1. Identification

1.1. Product identifier

Trade name	Protectosil® ANTIGRAFFITI
Chemical Name	PROTECTOSIL® antigraffiti

1.2. Recommended use of the chemical and restrictions on use

Relevant applications identified	For industrial use

1.3. Details of the supplier of the safety data sheet

Company	Evonik Corporation USA 299 Jefferson Road Parsippany,NJ 07054-0677 USA
Telephone	973-929-8000
Telefax	973-929-8040
Email address	Product-Regulatory-Services@Evonik.com

1.4. 24 HOUR EMERGENCY TELEPHONE NUMBERS:

CHEMTREC - US & CANADA:	800-424-9300
CHEMTREC MEXICO:	01-800-681-9531
CHEMTREC INTERNATIONAL:	+1 703-527-3887 **(collect calls accepted)**
Product Regulatory Services	: 973-929-8060

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation 29CFR 1910.1200

Remarks Not a hazardous substance or mixture.

2.2. Label elements

Statutory basis	Classification according to Regulation 29CFR 1910.1200
Remarks	Not a hazardous substance or mixture.

2.3. Other hazards

None known.

3. Composition/information on ingredients

Chemical nature
Preparation on the base:
Organofunctional silane system
and
water

• **Ethanol** >= 1% - < 5%	
CAS-No. 64-17-5	
Flammable liquids	Category 2
• **Methanol** >= 0.1% - < 1%	
CAS-No. 67-56-1	
Flammable liquids	Category 2
Acute toxicity (Oral)	Category 3
Acute toxicity (Inhalation)	Category 3
Acute toxicity (Dermal)	Category 3
Specific target organ toxicity - single exposure	Category 1

Other information
This product contains a component that is subject to a TSCA Significant New Use Rule (SNUR). The limitations on the use of this product are that the product may only be used in anti-graffiti systems and the product may not be used in a way that creates a mist, aerosol, or other respirable form of the product. The product may not be sprayed and should be applied to surfaces via brush or roller. If a product containing the regulated component is distributed further it is required that the distributor ensure that these limitations are communicated to downstream users.

4. First aid measures

4.1. Description of first aid measures

Inhalation
If aerosol or mists are inhaled, take affected persons out into the fresh air.In case of persistent discomfort or other symptoms, consult a physician immediately.

Skin contact
Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Obtain medical attention immediately if symptoms occur. Wash clothing before reuse.

Eye contact
In case of contact, immediately flush eyes with plenty of water. Obtain medical attention if irritation develops.

Ingestion
If accidentally swallowed, rinse mouth thoroughly with water and afterwards, drink plenty of water. In case of discomfort, obtain medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms
None known

4.3. Indication of any immediate medical attention and special treatment needed

After absorbing large amounts of substance:
administration of activated charcoal.
Acceleration of gastrointestinal passage

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Use water spray or fog, foam, dry chemical or CO2.
Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture

Standard procedure for chemical fires.

5.3. Advice for firefighters

Water used to extinguish fire should not enter drainage systems, soil or stretches of water.
Ensure there are sufficient retaining facilities for water used to extinguish fire.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Containers can build up pressure if exposed to heat (fire). Cool with water spray. As in any fire, wear self-contained, pressure-demand breathing apparatus (MSHA-NIOSH approved or equivalent) and full protective gear.
As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

6.2. Environmental precautions

Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

6.3. Methods and material for containment and cleaning up

Ventilate area. Absorb spill with inert material and place in a chemical waste container.

Additional advice

Remove sources of ignition and ventilate area.

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7. Handling and storage

7.1. Precautions for safe handling

Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Avoid breathing vapor or mist.
Follow all MSDS/label precautions even after container is emptied because it may retain product residues.
Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion

Take precautionary measures against static charges, keep away from sources of ignition.

Storage

Keep containers tightly closed in a cool, well-ventilated place.

Further information

Keep tightly sealed in original packing.
Protect from frost.

