

SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

Product Name: PRINT KOTE CONFORMAL COATING

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Type:	Silicone Resin Solution	Emergency Contact:	Chemtrec
Product Name:	Print Kote Conformal Coating	Phone:	(800) 424-9300
Part Number(s):	22-203		

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 2
Skin sensitization : Category 1
Reproductive toxicity : Category 2
Specific target organ systemic toxicity - repeated exposure : Category 2 (Central nervous system)

GHS Label element

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H225 Highly flammable liquid and vapor.
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs (Central nervous system) through prolonged or repeated exposure.

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.



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SECTION 2. HAZARDS IDENTIFICATION (CONTINUED)

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 - P233 Keep container tightly closed.
 - P240 Ground/bond container and receiving equipment.
 - P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 - P242 Use only non-sparking tools.
 - P243 Take precautionary measures against static discharge.
 - P260 Do not breathe spray.
 - P271 Use only outdoors or in a well-ventilated area.
 - P272 Contaminated work clothing must not be allowed out of the workplace.
 - P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response:**
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - P308 + P313 IF exposed or concerned: Get medical advice/ attention.
 - P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 - P363 Wash contaminated clothing before reuse.
- Storage:**
- P403 + P235 Store in a well-ventilated place. Keep cool.
 - P405 Store locked up.
- Disposal:**
- P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Vapors may form explosive mixture with air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Chemical nature : Silicone resin solution



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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS (CONTINUED)

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Octamethyltrisiloxane	107-51-7	>= 70 - < 90
Toluene	108-88-3	>= 1 - < 5
Methyltrimethoxysilane	1185-55-3	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
- Notes to physician : Treat symptomatically and supportively.



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SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Dry chemical
Carbon dioxide (CO₂)
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : Do not use a solid water stream as it may scatter and spread fire.
Flash back possible over considerable distance.
Vapors may form explosive mixtures with air.
Fire burns more vigorously than would be expected.
Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides
Silicon oxides
Formaldehyde
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.
Ventilate the area.
Use personal protective equipment.
Follow safe handling advice and personal protective equipment recommendations.
- Environmental precautions : Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).



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SECTION 6. ACCIDENTAL RELEASE MEASURES (CONTINUED)

Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapors/mists with a water spray jet.
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent.
Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures : Ensure all equipment is electrically grounded before beginning transfer operations.
This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations.
Restrict flow velocity in order to reduce the accumulation of static electricity.

Local/Total ventilation : Use with local exhaust ventilation.
Use only in an area equipped with explosion proof exhaust ventilation.



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SECTION 7. HANDLING AND STORAGE (CONTINUED)

- Advice on safe handling : Do not get on skin or clothing.
Do not breathe vapors or spray mist.
Do not swallow.
Avoid contact with eyes.
Handle in accordance with good industrial hygiene and safety practice.
Non-sparking tools should be used.
Keep container tightly closed.
Keep away from water.
Protect from moisture.
Keep away from heat and sources of ignition.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers.
Store locked up.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
Keep away from heat and sources of ignition.
- Materials to avoid : Do not store with the following product types:
Strong oxidizing agents
Organic peroxides
Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures which in contact with water emit flammable gases
Explosives
Gases



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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Octamethyltrisiloxane	107-51-7	TWA	200 ppm	DCC OEL
Toluene	108-88-3	TWA	20 ppm	ACGIH
		TWA	100 ppm 375 mg/m ³	NIOSH REL
		ST	150 ppm 560 mg/m ³	NIOSH REL
		TWA	200 ppm	OSHA Z-2
		CEIL	300 ppm	OSHA Z-2
		Peak	500 ppm	OSHA Z-2
Methyltrimethoxysilane	1185-55-3	TWA	50 ppm	DCC OEL

Occupational exposure limits of decomposition products

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m ³	NIOSH REL
		ST	250 ppm 325 mg/m ³	NIOSH REL
		TWA	200 ppm 260 mg/m ³	OSHA Z-1

Biological occupational exposure limits

Ingredients	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Toluene	108-88-3	Toluene	In blood	Prior to last shift of work-week	0.02 mg/l	ACGIH BEI



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		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI
		o-Cresol	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/g Creatinine	ACGIH BEI
				exposure ceases)		

Engineering measures : Processing may form hazardous compounds (see section 10).
 Minimize workplace exposure concentrations.
 Use only in an area equipped with explosion proof exhaust ventilation.
 Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection
Material : Antistatic gloves
 Impervious gloves
 Flame retardant gloves



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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

- Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
- Eye protection : Wear the following personal protective equipment:
Safety glasses
- Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Wear the following personal protective equipment:
Flame retardant antistatic protective clothing.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
- Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.
These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.
For further information regarding the use of silicones / organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these type of materials in consumer aerosol applications that has been developed by the silicone industry (www.SEHSC.com).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid pH : No data available
- Color : translucent Melting point/freezing point : No data available
- Odor : slight Initial boiling point and boiling range : 101 °C
- Odor Threshold : No data available



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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (CONTINUED)

Flash point	: 17 °C Method: Seta closed cup	Autoignition temperature	: No data available
Evaporation rate	: No data available	Thermal decomposition	: No data available
Flammability (solid, gas)	: Not applicable	Viscosity Viscosity, kinematic	: 350 cSt
Upper explosion limit	: No data available		
Lower explosion limit	: No data available	Explosive properties	: Not explosive
Vapor pressure	: No data available	Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Relative vapor density	: No data available		
Relative density	: 0.9	Molecular weight	: No data available
Solubility(ies) Water solubility	: No data available		
Partition coefficient: n- octanol/water	: No data available		

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Highly flammable liquid and vapor. Vapors may form explosive mixture with air. Use at elevated temperatures may form highly hazardous compounds. Can react with strong oxidizing agents. Hazardous decomposition products will be formed upon contact with water or humid air. Hazardous decomposition products will be formed at elevated temperatures.



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SECTION 10. STABILITY AND REACTIVITY (CONTINUED)

Conditions to avoid : Exposure to moisture.
Handling operations that can promote accumulation of static charges.
Heat, flames and sparks.

Incompatible materials : Oxidizing agents
Water

Hazardous decomposition products
Contact with water or humid air : Methanol

Thermal decomposition : Formaldehyde

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Ingredients:

Octamethyltrisiloxane:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on test data

Acute inhalation toxicity : LC50 (Rat): > 2350 ppm
Exposure time: 4 h
Test atmosphere: vapor
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on test data



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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on test data

Toluene:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 28.1 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Methyltrimethoxysilane:

Acute oral toxicity : LD50 (Rat): 12.3 ml/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Information taken from reference works and the literature.

Acute inhalation toxicity : LC50 (Rat): > 42.1 mg/l
Exposure time: 6 h
Test atmosphere: vapor
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on test data

Acute dermal toxicity : LD50 (Rabbit): > 9,500 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on test data

Skin corrosion/irritation

Not classified based on available information.



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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

Ingredients:

Octamethyltrisiloxane:

Species: Rabbit
Result: No skin irritation
Remarks: Based on test data

Toluene:

Species: Rabbit
Method: Directive 67/548/EEC, Annex V, B.4.
Result: Skin irritation

Methyltrimethoxysilane:

Species: Rabbit
Result: No skin irritation
Remarks: Based on test data

Serious eye damage/eye irritation

Not classified based on available information.

Ingredients:

Octamethyltrisiloxane:

Result: No eye irritation
Remarks: Based on data from similar materials

Toluene:

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Methyltrimethoxysilane:

Species: Rabbit
Result: No eye irritation
Remarks: Based on test data

Respiratory or skin sensitization

Skin sensitization: May cause an allergic skin reaction.
Respiratory sensitization: Not classified based on available information.

Ingredients:

Octamethyltrisiloxane:

Assessment: Does not cause skin sensitization.
Test Type: Human repeat insult patch test (HRIPT)
Species: Humans
Remarks: No known sensitising effect.
Based on test data

Toluene:

Test Type: Maximization Test (GPMT)
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

Methyltrimethoxysilane:

Assessment: Probability or evidence of low to moderate skin sensitization rate in humans



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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

Test Type: Buehler Test
Species: Guinea pig
Remarks: Causes sensitization.
Based on test data

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

Octamethyltrisiloxane:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Result: negative
Remarks: Based on test data

: Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on test data

Toluene:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Result: negative

: Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow
cytogenetic test, chromosomal analysis)
Test species: Mouse
Application Route: Ingestion
Result: negative

Methyltrimethoxysilane:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on test data

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo
cytogenetic assay)
Test species: Mouse



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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

Application Route: Ingestion
Result: negative
Remarks: Based on test data

Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects.

Carcinogenicity

Not classified based on available information.

Ingredients:

Toluene:

Species: Rat
Application Route: inhalation (vapor)
Exposure time: 24 Months
Result: negative

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Ingredients:

Octamethyltrisiloxane:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat, male and female
Application Route: inhalation (vapor)
Symptoms: No effects on fertility.
Remarks: Based on test data



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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

Test Type: Uterotrophic assay
Species: Rat, female
Application Route: inhalation (vapor)
Result: negative
Remarks: Based on test data

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat, male and female
Application Route: inhalation (vapor)
Symptoms: No effects on fetal development.
Remarks: Based on test data

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

Toluene:

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: positive

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

Methyltrimethoxysilane:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat, male and female
Application Route: Ingestion
Symptoms: No effects on fertility.
Remarks: Based on test data



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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat, male and female
Application Route: Ingestion
Symptoms: No effects on fetal development.
Remarks: Based on test data

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

STOT-single exposure

Not classified based on available information.

