



**DURATEC COATING VOC**

**1799-006**

**GREY VINYLESTER PRIMER**

**The Composites Fabricators Association in association with the EPA conducted a study of styrene emissions from open mold composite manufacturing. Styrene monomer is a volatile liquid that will react to form a non-volatile copolymer with unsaturated polyester resins. The value to determine is thus the amount of material lost prior to the completion of the reaction. The data gathered in this study is the actual measurement of emissions based on the percent styrene in the coating and the application method chosen. It was shown that the non-atomizing applications (such as brushing or roll coating) emit much less than the atomizing application (spraying). Using the data from this study, a Unified Emissions Factor (UEF) table was prepared.**

**Dura Technologies, Inc. considers this to be the best available science for calculating the emissions of coatings containing styrene monomer. We will therefore report three distinct VOC numbers. The VOC reported in section III of the MSDS is based on 100% evaporation of the styrene. This attachment will report the VOC calculated using the UEF factors for atomized application and non-atomized application.**

***ATOMIZED APPLICATION***

**COATING VOC: 1.35 LB/GAL ( 281.6 GR/LITER)**

**MATERIAL VOC: 1.35 LB/GAL ( 281.6 GR/LITER)**

***NON-ATOMIZED APPLICATION***

**COATING VOC: 1.77 LB/GAL ( 212.1 GR/LITER)**

**MATERIAL VOC: 1.77 LB/GAL ( 212.1 GR/LITER)**

**For some applications, this product may not be compliant if applied using atomizing techniques. Please consult the AQMD rule that applies to you operation and determine which application method will comply.**

# GREY VINYLESTER PRIMER

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Trade name : GREY VINYLESTER PRIMER  
CAS No : mixture  
Product code : 1799-006  
Formula : na

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : COATING

#### 1.3. Details of the supplier of the safety data sheet

Dura Technologies, Inc.  
2720 South Willow Avenue #A  
Bloomington, CA 92316

909.877.8477  
ChemTrec US: 800.424.9300  
ChemTrec Int: +1 70 3527 3887

#### 1.4. Emergency telephone number

Emergency number : ChemTrec US: 800.424.9300 Int: +1 70 3527 3887  
CHEMTREC: 1-800-424-9300

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Flam. Liq. 3 H226  
Skin Irrit. 2 H315  
Eye Irrit. 2A H319  
Carc. Not classified  
Repr. 2 H361  
STOT SE 3 H335  
STOT RE 1 H372

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS02

GHS07

GHS08

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H226 - Flammable liquid and vapor  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation  
H361 - Suspected of damaging fertility or the unborn child  
H372 - Causes damage to organs (hearing organ) through prolonged or repeated exposure

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from heat; hot surfaces; open flames. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical; lighting; ventilating equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P260 - Do not breathe dust, fume, mist, vapors  
P261 - Avoid breathing dust, fume, mist, vapors  
P264 - Wash exposed area. thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear eye protection; protective clothing

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P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously 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  
P312 - Call a POISON CENTER or doctor/physician if you feel unwell  
P314 - Get medical advice and attention if you feel unwell  
P321 - Specific treatment (see seek medical attention. on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash it before reuse  
P370+P378 - In case of fire: Use carbon dioxide (CO<sub>2</sub>), dry chemical powder, foam to extinguish  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container to in accordance with local, state, and national regulations.