8. Exposure controls/personal protection

8.1. Control parameters

• Methanol		
CAS-No.	67-56-1	
Control parameters	200 ppm	Time Weighted Average (TWA):(ACGIH)
Control parameters	250 ppm	Short Term Exposure Limit (STEL):(ACGIH)
Control parameters	Can be absorbed through the skin.	Skin designation:(ACGIH)
Control parameters	200 ppm 260 mg/m3	Permissible exposure limit:(OSHA Z1)
Control parameters	200 ppm 260 mg/m3	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):(US CA OEL)
Control parameters	1000 ppm	Ceiling Limit Value:(US CA OEL)
Control parameters	250 ppm 325 mg/m3	Short Term Exposure Limit (STEL):(US CA OEL)
Control parameters	Can be absorbed through the skin.	Skin designation:(US CA OEL)
Control parameters	200 ppm 260 mg/m3	Time Weighted Average (TWA):(TN OEL)
Control parameters	250 ppm 325 mg/m3	Short Term Exposure Limit (STEL):(TN OEL)
Control parameters	Can be absorbed through the skin.	Skin designation:(TN OEL)
• Ethanol		
CAS-No.	64-17-5	
Control parameters	1000 ppm 1900 mg/m3	Permissible exposure limit:(OSHA Z1)
Control parameters	1000 ppm 1900 mg/m3	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):(US CA OEL)
Control parameters	1000 ppm	Short Term Exposure Limit (STEL):(ACGIH)
Control parameters	1000 ppm 1900 mg/m3	Time Weighted Average (TWA):(TN OEL)

8.2. Exposure controls

Engineering measures

Provide for good ventilation if vapors/aerosols are formed.

Personal protective equipment

Respiratory protection

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Hand protection

Glove material	for example, butyl-rubber
Material thickness	0.5 mm
Break through time	>= 480 min
Glove material	for example, Fluorinated rubber (Viton)
Material thickness	0.4 mm

Break through time >= 480 min
The above mentioned hand protection is based on knowledge of the chemistry and anticipated uses of this product but it may not be appropriate for all workplaces. A hazard assessment should be conducted prior to use to ensure suitability of gloves for specific work environments and processes prior to use.
Selection of protective gloves to meet the requirements of specific workplaces.
Suitability for specific workplaces should be clarified with protective glove manufacturers.
Use impermeable gloves.

Eye protection
Use chemical splash goggles or face shield.

Skin and body protection
A safety shower and eye wash fountain should be readily available.
To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

Hygiene measures
Avoid contact with skin, eyes and clothing. Do not inhale vapors or aerosols. Do not eat, drink, or smoke when using the product. Remove contaminated or saturated clothing.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

physical state	liquid	
Colour	yellowish orange slightly turbid	
Form	liquid	
Odour	almost odorless	
Odour Threshold	not determined	
pH	ca. 4	(1000 g/l) (20 °C)
Melting point/range	-1 °C Method:	ISO 3841
Boiling point/range	97 °C Method:	(1013 hPa) ASTM D-1120
Flash point	> 95 °C Method:	DIN EN ISO 2719 (Pensky-Martens, Closed Cup)
Evaporation rate	not determined	
Flammability (solid, gas)	no data available	
Lower explosion limit	not determined	
Upper explosion limit	not determined	
Vapour pressure	23.4 hPa Water	(20 °C)
Relative vapour density	no data available	

Density	ca. 1.06 g/cm3	(20 °C)
	Method: DIN 51757	
Water solubility	miscible	
Partition coefficient: n-octanol/water	not determined	
Autoignition temperature	Not determined.	
Thermal decomposition	not determined	
Viscosity, dynamic	ca. 1.6 mPa.s	(20 °C)

9.2. Other information

Explosiveness	no data available	
Surface tension	30.4 mN/m	(20 °C)
	Method: OECD 115	
	% VOC (gm/l)	0
Other information	Vapors can form explosive mixtures with air.	

10. Stability and reactivity

10.1. Reactivity
No dangerous reaction known under conditions of normal use.

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions: No dangerous reactions known.

10.4. Conditions to avoid

10.5. Incompatible materials
None known

10.6. Hazardous decomposition products
None known

Stable under normal conditions.
Product will not undergo hazardous polymerization.

11. Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity	LD50 Rat:	> 2000 mg/kg
	Method:	OECD 423
	Assessment:	The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	LC50 Rat:	> 5.5 mg/l / 4 h / dust/mist

	Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	No data available
Skin irritation	Rabbit No skin irritation Method: OECD Test Guideline 404
Eye irritation	Rabbit No eye irritation Method: OECD Test Guideline 405
Sensitization	(Magnusson-Kligman test) Guinea pig: Does not cause skin sensitisation. Method: OECD Test Guideline 406
Repeated dose toxicity	inhalative Rat Testing period: 90 d No toxicological effects relevant to classification
Assessment of STOT single exposure	Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.
Assessment of STOT repeat exposure	Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Risk of aspiration toxicity	No evidence of aspiration toxicity
Gentoxicity in vitro	Ames test Salmonella typhimurium no evidence of mutagenic effects Method: OECD TG 471
Carcinogenicity	No evidence that cancer may be caused.
Toxicity to reproduction	No data available

Toxicological information on components
Methanol

Acute oral toxicity	LD50 Rat: 2963 mg/kg (literature value) Acute toxicity estimate : 100 mg/kg Method: Expert judgement
Acute inhalation toxicity	Acute toxicity estimate : 3 mg/l / vapour Method: Expert judgement
Acute dermal toxicity	Acute toxicity estimate : 300 mg/kg Method: Expert judgement
Skin irritation	Rabbit No skin irritation

Eye irritation	Rabbit No eye irritation Method: OECD Test Guideline 405
Sensitization	Maximization test Guinea pig: Does not cause skin sensitisation. Method: OECD Test Guideline 406
Repeated dose toxicity	Oral Monkey LOAEL: 2340 mg/kg
Assessment of STOT single exposure	Assessment: Causes damage to organs.
Assessment of STOT repeat exposure	no evidence for hazardous properties
Risk of aspiration toxicity	No evidence of aspiration toxicity
Gentoxicity in vitro	Ames test Salmonella typhimurium negative Method: OECD Test Guideline 471
Gentoxicity in vivo	chromosomal aberration Mouse intraperitoneal (i.p.) negative Method: OECD Test Guideline 474
teratogenicity assessment	Potential embryo-foetal toxicity and teratogenicity. Potential embryo-foetal toxicity and teratogenicity.
Human experience	Liver and kidney injuries may occur.
Further information	Material contains methanol. Harmful if inhaled or absorbed through skin; causes damage to liver, kidney and nervous system. Causes eye, skin, nose and throat irritation. May be fatal or cause blindness if swallowed. Cannot be made non-poisonous.

Ethanol

Acute oral toxicity	LD50 Rat: 7060 mg/kg RTECS LD50 Rat: 10470 mg/kg Method: OECD Test Guideline 401 literature
Acute inhalation toxicity	LC50 Rabbit: 117 - 125 mg/l / 4 h / vapour Method: OECD Test Guideline 403 literature
Acute dermal toxicity	LD50 Rabbit: > 20000 mg/kg literature
Skin irritation	Rabbit not irritating Method: OECD Test Guideline 404 literature

Eye irritation	Rabbit not irritating Method: OECD Test Guideline 405 literature
Sensitization	Local Lymphnode Assay Mouse: No sensitizing effects. Method: OECD TG 429 literature
Assessment of STOT single exposure	no evidence for hazardous properties
Assessment of STOT repeat exposure	no evidence for hazardous properties
Risk of aspiration toxicity	No evidence of aspiration toxicity
Gentoxicity in vitro	Ames test Salmonella typhimurium negative Method: OECD TG 471 literature gene mutation TK +/- mouse lymphoma cell (L5178Y) negative Method: OECD TG 476 literature
Mutagenicity assessment	This product contains an ingredient that has been shown to produce mutagenic effects in in vivo testing.

12. Ecological information

12.1. Toxicity

Toxicity to fish

LC50 Brachydanio rerio: > 1000 mg/l / 96 h
Method: OECD TG 203

LC0 Brachydanio rerio: >= 1000 mg/l / 96 h
Method: OECD TG 203

12.2. Persistence and degradability

Biodegradability

Exposure time: 28 d
Result: 62 % Readily biodegradable.
Method: (CO2; modif. Sturm test / OECD 301 B)

12.3. Bioaccumulative potential

Bioaccumulation: low

12.4. Mobility in soil

Mobility: Adsorption on the floor: low.

12.5. Other adverse effects

Further Information: The data we have at our disposal do not necessitate identification concerning environmental hazard.

13. Disposal considerations

13.1. Waste treatment methods

Product

Waste must be disposed of in accordance with federal, provincial, state and local regulations. Empty containers must be handled with care due to product residue. DO NOT HEAT OR CUT THE EMPTY CONTAINER WITH AN ELECTRIC OR GAS TORCH.

Uncleaned packaging

Packaging, that can not be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations.
Incorrect disposal or reuse of this container is illegal and can be dangerous.
Other countries: observe the national regulations.

