

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: QUANTUM ADHESION PROMOTING SURFACE TREATMENT AEROSOL Product Code: 45-X-117-1KA

MANUFACTURER:
Engineered Marine Coatings, Inc.

EMERGENCY PHONE: 1-800-255-3924 (CHEMTEL)

MANUFACTURING ADDRESS:
4120 Hyde Park Blvd.
Niagara Falls, NY 14305

INFORMATION PHONE: 1-855-54GENIUS

CORPORATE ADDRESS:
PO Box 921
Isle of Palms, SC 29451

Product Use: FOR PROFESSIONAL USE ONLY

Not recommended for:

2. HAZARD(S) IDENTIFICATION

GHS Ratings:

Flammable aerosol	1	Flammable aerosol class 1
Skin corrosive	2	Reversible adverse effects in dermal tissue, Draize score: \geq 2.3 < 4.0 or persistent inflammation
Eye corrosive	2	Eye Irritation: Reversible adverse effects on cornea, iris, conjunctiva, Draize score: Corneal opacity \geq 1, Iritis > 1, Redness \geq 2, Chemosis \geq 2
Skin sensitizer	1	Skin sensitizer
Carcinogen	1B	Presumed Human Carcinogen, Based on demonstrated animal carcinogenicity
Reproductive toxin	2	Human or animal evidence possibly with other information
Aspiration hazard	1	Aspiration Toxicity Category 1: Known (regarded)- human evidence - hydrocarbons with kinematic viscosity \leq 20.5 mm ² /s at 40° C.

GHS Hazards

H222	Extremely flammable material
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H350	May cause cancer
H361	Suspected of damaging fertility or the unborn child

GHS Precautions

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking
P211	Do not spray on an open flame or other ignition source
P251	Pressurized container - Do not pierce or burn, even after use
P261	Avoid breathing dust/fume/gas/mist/vapours/spray
P264	Wash ... thoroughly after handling
P272	Contaminated work clothing should not be allowed out of the workplace
P280	Wear protective gloves/protective clothing/eye protection/face protection

P281	Use personal protective equipment as required
P321	Specific treatment (see ... on this label)
P331	Do NOT induce vomiting
P362	Take off contaminated clothing and wash before reuse
P363	Wash contaminated clothing before reuse
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P302+P352	IF ON SKIN: Wash with soap and water
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P308+P313	IF exposed or concerned: Get medical advice/attention
P332+P313	If skin irritation occurs: Get medical advice/attention
P333+P313	If skin irritation or a rash occurs: Get medical advice/attention
P337+P313	Get medical advice/attention
P405	Store locked up
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
P501	Dispose of contents/container to ...

Signal Word: Danger



3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS number	Weight Concentration %
Dimethyl Ether	115-10-6	40.00% - 50.00%
Toluene	108-88-3	20.00% - 30.00%
Acetone	67-64-1	10.00% - 20.00%
Isopropanol	67-63-0	1.00% - 5.00%
Amine	Proprietary	1.00% - 5.00%
Propylene Glycol Monomethyl Ether Acetate	108-65-6	1.00% - 5.00%
Epoxy Resin	25068-38-6	1.00% - 5.00%

4. FIRST AID MEASURES

INHALATION:

Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type systems may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. Consult a physician.

EYES:

Flush with clean, lukewarm water (low pressure) for at least 15 minutes, while lifting eyelids. Refer individual to physician or ophthalmologist for immediate follow-up.

SKIN:

First aid for skin: Remove contaminated clothing immediately. Wash affected areas thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse. For severe exposures, get under safety shower after removing clothing, then get medical attention. Seek medical attention if irritation develops or persists.

INGESTION:

DO NOT INDUCE VOMITING. Give 1 to 2 cups of mil or water to drink. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON. Consult physician immediately.

5. FIRE FIGHTING MEASURES

Flash Point: N/A

LEL: 1.00

UEL: 27.00

EXTINGUISHING MEDIA:

Use water spray to cool fire exposed surfaces and to protect personnel. Isolate "fuel" supply from fire. Use foam, dry chemical, carbon dioxide, or water spray as last option. Avoid spraying water directly into storage containers due to the danger of boilover.

HAZARDOUS COMBUSTION PRODUCTS:

Fires involving this product may release fumes, smoke, carbon dioxide, carbon monoxide, and irritating vapors.

FIRE FIGHTING INSTRUCTIONS:

Wear self-contained breathing apparatus and protective clothing. Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting fire. Vapors may cause a flash fire or ignite explosively. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL:

Eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

LARGE SPILL:

Evacuate all non-essential personnel. Remove all sources of ignition. Ventilate the area. Equip employees with appropriate protection equipment. Dike around spilled material. Cover spill with inert absorbent material and shovel with non-sparking tools into container. Remove containers to a safe area and seal. Waste material must be disposed of in accordance with federal, state, and local environmental regulatory controls.

