right-to-Know Law

4,4'-Methylene diphenyl diisocyanate (CAS 101-68-8) Diisocyanate methylenediphenyl (CAS 26447-40-5)

### **US. Rhode Island RTK**

4,4'-Methylene diphenyl diisocyanate (CAS 101-68-8) Diisocyanate methylenediphenyl (CAS 26447-40-5)

### California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

# US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

4,4'-Methylene diphenyl diisocyanate (CAS 101-68-8) Diisocyanate methylenediphenyl (CAS 26447-40-5) Polymethylene polyphenyl isocyanate (CAS 9016-87-9)

Inventory name

#### **International Inventories**

Country(s) or region

Country(s) or region	inventory name	On inventory (yes/no)
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes

<sup>\*</sup>A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

Toxic Substances Control Act (TSCA) Inventory

# 16. Other information, including date of preparation or last revision

Issue date 11-June-2018

Revision date - 01

United States & Puerto Rico

HMIS® ratings Health: 3\*

Flammability: 1 Physical hazard: 0

NFPA ratings



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Yes

On inventory (yes/no)\*

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

### Disclaimer

NuKote Coating Systems cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

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# SAFETY DATA SHEET

## 1. Identification

Product identifier Nukote PP 300, B-Side

Other means of identification

Product code 70-11755

Recommended use Coating.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Supplier

Company name Nukote Coating Systems International

Address 4730 Consulate Plaza Dr.

Suite 100

Houston, TX. 77032

**Telephone** 832-770-7100

Email SDS@nukoteglobal.com

Emergency Phone Number Chemtrec: 800-424-9300 (Account: CCN16118) or International: 703-527-3887 (Account:

CCN16118)

# 2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Carcinogenicity Category 1A

Specific target organ toxicity, repeated Category 2 (Lung)

exposure

Environmental hazards Hazardous to the aquatic environment, acute Category 2

hazard

Hazardous to the aquatic environment,

long-term hazard

OSHA defined hazards Not classified.

Label elements





Signal word Danger

Hazard statement May cause cancer. May cause damage to organs (Lung) through prolonged or repeated

exposure. Toxic to aquatic life with long lasting effects.

**Precautionary statement** 

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read

and understood. Do not breathe mist or vapor. Avoid release to the environment. Wear protective

Category 2

gloves/protective clothing/eye protection/face protection.

Response If exposed or concerned: Get medical advice/attention. Collect spillage.

Storage Store locked up.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise

classified (HNOC)

None known.

Supplemental information None.

# 3. Composition/information on ingredients

**Mixtures** 

Nukote PP 300, B-Side SDS US

Chemical name	CAS number	%
Polyether Polyol	52019-35-9	50 - 95
Titanium dioxide	13463-67-7	1.9 - 4
Aromatic Amine	68479-98-1	1.6 - 3
Carbon black	1333-86-4	0.9 - 1.4
Crystalline silica (Quartz)	14808-60-7	0.9 - 1.4

### **Composition comments**

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. First-aid measures

Move to fresh air. Call a physician if symptoms develop or persist. Inhalation

Wash off with soap and water. Get medical attention if irritation develops and persists. Skin contact

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical advice/attention if you feel unwell.

Most important symptoms/effects, acute and

delayed

Coughing. Discomfort in the chest. Shortness of breath. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

**General information** 

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

# 5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Special protective equipment

During fire, gases hazardous to health may be formed. Contact with powerful oxidizing agents may cause fire and/or explosions.

and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods General fire hazards Use standard firefighting procedures and consider the hazards of other involved materials.

Will burn if involved in a fire.

### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product

recovery, flush area with water.

Prevent product from entering drains.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

### **Environmental precautions**

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

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## 7. Handling and storage

#### Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Should be handled in closed systems, if possible. Provide adequate ventilation. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. When using do not eat or drink. Avoid release to the environment. Observe good industrial hygiene practices.

# Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store in a cool, dry and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Protect from heat and direct sunlight. Protect from moisture. Store only in approved containers. Protect against physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Outdoor storage should be above ground and surrounded by dike to contain spills or leaks.

Use explosion-proof ventilation equipment. Take precautionary measures against static discharges. Ground container and transfer equipment to eliminate static electric sparks. Do not cut, grind, drill, weld or reuse containers unless adequate precautions are taken against these hazards.