Ingredients:

Toluene:

Assessment: May cause drowsiness or dizziness.

STOT-repeated exposure

May cause damage to organs (Central nervous system) through prolonged or repeated exposure.

Ingredients:

Octamethyltrisiloxane:

Routes of exposure: Ingestion

Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Routes of exposure: inhalation (vapor)

Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

Toluene:

Target Organs: Central nervous system

Assessment: May cause damage to organs through prolonged or repeated exposure.

Methyltrimethoxysilane:

Routes of exposure: inhalation (vapor)

Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.



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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

Routes of exposure: Ingestion

Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Repeated dose toxicity

Ingredients:

Octamethyltrisiloxane:

Species: Rat

Application Route: Ingestion

Remarks: Based on test data

Species: Rat

Application Route: inhalation (vapor)

Remarks: Based on test data

Toluene:

Species: Rat

LOAEL: 1.875 mg/l

Application Route: inhalation (vapor)

Exposure time: 6 m

Methyltrimethoxysilane:

Species: Rat

Application Route: inhalation (vapor)

Remarks: Based on test data

Species: Rat

Application Route: Ingestion

Remarks: Based on test data

Aspiration toxicity

Not classified based on available information.



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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

Ingredients:

Toluene:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Experience with human exposure

Ingredients:

Toluene:

Inhalation:	Target Organs:	Central nervous system
	Symptoms:	Neurological disorders, Fatigue, Vertigo

Further information

Ingredients:

Octamethyltrisiloxane:

Remarks: This material contains octamethyltrisiloxane (L3). Repeated inhalation exposure in rats to L3 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Octamethyltrisiloxane:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.019 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on test data
No toxicity at the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0.020 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility.



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SECTION 12. ECOLOGICAL INFORMATION (CONTINUED)

- Toxicity to algae : EC50 (*Pseudokirchneriella subcapitata* (green algae)): > 0.0094 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: No toxicity at the limit of solubility.
- Toxicity to fish (Chronic toxicity) : NOEC (*Oncorhynchus mykiss* (rainbow trout)): > 0.027 mg/l
Method: OECD Test Guideline 210
Remarks: Based on test data
No toxicity at the limit of solubility.
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (*Daphnia* sp.): > 0.15 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: No toxicity at the limit of solubility.
- Ecotoxicology Assessment
Acute aquatic toxicity : This product has no known ecotoxicological effects.
Chronic aquatic toxicity : This product has no known ecotoxicological effects.
- Toluene:**
- Toxicity to fish : LC50 (*Oncorhynchus kisutch* (coho salmon)): 5.5 mg/l
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Ceriodaphnia dubia* (water flea)): 3.78 mg/l
Exposure time: 48 h
- Toxicity to algae : NOEC (*Skeletonema costatum* (marine diatom)): 10 mg/l
Exposure time: 72 h
- Toxicity to fish (Chronic toxicity) : NOEC (*Oncorhynchus kisutch* (coho salmon)): 1.39 mg/l
Exposure time: 40 d
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (*Daphnia magna* (Water flea)): 1 mg/l
Exposure time: 21 d
- NOEC (*Ceriodaphnia dubia* (water flea)): 0.74 mg/l
Exposure time: 7 d



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SECTION 12. ECOLOGICAL INFORMATION (CONTINUED)

Toxicity to bacteria : EC50 (Nitrosomonas sp.): 84 mg/l
Exposure time: 24 h

Methyltrimethoxysilane:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia sp.): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to bacteria : EC50: > 100 mg/l
Method: OECD Test Guideline 209

Persistence and degradability

Ingredients:

Octamethyltrisiloxane:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Method: OECD Test Guideline 310

Stability in water : Degradation half life: 329 h pH: 7
Method: OECD Test Guideline 111
Remarks: Based on test data

Toluene:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 86 %
Exposure time: 20 d

Methyltrimethoxysilane:

Stability in water : Degradation half life: 2.2 h pH: 7



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SECTION 12. ECOLOGICAL INFORMATION (CONTINUED)

Bioaccumulative potential

Ingredients:

Octamethyltrisiloxane:

Bioaccumulation : Species: Pimephales promelas (fathead minnow)
Bioconcentration factor (BCF): ≥ 500
Method: OECD Test Guideline 305
Remarks: Biomagnification factor < 1

Partition coefficient: n-octanol/water : log Pow: ≥ 4
Remarks: Based on test data

Toluene:

Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): 90

Partition coefficient: n-octanol/water : log Pow: 2.73

Methyltrimethoxysilane:

Partition coefficient: n-octanol/water : log Pow: -2.36

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Resource Conservation and Recovery Act (RCRA) : When a decision is made to discard this material as supplied, it is classified as a RCRA hazardous waste.