7. HANDLING AND STORAGE

HANDLING:

Ground lines and equipment during transfer to reduce the possibility of static spark-initiated fire or explosion. Use non-sparking tools. Do not cut, grind, drill, weld, or reuse containers unless adequate precautions are taken against these hazards. Do not eat, drink, or smoke in areas of use or storage.

STORAGE:

Protect against physical damage. Store in a cool dry place. Outside or detached storage preferred. Inside storage should be in a standard flammable liquid storage room or cabinet. All equipment should be grounded and bonded to reduce static electricity hazard. Use non-sparking tools. Do not reuse empty product container for any purpose.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Dimethyl Ether 115-10-6	OSHA PEL Not Available	ACGIH TLV Not Available	TWA 1,000 ppm USA. Workplace Environmental Exposure Levels (WEEL)
Toluene 108-88-3	PEL 200.00 ppm - TWA PEL 300.00 ppm - Ceiling VPEL 100.00 ppm - TWA VPEL 150.00 ppm STEL	TLV 50.00 ppm - TWA (Skin) STEL 150 ppm - STEL (Skin)	Not Established
Acetone 67-64-1	TWA 1,000 ppm 2,400 mg/m ³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants	TWA - 750 ppm STEL - 1000 ppm	NIOSH has a TWA of 250 ppm (590 mg/m ³). The NIOSH IDLH level is 2,500 ppm.

Isopropanol 67-63-0	The OSHA PEL, HSE TWA, DFG MAK, and the ACGIH TWA value is 400 ppm (980 mg/m3).	The OSHA PEL, HSE TWA, DFG MAK, and the ACGIH TWA value is 400 ppm (980 mg/m3). The STEL set by ACGIH, HSE is 500 ppm (1,225 mg/m3).	The NIOSH IDLH level is 2,000 ppm.
Amine Proprietary	OSHA PEL Not Available	ACGIH TLV Not Available	Not Established
Propylene Glycol Monomethyl Ether Acetate 108-65-6	OSHA PEL Not Available	ACGIH TLV Not Available	TWA 50 ppm USA. Workplace Environmental Exposure Levels (WEEL)
Epoxy Resin 25068-38-6	TWA 5 ppm (19 mg/m3) USA. Occupational Exposure Limits(OSHA) - Table Z-1 Limits for Air Contaminants	TWA 0.5 ppm USA. ACGIH Threshold Limit Values (TLV)	Not Established

Ventilation:

Good general ventilation (typically 10 air changes per hour) should be used to keep vapor levels below the limits in Section 2 and lower explosive limit in Section 5. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Respiratory Protections:

Respirator Requirements - A respirator that is recommended or approved for use in isocyanate containing environments (air purifying or fresh air supplied) may be necessary for spray applications or other situations such as high temperature use. This may cause inhalation exposures. A supplied air respirator (either positive pressure or continuous flow type) is recommended before an air-purifying respirator can be used. Air monitoring must be performed to measure airborne concentrations of HDI monomer, HDI polyisocyanate and organic solvents. See the outline below for the specific conditions under which air-purifying respirators can be used. Observe OSHA regulations for respirator use (29 CFR 1910.134)

Spray Application:

A. Good industrial hygiene practice dictates that when isocyanate based coatings are spray applied, some form of respiratory protection should be worn. During the spray application of organic solvent containing coatings systems, the use of a supplied-air (either positive pressure or continuous flow type) respirator is mandatory when one or more the following conditions exists:

The airborne isocyanate concentrations are not known; or

-the airborne isocyanate monomer concentrations exceed 0.05 ppm (10 times TLV); or

-The airborne polyisocyanate (polymer, oligomeric) concentrations exceed 5 mg/m3 averaged over 8 hours or mg/m3 averaged over 15 minutes (10 times the mg/l);or

-No airborne solvent concentration exceeds its odor threshold;or

-Spraying is performed in a confined space (See OSHA Confined Space Standard 29 CFR 1910.146).

A properly fitted air-purifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate-containing spray painting environments, and used in accordance with all recommendations made by the manufacturer, can be used when all of the following conditions are met:

-The airborne isocyanate monomer concentrations are known to be below 0.05 ppm (10 times the TLV); and

-The airborne polyisocyanate (polymer, oligomeric) concentrations exceed 5 mg/m3 averaged over 8 hours or mg/m3 average over 15 minutes (10 times the mg/l);and

-At least one solvent has a published odor threshold; and

-At least one airborne solvent concentration exceeds its odor threshold and that solvent's odor is lower than its TLV.