# 8. Exposure controls/personal protection

# Occupational exposure limits

Components	Туре	Value	
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.05 mg/m3	
US. OSHA Table Z-1 Limits for Ai	Contaminants (29 CFR 1910.	1000)	
Components	Туре	Value	Form
Carbon black (CAS 1333-86-4)	PEL	3.5 mg/m3	
Titanium dioxide (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.
US. OSHA Table Z-3 (29 CFR 1910	0.1000)		
Components	Туре	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.
Titanium dioxide (CAS 13463-67-7)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
US. ACGIH Threshold Limit Value	s		
Components	Туре	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	
US. NIOSH: Pocket Guide to Chei	nical Hazards		
Components	Туре	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m3	
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

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# Appropriate engineering

controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Eye wash fountain is

recommended.

### Individual protection measures, such as personal protective equipment

Wear safety glasses, sealed eyewear, unvented tight fitting goggles or face shield depending on Eye/face protection

hazard of task.

Skin protection

Wear appropriate chemical resistant gloves. Neoprene, nitrile, polyethylene or PVC. Suitability and Hand protection

durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Suitable gloves can be recommended by

the glove supplier. Contaminated gloves should be replaced.

Skin protection

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with

> respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use. Check with respiratory protective equipment suppliers.

Wear appropriate thermal protective clothing, when necessary. Thermal hazards

General hygiene considerations

Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

# 9. Physical and chemical properties

**Appearance** 

Liquid. Physical state Liquid. **Form** 

Color Not available. Odor Mild chemical. **Odor threshold** Not available. Not available. Melting point/freezing point Not available. Initial boiling point and boiling 266 °F (130 °C)

range

Flash point **Evaporation rate** 

212.0 °F (100.0 °C) Slower than ether. Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower

Not available.

(%)

Flammability limit - upper

Not available.

(%)

Not available. Vapor pressure Heavier than air. Vapor density 1.06 (H20=1) Relative density

Solubility(ies)

Not available. Solubility (water) Partition coefficient Not available.

(n-octanol/water)

Not available. **Auto-ignition temperature Decomposition temperature** Not available. Not available. **Viscosity** 

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Other information

Density 8.82 lb/gal **Explosive properties** Not explosive. Oxidizing properties Not oxidizing. VOC 0 lb/gal

# 10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

Will not occur.

Protect against direct sunlight. Heat. Open flame. Moisture. Contact with incompatible materials. Conditions to avoid

Incompatible materials Isocyanates. Strong oxidizing agents.

Hazardous decomposition

products

Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic

compounds whose composition have not been characterized. Organic vapor.

## 11. Toxicological information

### Information on likely routes of exposure

Prolonged inhalation may be harmful. Inhalation

Skin contact May be absorbed through the skin with possible systemic effects.

Vapors can irritate the eyes. Chemical burns may result due to overexposure. Affects of Eve contact

exposure may be delayed.

Ingestion may cause irritation and malaise. Ingestion

Symptoms related to the physical, chemical and toxicological characteristics

Coughing, Discomfort in the chest, Shortness of breath, Prolonged exposure may cause chronic effects.

Information on toxicological effects

Not expected to be acutely toxic. **Acute toxicity** 

Components **Species Test Results** 

Carbon black (CAS 1333-86-4)

**Acute Dermal** 

LD50 Rabbit > 3000 mg/kg

Oral

LD50 Rat > 8000 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye

irritation

Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization Repeated or prolonged inhalation exposure may cause asthma-like syndrome.

Skin sensitization Prolonged or repeated contact may cause skin sensitization in susceptible individuals.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity May cause cancer. The carcinogenic effect is caused by inhalation of dust particles. Grinding and

sanding this product may generate dust.

### IARC Monographs. Overall Evaluation of Carcinogenicity

Carbon black (CAS 1333-86-4) 2B Possibly carcinogenic to humans.

Crystalline silica (Quartz) (CAS 14808-60-7) 1 Carcinogenic to humans.

Titanium dioxide (CAS 13463-67-7) 2B Possibly carcinogenic to humans.

NTP Report on Carcinogens

Crystalline silica (Quartz) (CAS 14808-60-7) Known To Be Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) Crystalline silica (Quartz) (CAS 14808-60-7) Cancer

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Nukote PP 300, B-Side SDS US Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

repeated exposure

May cause damage to organs (Lung) through prolonged or repeated exposure. Grinding and sanding this product may generate dust. Frequent inhalation of dust over a long period of time

increases the risk of developing lung diseases.

**Aspiration hazard** Not an aspiration hazard.

Chronic effects May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may

be harmful. Prolonged exposure may cause chronic effects.

# 12. Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

Components Species Test Results

Carbon black (CAS 1333-86-4)

Aquatic Acute

Fish LC50 Leuciscus idus >= 1000 mg/l, 96 Hours

Persistence and degradability

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.

