Protectosil® ANTIGRAFFITI



Material no. Specification

Version 6.2 / US Revision date

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1. Identification

1.1. **Product identifier**

Trade name Protectosil® ANTIGRAFFITI Chemical Name PROTECTOS IL® 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

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

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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 Acute to xicity (Oral) Acute to xicity (Inhalation) Acute to xicity (Dermal) Specific target organ toxicity - single exposure	Category 2 Category 3 Category 3 Category 3 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

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

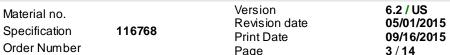
After absorbing large amounts of substance:

administration of activated charcoal.

Acceleration of gastrointestinal passage

5. Fire-fighting measures

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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.

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.

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

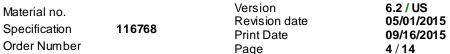
Keep containers tightly closed in a cool, well-ventilated place.

Further information

Keep tightly sealed in original packing.

Protect from frost.

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8. Exposure controls/personal protection

8.1. Control parameters

Control paramet		
 Methanol 		
CAS-No. Control parameters	67-56-1	Time Weighted Average (TWA): (ACCIH)
•	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:(OSHAZ1)
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. Control parameters	64-17-5 1000 ppm 1900 mg/m3	Permissible exposure limit:(OSHA Z1)
Control parameters	1000 ppm 1900 mg <i>l</i> 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 <i>l</i> 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

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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 (1013 hPa)

Method: 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 (20 °C)

Water

Relative vapour density no data available

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Density ca. 1.06 g/cm3 (20 °C)

Method: DIN 51757

Water solubility miscible

Partition coefficient: n-

not determined

octanol/water

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 No dangerous reactions known.

reactions

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

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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

ssessment 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

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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

Causes damage to organs.

Repeated dose toxicity Oral Monkey

LOAEL: 2340 mg/kg

Assessment of STOT single

exposure

Assessment of STOT repeat

exposure

no evidence for hazardous properties

Risk of aspiration toxicity

No evidence of aspiration toxicity

Assessment:

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

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Eve 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

fSTOT repeat no evidence for hazardous properties

exposure

Assessment of STOT repeat

Risk of aspiration toxicity

No evidence of aspiration toxicity

no evidence for hazardous properties

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 Iow

12.4. Mobility in soil

Mobility Adsorption on the floor: low.

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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

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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

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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
DM EL 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 **LC50** or **EC50**

LOA EL Low est observed adverse effect level

LOEL Low est 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

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voc

volatile organic compounds Workplace Hazardous Materials Information System WHMIS

WHO World Health Organization