B. During the spray application of a coating system not containing organosolvents a supplied-air (either positive pressure or continuous flow type) respirator is mandatory when one or more of the following conditions exist:

-The airborne isocyanate concentrations are not known; or

-The airborne polyisocyanate (polymer, oligomeric) concentrations exceed 5 mg/m3 averaged over 8 hours or mg/m3 average over 15 minutes (10 times the mg/l);and

-Spraying is performed in a confined space (See OSHA Confined Space Standard 29 CFR 1910.146).

Under any other circumstances, during spray application of a coating system not containing organic solvents, good industrial hygiene practice dictates that when isocyanate based coatings are spray applied at least an air purifying respirator should be worn.

Non-Spray Operations:

A. During non-spray operations such as mixing, batch making, brush or roller applications, etc. at elevated temperatures (for example, heating of a material or application to a hot substrate), it is possible to be exposed to airborne isocyanate vapors. Therefore, when the coatings system contains solvents and will be applied in a non-spray manner, a supplied-air (either positive pressure or continuous flow type) respirator is mandatory using the guidelines in the previous section for spray applications.

Contaminated Gear:

Promptly remove clothing that becomes contaminated. Provide readily accessible eye wash stations and safety showers. Wash at the end of each work shift and before eating, smoking or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

This mixture typically exhibits the following properties under normal circumstances:

<p>Appearance: Liquid</p> <p>Vapor Pressure: 164.5 mmHg @ 25C</p> <p>Vapor Density: 2.7</p> <p>Specific Gravity: 0.787324735</p> <p>Freezing point: No Data</p> <p>Boiling range: No Data</p> <p>Evaporation rate: No Data</p> <p>Explosive Limits: 1% - 27%</p> <p>Autoignition temperature: No Data</p> <p>Coating VOC (lbs/gal) 6.17</p>	<p>Odor: Solvent</p> <p>Odor threshold: No Data</p> <p>pH: No Data</p> <p>Melting point: No Data</p> <p>Solubility: No Data</p> <p>Flash point: 999 F,999 C</p> <p>Flammability: Flammable Liquid, Class 2</p> <p>Partition coefficient (n-octanol/water): No Data</p> <p>Decomposition temperature: No Data</p>
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10. REACTIVITY AND STABILITY

STABLE

Incompatibility:

Strong oxidizing agents
 May form explosive peroxides
 Acids, bases.

Hazardous Decomposition:

May form: carbon dioxide and carbon monoxide
 Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Mixture Toxicity

Inhalation Toxicity LC50: 95mg/L

Component Toxicity

108-65-6 Propylene Glycol Monomethyl Ether Acetate
 Dermal LD50: 5,000 mg/kg (RABBIT)

N/A

ROUTES OF ENTRY:

Inhalation Skin Contact Eye Contact Ingestion

Exposure to this material may affect the following organs:

Blood Eyes Kidneys Liver Lungs Central Nervous System Reproductive System
Skin

Effects of Overexposure

Short Term Exposure	Contact can irritate the skin. Exposure can irritate the eyes and respiratory tract. Exposure to high concentrations can cause dizziness, lightheadedness, and unconsciousness.
Short Term Exposure	Isopropyl alcohol irritates the eyes, skin, and respiratory tract. Inhalation: Irritation of the nose and throat may occur at 400 ppm and above. Skin: 5% solution may cause irritation and dryness. Eyes: Vapor levels of 20 ppm or above may result in irritation. Liquid may cause corneal burns and eye damage. Ingestion: 22.5 ml (2/3 oz) has caused salivation, reddening of face, stomach pain, depression, dizziness, headache, vomiting and unconsciousness. Ingestion of 100 ml (3 oz) has caused death.

Long Term Exposure

Repeated skin exposure can cause dryness and skin cracking. This chemical has not been adequately evaluated to determine whether brain or nerve damage could occur with repeated exposure. However, many solvents and other petroleum-based chemicals have been shown to cause such damage. Effects may include reduced memory and concentration, personality changes (withdrawal, irritability), and fatigue, sleep disturbances, reduced coordination, and/or effects on the nerves to the arms and legs (weakness, "pins and needles").

Long Term Exposure

Repeated or prolonged contact may cause dry, cracking skin. There is an increased incidence of nasal sinus cancer in workers involved in the manufacture of IPA by the strong acid process. Although this chemical has not been adequately evaluated, many solvents and similar petroleum-based chemicals have been shown to cause brain or other nerve damage.