Bioaccumulative 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 oweing to the

large diameter of the solid aggregate particles.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation

potential, endocrine disruption, global warming potential) are expected from this component.

# 13. Disposal considerations

**Disposal instructions**Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow

this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches

with chemical or used container. Dispose of contents/container in accordance with

local/regional/national/international regulations. When this product as supplied is to be discarded as waste, it may meet the definition of a RCRA waste under 40 CFR 261.

Local disposal regulations

Hazardous waste code

Dispose in accordance with all applicable regulations.

The waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Waste from residues / unused

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is

emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. DO NOT pressurize, cut, heat, or weld containers; they may explode and cause injury or death. Empty product containers may contain product residue. DO NOT reuse empty containers without commercial cleaning or reconditioning. All containers should be disposed of in an

environmentally safe manner and in accordance with governmental regulations.

# 14. Transport information

DOT

UN number UN3082

**UN proper shipping name** Environmentally hazardous substances, liquid, n.o.s. (Polyether Polyol)

Transport hazard class(es)

**Environmental hazards** 

Class 9
Subsidiary risk Label(s) 9
Packing group III

Marine pollutant Yes

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

**Special provisions** 8, 146, 335, IB3, T4, TP1, TP29

Packaging exceptions 155
Packaging non bulk 203

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Packaging bulk 241

IATA

UN3082 **UN** number

Environmentally hazardous substance, liquid, n.o.s. (Polyether Polyol) **UN** proper shipping name

Transport hazard class(es)

Class 9 Subsidiary risk 9 Label(s) Ш **Packing group Environmental hazards** Yes **ERG Code** 9L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

**IMDG** 

**UN** number UN3082

**UN** proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyether Polyol)

Transport hazard class(es)

Class 9 Subsidiary risk Packing group Ш **Environmental hazards** 

Marine pollutant Yes F-A, S-F **EmS** 

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to

Annex II of MARPOL 73/78 and

the IBC Code

15. Regulatory information

**US** federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Standard, 29 CFR 1910.1200.

Not established.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Aromatic Amine (CAS 68479-98-1) 1.0 % One-Time Export Notification only.

**CERCLA Hazardous Substance List (40 CFR 302.4)** 

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Crystalline silica (Quartz) (CAS 14808-60-7) Cancer

lung effects

immune system effects

kidney effects

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous Yes

chemical

Classified hazard Carcinogenicity

Specific target organ toxicity (single or repeated exposure) categories

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act Not regulated.

(SDWA)

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### **US** state regulations

### **US. Massachusetts RTK - Substance List**

Carbon black (CAS 1333-86-4)

Crystalline silica (Quartz) (CAS 14808-60-7)

Titanium dioxide (CAS 13463-67-7)

### US. New Jersey Worker and Community Right-to-Know Act

Carbon black (CAS 1333-86-4)

Crystalline silica (Quartz) (CAS 14808-60-7)

Titanium dioxide (CAS 13463-67-7)

### US. Pennsylvania Worker and Community Right-to-Know Law

Carbon black (CAS 1333-86-4)

Crystalline silica (Quartz) (CAS 14808-60-7)

Titanium dioxide (CAS 13463-67-7)

### **US. Rhode Island RTK**

Carbon black (CAS 1333-86-4)

Crystalline silica (Quartz) (CAS 14808-60-7)

Titanium dioxide (CAS 13463-67-7)

### **California Proposition 65**



WARNING: This product can expose you to chemicals including Titanium dioxide, which is known to the State

of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

### California Proposition 65 - CRT: Listed date/Carcinogenic substance

Inventory name

Carbon black (CAS 1333-86-4) Listed: February 21, 2003 Crystalline silica (Quartz) (CAS 14808-60-7) Listed: October 1, 1988 Titanium dioxide (CAS 13463-67-7) Listed: September 2, 2011

## US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Carbon black (CAS 1333-86-4)

Crystalline silica (Quartz) (CAS 14808-60-7)

Titanium dioxide (CAS 13463-67-7)

### **International Inventories**

Country(s) or region

Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes

<sup>\*</sup>A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

Toxic Substances Control Act (TSCA) Inventory

# 16. Other information, including date of preparation or last revision

22-June-2018 Issue date

**Revision date** Version # 01

United States & Puerto Rico

Health: 2\* **HMIS®** ratings

Flammability: 1 Physical hazard: 0

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Yes

On inventory (yes/no)\*

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing

# **NFPA** ratings



### Disclaimer

NuKote Coating Systems cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

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