14. Transport information

Not dangerous according to transport regulations.

14.1.	UN number:	--
14.2.	UN proper shipping name:	--
14.3.	Transport hazard class(es):	--
14.4.	Packing group:	--
14.5.	Environmental hazards (Marine pollutant):	--
14.6.	Special precautions for user:	Yes

Not dangerous according to transport regulations.

15. Regulatory information

US Federal Regulations

OSHA

If listed below, chemical specific standards apply to the product or components:

- None listed

Clean Air Act Section (112)

If listed below, components present at or above the de minimus level are hazardous air pollutants:

- Methanol
  CAS-No. 67-56-1

CERCLA Reportable Quantities

If listed below, a reportable quantity (RQ) applies to the product based on the percent of the named component:

- None listed

SARA Title III Section 311/312 Hazard Categories

The product meets the criteria only for the listed hazard classes:

- Chronic Health Hazard

SARA Title III Section 313 Reportable Substances

If listed below, components are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

- None listed

Toxic Substances Control Act (TSCA)

If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA:

- None listed

Other US Federal Regulatory Information

This product contains a component that is subject to a TSCA Significant New Use Rule (SNUR). The limitations on the use of this product are that the product may only be used in anti-graffiti systems and the product may not be used in a way that creates a mist, aerosol, or other respirable form of the product. The product may not be sprayed and should be applied to surfaces via brush or roller. If a product containing the regulated component is distributed further it is required that the distributor ensure that these limitations are communicated to downstream users.

State Regulations

The Listing requirements of the Right to Know (RTK) legislation varies by state. All information for NJ, PA, MA and other states can be derived from the listing of hazardous and non-hazardous components in section 2 and 15 of this MSDS.

California Proposition 65

A warning under the California Drinking Water Act is required only if listed below:

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

- Methanol
  CAS-No. 67-56-1

An employer using HMIS/NFPA labeling must through training ensure that its employees are fully aware of the hazards of the chemicals used.

HMIS Ratings

Health :	1
Flammability :	1
Physical Hazard :	0

NFPA Ratings

Health :	1
Flammability :	1
Reactivity :	0

16. Other information

Further information

Revision date 05/01/2015

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Legend

ACC	American Chemistry Council
ACGIH	American Conference of Governmental Industrial Hygenists
ACS	Advisory Committee on Sustainability
ADI	Acceptable Daily Intake
ASTM	American Society for Testing and Materials
ATP	Adaptation to Technical Progress
BCF	Bioconcentration factor
BOD	Biochemical oxygen demand
c.c.	closed cup
CAO	Cargo Aircraft Only
Carc	Carcinogen
CAS	Chemical Abstract Services
CDN	Canada
CEPA	Canadian Environmental Protection Act
CERCLA	Comprehensive Environmental Response – Compensation and Liability Act
CFR	Code of Federal Regulations
CMR	carcinogenic-mutagenic-toxic for reproduction
COD	Chemical oxygen demand
DIN	German Institute for Standardization
DMEL	Derived minimum effect level
DNEL	Derived no effect level
DOT	Department of Transportation
EC50	half maximal effective concentration
EPA	Environmental Protection Agency
ErC50	Reduction of Growth Rate
ERG	Emergency Response Guide Book
FDA	Food and Drug Administration
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
GLP	Good Laboratory Practice
GMO	Genetic Modified Organism
HCS	Hazard Communication Standard
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
ICAO-TI	International Civil Aviation Organization- Technical Instructions
ICCA	International Council of Chemical Association
ID	Identification number
IMDG	International Maritime Dangerous Goods
IUPAC	International Union of Pure and Applied Chemistry
ISO	International Organization For Standardization
LC50	50 % Lethal Concentration
LD50	50 % Lethal Dose
L(E)C50	LC50 or EC50
LOAEL	Lowest observed adverse effect level
LOEL	Lowest observed effect level
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
NOAEL	No observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
o. c.	open cup
OECD	Organisation for Economic Cooperation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PBT	Persistent, bioaccumulative, toxic
PEC	Predicted effect concentration
PNEC	Predicted no effect concentration
RQ	Reportable Quantity
SDS	Safety Data Sheet
STOT	Specific Target Organ Toxicity
UN	United Nations
vPvB	very persistent, very bioaccumulative

voc	volatile organic compounds
WHMIS	Workplace Hazardous Materials Information System
WHO	World Health Organization