CAS Number

Description

% Weight

Carcinogen Rating

None

N/A

12. ECOLOGICAL INFORMATION

This section will be updated as ecological reviews are complete.

Component Ecotoxicity

Dimethyl Ether

Toxicity

Toxicity to fish semi-static test LC50 - Poecilia reticulata (guppy) - > 4.1 g/l - 96 h

Toxicity to daphnia and

other aquatic

invertebrates

static test EC50 - Daphnia magna (Water flea) - > 4.4 g/l - 48 h

Toxicity to bacteria Respiration inhibition EC10 - Pseudomonas putida - ca. > 1,600 mg/l - 30 min

Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 5 % - Not readily biodegradable.

(OECD Test Guideline 301D)

Bioaccumulative potential

no data available

Mobility in soil

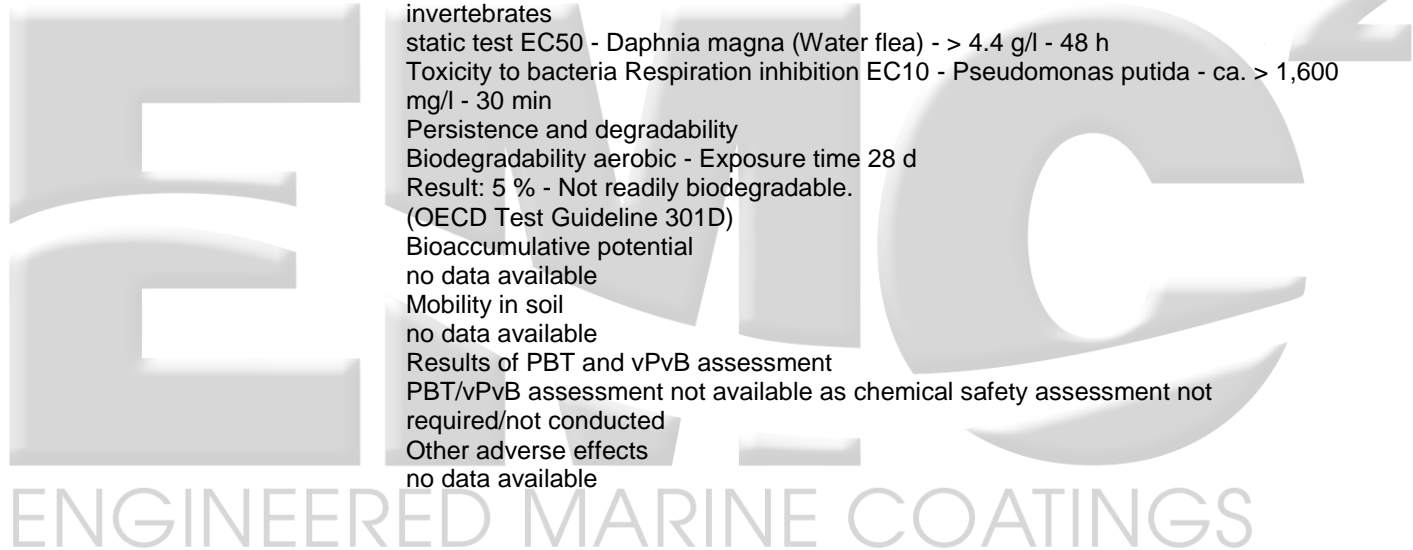
no data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

no data available



Epoxy Resin

Toxicity
no data available
Persistence and degradability
Biodegradability Result: - According to the results of tests of biodegradability this product is not readily biodegradable.
Remarks: no data available
Bioaccumulative potential
no data available
Mobility in soil
no data available
Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.
no data available

13. DISPOSAL CONSIDERATIONS

Waste material must be disposed of in accordance with all federal, state, and local environmental regulatory controls. Chemical additions, processing, or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate, or otherwise inappropriate.

14. TRANSPORT

<u>Agency</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT	AEROSOLS (ACETONE)	1950	-	2.1

15. REGULATORY INFORMATION

The regulatory information provided is not meant to be comprehensive. Other federal, state, and local regulation applies to this material.

<u>Country</u>	<u>Regulation</u>	<u>All Components Listed</u>
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EU Risk Phrases

Safety Phrase

- None

16. OTHER INFORMATION

Hazardous Material Information System (HMIS)

HEALTH	2
FLAMMABILITY	4
PHYSICAL HAZARD	0
PERSONAL PROTECTION	G

HMS & NFPA Hazard Rating Legend

* = Chronic Health Hazard

0 = INSIGNIFICANT

1 = SLIGHT

2 = MODERATE

3 = HIGH

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Reviewer Revision

Date Prepared: 3/12/2017