Waste Code : D001: Ignitability

Waste from residues : Dispose of in accordance with local regulations.



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SECTION 13. DISPOSAL CONSIDERATIONS (CONTINUED)

Contaminated packaging : Dispose of as unused product.
 Empty containers should be taken to an approved waste handling site for recycling or disposal.
 Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG

UN number : UN 1993
 Proper shipping name : FLAMMABLE LIQUID, N.O.S.
 (Toluene, Methoxysilane)
 Class : 3
 Packing group : II
 Labels : 3

IMDG-Code

UN number : UN 1993
 Proper shipping name : FLAMMABLE LIQUID, N.O.S.
 (Toluene, Methoxysilane)
 Class : 3
 Packing group : II
 Labels : 3
 EmS Code : F-E, S-E
 Marine pollutant : no

IATA-DGR

UN/ID No. : UN 1993
 Proper shipping name : Flammable liquid, n.o.s.
 (Toluene, Methoxysilane)
 Class : 3
 Packing group : II
 Labels : Flammable Liquids
 Packing instruction (cargo aircraft) : 364
 Packing instruction (passenger aircraft) : 353

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number : UN 1993
 Proper shipping name : FLAMMABLE LIQUIDS, N.O.S.
 (Toluene, Methoxysilane)

Class : 3
 Packing group : II
 Labels : FLAMMABLE LIQUID
 ERG Code : 128
 Marine pollutant : no



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SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Toluene	108-88-3	1000	33333
Methanol	67-56-1	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Fire Hazard
 Acute Health Hazard
 Chronic Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Toluene 108-88-3 3 %

US State Regulations

Pennsylvania Right To Know

Octamethyltrisiloxane	107-51-7	70 - 90 %
Dimethyl, methylmethoxy, phenylmethoxy siloxane with methyl and phenyl silsesquioxanes	68952-93-2	20 - 30 %
Toluene	108-88-3	1 - 5 %
Methanol	67-56-1	0 - 0.1 %



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Product Name: PRINT KOTE CONFORMAL COATING

SECTION 15. REGULATORY INFORMATION (CONTINUED)

New Jersey Right To Know

Octamethyltrisiloxane	107-51-7	70 - 90 %
Dimethyl, methylmethoxy, phenylmethoxy siloxane with methyl and phenyl silsesquioxanes	68952-93-2	20 - 30 %
Toluene	108-88-3	1 - 5 %
Methyltrimethoxysilane	1185-55-3	1 - 5 %

California Prop 65

WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Toluene	108-88-3
Methanol	67-56-1

The ingredients of this product are reported in the following inventories:

- KECI : All ingredients listed, exempt or notified.
- REACH : All ingredients (pre-)registered or exempt.
- TSCA : All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
- AICS : All ingredients listed or exempt.
- IECSC : All ingredients listed or exempt.
- PICCS : All ingredients listed or exempt.
- DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SAFETY DATA SHEET

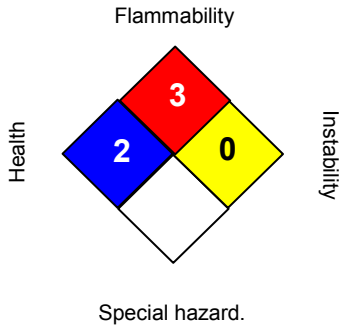
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SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2*
FLAMMABILITY	3
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
 2 = Moderate, 3 = High
 4 = Extreme, * = Chronic

Full text of other abbreviations

- ACGIH : USA. ACGIH Threshold Limit Values (TLV)
- ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
- NIOSH REL : USA. NIOSH Recommended Exposure Limits
- OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
- OSHA Z-2 : USA. Occupational Exposure Limits (OSHA) - Table Z-2
- ACGIH / TWA : 8-hour, time-weighted average
- ACGIH / STEL : Short-term exposure limit
- DCC OEL / TWA : Time weighted average
- NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
- NIOSH REL / ST : STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
- OSHA Z-1 / TWA : 8-hour time weighted average
- OSHA Z-2 / TWA : 8-hour time weighted average
- OSHA Z-2 / CEIL : Acceptable ceiling concentration
- OSHA Z-2 / Peak : Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift



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SECTION 16. OTHER INFORMATION (CONTINUED)

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