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substance

Not applicable

Full text of H-phrases: see section 16

### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
talc	(CAS No) 14807-96-6	<= 31.5	Not classified
Unsaturated VINYL ESTER Resin	(CAS No) TRADE SECRET	<= 30	Not classified
styrene, inhibited	(CAS No) 100-42-5	<= 25	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Repr. 2, H361 STOT SE 3, H335 STOT RE 1, H372
methyl ethyl ketone	(CAS No) 78-93-3	<= 5	Flam. Liq. 2, H225 STOT SE 3, H336
titanium(IV) oxide	(CAS No) 13463-67-7	<= 4	Carc. 2, H351
Solvent Naptha Petroleum Aliphatic	(CAS No) Proprietary	<= 2	Not classified
n-butyl acetate	(CAS No) 123-86-4	<= 1	Flam. Liq. 3, H226 STOT SE 3, H336
cobalt(II) 2-ethylhexanoate	(CAS No) 136-52-7	<= 0.5	Carc. 2, H351
2-propanol	(CAS No) 67-63-0	<= 0.5	Flam. Liq. 2, H225 STOT SE 3, H336
isobutyl acetate	(CAS No) 110-19-0	<= 0.5	Flam. Liq. 2, H225

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: wash thoroughly for five minutes. seek medical attention. Get medical advice/attention. Specific treatment (see seek medical attention. on this label).

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- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: SEEK IMMEDIATE MEDICAL ATTENTION. Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/injuries : May cause genetic defects (avoid skin contact and inhalation.). May cause cancer (avoid skin contact and inhalation.). Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.
- Symptoms/injuries after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. May cause respiratory irritation.
- Symptoms/injuries after skin contact : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapor. Flammable liquid and vapor.
- Explosion hazard : May form flammable/explosive vapor-air mixture.
- Reactivity : No reactivity hazard other than the effects described in sub-sections below.

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Protective goggles. Protective clothing.
- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

- For containment : Dam up the liquid spill. Contain released substance, pump into suitable containers.
- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

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Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Avoid breathing DUST, FUMES, MIST, OR VAPORS. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray.

Hygiene measures : Wash HANDS thoroughly after handling. Do not eat, drink or smoke when using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : HEAT SPARKS OR OPEN FLAMES. Keep in fireproof place. Keep container tightly closed.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

styrene, inhibited (100-42-5)		
USA ACGIH	ACGIH TWA (ppm)	20 ppm
USA ACGIH	ACGIH STEL (ppm)	20 ppm

methyl ethyl ketone (78-93-3)		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	200 ppm

titanium(IV) oxide (13463-67-7)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>

n-butyl acetate (123-86-4)		
USA ACGIH	ACGIH TWA (ppm)	150 ppm
USA ACGIH	ACGIH STEL (ppm)	200 ppm

isobutyl acetate (110-19-0)		
USA ACGIH	ACGIH TWA (ppm)	150 ppm
USA ACGIH	ACGIH STEL (ppm)	150 ppm

2-propanol (67-63-0)		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	200 ppm

talc (14807-96-6)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>

### 8.2. Exposure controls

Appropriate engineering controls : Ensure exposure is below occupational exposure limits (where available).

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Gray.
Odor	: characteristic.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: >= 79.4 °C
Flash point	: >= -11.1 (30 - 34) °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: <
Relative density	: <=
Specific gravity / density	: 1.4
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

#### 10.2. Chemical stability

Polymerization can result in formation of solid deposits, even in vapour space. Not established. Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture. Flammable liquid and vapor.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

#### 10.5. Incompatible materials

Strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### GREY VINYLESTER PRIMER ( V f )mixture

ATE CLP (vapors)	11.000 mg/l/4h
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<b>styrene, inhibited (100-42-5)</b>	
LD50 oral rat	5000 mg/kg (Rat; Literature study; >6000 mg/kg bodyweight; Rat; Weight of evidence)
LD50 dermal rat	2820 mg/kg (Rat; Literature study; OECD 402: Acute Dermal Toxicity; >2000 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	5010 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	12 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	2770 ppm/4h (Rat; Literature study)
ATE CLP (oral)	5000.000 mg/kg body weight
ATE CLP (dermal)	2820.000 mg/kg body weight
ATE CLP (gases)	2770.000 ppmV/4h
ATE CLP (vapors)	12.000 mg/l/4h
ATE CLP (dust, mist)	12.000 mg/l/4h

<b>cobalt(II) 2-ethylhexanoate (136-52-7)</b>	
LD50 oral rat	3129 mg/kg body weight (Rat; OECD 425: Acute Oral Toxicity: Up-and-Down Procedure; Experimental value)
LD50 dermal rat	> 2000 mg/kg body weight (Rat; Weight of evidence; OECD 402: Acute Dermal Toxicity)
ATE CLP (oral)	3129.000 mg/kg body weight

<b>methyl ethyl ketone (78-93-3)</b>	
LD50 oral rat	2737 mg/kg (Rat; Equivalent or similar to OECD 423; Read-across; 2054 mg/kg; Rat; Equivalent or similar to OECD 423; Read-across; 2328 mg/kg; Rat)
LD50 dermal rabbit	6480 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; >10; Rabbit)
LC50 inhalation rat (mg/l)	34 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	11300 ppm/4h (Rat; Literature study)
ATE CLP (oral)	2737.000 mg/kg body weight
ATE CLP (dermal)	6480.000 mg/kg body weight
ATE CLP (gases)	11300.000 ppmV/4h
ATE CLP (vapors)	34.000 mg/l/4h
ATE CLP (dust, mist)	34.000 mg/l/4h

<b>titanium(IV) oxide (13463-67-7)</b>	
LD50 oral rat	> 10000 mg/kg (Rat; OECD 425: Acute Oral Toxicity: Up-and-Down Procedure; Experimental value; > 5000 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	> 6.8 mg/l/4h (Rat; Experimental value)

<b>n-butyl acetate (123-86-4)</b>	
LD50 oral rat	10770 mg/kg (Rat)
LD50 dermal rabbit	> 17600 mg/kg (Rabbit)
ATE CLP (oral)	10770.000 mg/kg body weight

<b>isobutyl acetate (110-19-0)</b>	
LD50 oral rat	13400 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
ATE CLP (oral)	13400.000 mg/kg body weight

<b>2-propanol (67-63-0)</b>	
LD50 oral rat	5045 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 5840 mg/kg bodyweight; Rat)
LD50 dermal rabbit	12870 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; 16.4; Rabbit)
LC50 inhalation rat (mg/l)	73 mg/l/4h (Rat)
ATE CLP (oral)	5045.000 mg/kg body weight
ATE CLP (dermal)	12870.000 mg/kg body weight
ATE CLP (vapors)	73.000 mg/l/4h
ATE CLP (dust, mist)	73.000 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified

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Carcinogenicity : Not classified.

<b>styrene, inhibited (100-42-5)</b>	
IARC group	2B - Possibly carcinogenic to humans
<b>cobalt(II) 2-ethylhexanoate (136-52-7)</b>	
IARC group	2B - Possibly carcinogenic to humans
<b>titanium(IV) oxide (13463-67-7)</b>	
IARC group	2B - Possibly carcinogenic to humans
<b>2-propanol (67-63-0)</b>	
IARC group	3 - Not classifiable
<b>talc (14807-96-6)</b>	
IARC group	3 - Not classifiable

Reproductive toxicity : Suspected of damaging fertility or the unborn child.  
Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : Causes damage to organs (hearing organ) through prolonged or repeated exposure.  
Based on available data, the classification criteria are not met  
Causes damage to organs through prolonged or repeated exposure

Aspiration hazard : Not classified  
Based on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms : Harmful if inhaled. Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. May cause respiratory irritation.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>styrene, inhibited (100-42-5)</b>	
LC50 fish 1	25 mg/l (96 h; Lepomis macrochirus; GLP)
LC50 other aquatic organisms 1	10 - 100 mg/l (96 h)
EC50 Daphnia 1	23 mg/l (48 h; Daphnia magna; Locomotor effect)
LC50 fish 2	32 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 2	27 mg/l (24 h; Daphnia magna; GLP)
TLM fish 1	25.1 mg/l (96 h; Lepomis macrochirus; Soft water)
TLM fish 2	46.4 mg/l (96 h; Pimephales promelas; Soft water)
TLM other aquatic organisms 1	10 - 100,96 h
Threshold limit other aquatic organisms 1	10 - 100,96 h; Pseudomonas putida
Threshold limit other aquatic organisms 2	72 mg/l
Threshold limit algae 1	> 200 mg/l (192 h; Scenedesmus quadricauda; Inhibitory)
Threshold limit algae 2	67 mg/l (Microcystis aeruginosa; Inhibitory)
<b>cobalt(II) 2-ethylhexanoate (136-52-7)</b>	
LC50 fish 1	54.1 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	2618 µg/l (48 h)
Threshold limit algae 1	24.1 µg/l (7 days)
Threshold limit algae 2	90.1 µg/l (7 days; Lemna minor; Growth rate)
<b>methyl ethyl ketone (78-93-3)</b>	
LC50 fish 1	1690 mg/l (96 h; Lepomis macrochirus; Lethal)
EC50 Daphnia 1	308 mg/l (48 h; Daphnia magna; Locomotor effect)
LC50 fish 2	2990 mg/l (96 h; Pimephales promelas)
TLM fish 1	5600 mg/l (96 h; Gambusia affinis)



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<b>methyl ethyl ketone (78-93-3)</b>	
TLM fish 2	1690 mg/l (96 h; Lepomis macrochirus)
TLM other aquatic organisms 1	> 1000 ppm (96 h)
Threshold limit algae 1	110 mg/l (168 h; Microcystis aeruginosa)
Threshold limit algae 2	4300 mg/l (192 h; Scenedesmus quadricauda)

<b>titanium(IV) oxide (13463-67-7)</b>	
LC50 fish 1	> 1000 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	< 1000 mg/l (432 h; Daphnia magna; Static system)
LC50 fish 2	> 1 g/l (96 h; Leuciscus idus)
EC50 Daphnia 2	< 500 mg/l (720 h; Daphnia magna; Static system)
Threshold limit algae 1	61 mg/l (72 h; Pseudokirchneriella subcapitata)

<b>n-butyl acetate (123-86-4)</b>	
LC50 fish 1	18 mg/l (96 h; Pimephales promelas)
LC50 other aquatic organisms 1	10 - 100 mg/l (96 h)
EC50 Daphnia 1	10 - 100 mg/l (48 h; Daphnia magna; Static system)
EC50 other aquatic organisms 1	320 mg/l (96 h; Algae)
LC50 fish 2	62 mg/l (96 h; Brachydanio rerio)
EC50 Daphnia 2	24 - 205 mg/l (24 h; Daphnia magna)
TLM fish 1	10 - 100,96 h; Pisces
Threshold limit other aquatic organisms 1	10 - 100,96 h
Threshold limit algae 1	21 mg/l (168 h; Scenedesmus quadricauda; GROWTH RATE)
Threshold limit algae 2	280 mg/l (192 h; Microcystis aeruginosa; GROWTH RATE)

<b>isobutyl acetate (110-19-0)</b>	
LC50 fish 1	100 mg/l (96 h; Lepomis macrochirus)
LC50 other aquatic organisms 1	10 - 100 mg/l (96 h)
EC50 Daphnia 1	44 mg/l (48 h; Daphnia magna; Nocivity test)
LC50 fish 2	101 mg/l (48 h; Leuciscus idus)
EC50 Daphnia 2	146 - 192 mg/l (Daphnia magna)
TLM fish 1	> 1000 ppm (96 h; Pisces)
Threshold limit other aquatic organisms 1	10 - 100,96 h; Protozoa
Threshold limit other aquatic organisms 2	411 mg/l (72 h)
Threshold limit algae 1	205 mg/l (192 h; Microcystis aeruginosa)
Threshold limit algae 2	80 mg/l (192 h; Scenedesmus quadricauda)

<b>2-propanol (67-63-0)</b>	
LC50 fish 1	4200 mg/l (96 h; Rasbora heteromorpha; Flow-through system)
EC50 Daphnia 1	> 10000 mg/l (48 h; Daphnia magna)
LC50 fish 2	9640 mg/l (96 h; Pimephales promelas; Lethal)
EC50 Daphnia 2	13299 mg/l (48 h; Daphnia magna)
Threshold limit algae 1	> 1000 mg/l (72 h; Scenedesmus subspicatus; Growth rate)
Threshold limit algae 2	1800 mg/l (72 h; Algae; Cell numbers)

<b>talc (14807-96-6)</b>	
LC50 fish 1	> 100 g/l (24 h; Brachydanio rerio; Intermittent flow)

### 12.2. Persistence and degradability

<b>GREY VINYLESTER PRIMER (mixture)</b>	
Persistence and degradability	Not established.

<b>styrene, inhibited (100-42-5)</b>	
Persistence and degradability	Readily biodegradable in water. Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil. Photodegradation in the air. Not established.
Chemical oxygen demand (COD)	2.80 g O <sub>2</sub> /g substance
ThOD	3.07 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.42 % ThOD

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<b>cobalt(II) 2-ethylhexanoate (136-52-7)</b>	
Persistence and degradability	Biodegradability in water: no data available.

<b>Unsaturated VINYL ESTER Resin (TRADE SECRET)</b>	
Persistence and degradability	Not established.

<b>methyl ethyl ketone (78-93-3)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Not established.
Biochemical oxygen demand (BOD)	1.92 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.31 g O <sub>2</sub> /g substance
ThOD	2.44 g O <sub>2</sub> /g substance
BOD (% of ThOD)	> % ThOD (5 day(s)) > 0.5

<b>titanium(IV) oxide (13463-67-7)</b>	
Persistence and degradability	Biodegradability: not applicable. Low potential for mobility in soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

<b>n-butyl acetate (123-86-4)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Not established.
Biochemical oxygen demand (BOD)	0.15 - 0.5 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.32 g O <sub>2</sub> /g substance
ThOD	2.21 g O <sub>2</sub> /g substance
BOD (% of ThOD)	46 % ThOD

<b>isobutyl acetate (110-19-0)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Photolysis in the air. Not established.
ThOD	2.2 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.60 % ThOD

<b>2-propanol (67-63-0)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test)data on mobility of the substance available. Not established.
Biochemical oxygen demand (BOD)	1.19 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.23 g O <sub>2</sub> /g substance
ThOD	2.40 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.49 % ThOD

<b>talc (14807-96-6)</b>	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

<b>Solvent Naptha Petroleum Aliphatic (Proprietary)</b>	
Persistence and degradability	May cause long-term adverse effects in the environment.

### 12.3. Bioaccumulative potential

<b>GREY VINYLESTER PRIMER (mixture)</b>	
Bioaccumulative potential	Not established.

<b>styrene, inhibited (100-42-5)</b>	
BCF fish 1	35.5 (Carassius auratus)
BCF other aquatic organisms 1	74
Log Pow	2.96 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Not established.

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<b>cobalt(II) 2-ethylhexanoate (136-52-7)</b>	
Bioaccumulative potential	No bioaccumulation data available.
<b>Unsaturated VINYL ESTER Resin (TRADE SECRET)</b>	
Bioaccumulative potential	Not established.
<b>methyl ethyl ketone (78-93-3)</b>	
Log Pow	0.3 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 40 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4). Not established.
<b>titanium(IV) oxide (13463-67-7)</b>	
Bioaccumulative potential	Not bioaccumulative.
<b>n-butyl acetate (123-86-4)</b>	
BCF fish 1	14 (Pisces)
Log Pow	1.79 - 2.06
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Not established.
<b>isobutyl acetate (110-19-0)</b>	
BCF fish 1	4 - 9.7 (Pisces; Estimated value)
Log Pow	1.59 - 1.78
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Not established.
<b>2-propanol (67-63-0)</b>	
Log Pow	0.05 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4). Not established.
<b>Solvent Naptha Petroleum Aliphatic (Proprietary)</b>	
Bioaccumulative potential	Not established.

### 12.4. Mobility in soil

<b>styrene, inhibited (100-42-5)</b>	
Surface tension	0.032 N/m (19 °C)
<b>cobalt(II) 2-ethylhexanoate (136-52-7)</b>	
Surface tension	0.064 N/m (20 °C; 1 g/l)
<b>methyl ethyl ketone (78-93-3)</b>	
Surface tension	0.024 N/m (20 °C)
Ecology - soil	Slightly harmful to plants.
<b>n-butyl acetate (123-86-4)</b>	
Surface tension	0.0145 N/m (25 °C)
<b>isobutyl acetate (110-19-0)</b>	
Surface tension	0.024 N/m (20 °C)
<b>2-propanol (67-63-0)</b>	
Surface tension	0.021 N/m (25 °C)

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to approved disposal site.

Additional information : Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials : Avoid release to the environment.

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### SECTION 14: Transport information

In accordance with DOT

UN-No.(DOT) : UN1263  
Proper Shipping Name (DOT) : paint  
Transport hazard class(es) (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120  
Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : II - Medium Danger

#### Additional information

Other information : No supplementary information available.

#### ADR

Transport document description : UN 1263, 3, II, (D/E)  
Packing group (ADR) : II  
Class (ADR) : 3 - Flammable liquid  
Hazard identification number (Kemler No.) : 33  
Classification code (ADR) : F1  
Hazard labels (ADR) : 3 - Flammable liquids



Orange plates :



Tunnel restriction code : D/E  
LQ : 5l  
Excepted quantities (ADR) : E2

#### Transport by sea

UN-No. (IMDG) : 1263  
Proper Shipping Name (IMDG) : paint  
Class (IMDG) : 3 - Flammable liquids  
Packing group (IMDG) : II - substances presenting medium danger

#### Air transport

UN-No. (IATA) : 1263  
Proper Shipping Name (IATA) : paint  
Class (IATA) : 3 - Flammable Liquids  
Packing group (IATA) : II - Medium Danger

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

styrene, inhibited (100-42-5)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Reactive hazard Fire hazard Delayed (chronic) health hazard

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<b>methyl ethyl ketone (78-93-3)</b>	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
<b>n-butyl acetate (123-86-4)</b>	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Fire hazard

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225  
Acute Tox. 4 (Inhalation:vapour) H332  
Skin Irrit. 2 H315  
Eye Irrit. 2 H319  
Muta. 1B H340  
Carc. 2 H351  
Repr. 2 H361  
STOT RE 2 H373

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc.Cat.2; R45  
Muta.Cat.2; R46  
F; R11  
Xn; R20  
Xi; R36/38

Full text of R-phrases: see section 16

#### 15.2.2. National regulations

<b>styrene, inhibited (100-42-5)</b>
Listed on EPA's Hazardous Air Pollutants (HAPS)

### 15.3. US State regulations

<b>styrene, inhibited (100-42-5)</b>				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)

<b>styrene, inhibited (100-42-5)</b>
U.S. - Massachusetts - Right To Know List

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### styrene, inhibited (100-42-5)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

## SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Carc. 2	Carcinogenicity Category 2
Carc. Not classified	Carcinogenicity Not classified
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure

NFPA health hazard

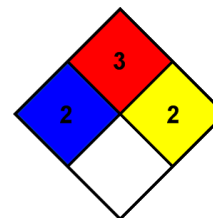
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard

: 3 - Liquids and solids that can be ignited under almost all ambient conditions.

NFPA reactivity

: 2 - Normally unstable and readily undergo violent decomposition but do not detonate. Also: may react violently with water or may form potentially explosive mixtures with water.



### HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 3 Serious Hazard

Physical : 1 Slight Hazard

Personal Protection : H

SDS US (GHS HazCom 2012)

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