DURATEC COATING VOC

904-061
SUNSHIELD CLEAR

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: 2.0 LB/GAL (232 GR/LITER)
MATERIAL VOC: 2.0 LB/GAL (232 GR/LITER)

NON-ATOMIZED APPLICATION
COATING VOC: 1.4 LB/GAL (1.67 GR/LITER)
MATERIAL VOC: 1.4 LB/GAL (1.67 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.

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

1.1. Product identifier

Product form : Mixture
Trade name : SHUSHIELD CLEAR

CAS No : mixture
Product code : 904-061
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

Classification (GHS-US)

Flam. Liq. 3 H226
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Carc. Not classified

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS02 GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) :
H226 - Flammable liquid and vapor
H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary statements (GHS-US) :
P210 - Keep away from heat, hot surfaces, open flames, sparks. - 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
P264 - Wash exposed area. thoroughly after handling
P280 - Wear eye protection, protective clothing, protective gloves
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
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P321 - Specific treatment (see none listed. 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 before reuse
P370+P378 - In case of fire: Use carbon dioxide (CO2), dry chemical powder, foam to extinguish
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to in accordance with local, state, and federal 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	%	Classification (GHS-US)
Proprietary Resin	(CAS No) TRADE SECRET	<= 60	Not classified
styrene, inhibited	(CAS No) 100-42-5	<= 30	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351
methyl ethyl ketone	(CAS No) 78-93-3	<= 6	Flam. Liq. 2, H225
1,6-hexanediol diacrylate	(CAS No) 13048-33-4	<= 5	Not classified
2-propanol	(CAS No) 67-63-0	<= 1	Flam. Liq. 2, H225
n-butyl acetate	(CAS No) 123-86-4	<= 1	Flam. Liq. 3, H226
isobutyl acetate	(CAS No) 110-19-0	<= 1	Flam. Liq. 2, H225
Solvent Naptha Petroleum Aliphatic	(CAS No) Proprietary	<= 1	Not classified
cobalt(II) 2-ethylhexanoate	(CAS No) 136-52-7	<= 0.5	Carc. 2, H351

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 you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest. Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/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 throughly for five minutes. seek medical attention. Get medical advice/attention. Specific treatment (see seek medical attention. on this label).

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.).

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

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.

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. Avoid (reject) fire-fighting water to enter 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 naked lights. 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.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. 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.

Hygiene measures : Wash HANDS thoroughly after handling.

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. 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)	40 ppm

methyl ethyl ketone (78-93-3)		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	300 ppm

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

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

2-propanol (67-63-0)		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	400 ppm

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

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 approved mask.
Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Color : clear.
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 °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 : No data available
Relative density : <= 1.07
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.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

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

SHUSHIELD CLEAR (\f)mixture	
ATE CLP (dust, mist)	1.500 mg/l/4h

styrene, inhibited (100-42-5)	
LD50 oral rat	5000 mg/kg (>6000 mg/kg bodyweight; Rat; Rat)
LD50 dermal rat	2820 mg/kg (>2000 mg/kg bodyweight; Rat; Rat; Experimental value)
LD50 dermal rabbit	5010 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	12 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	2770 ppm/4h (Rat)
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

methyl ethyl ketone (78-93-3)	
LD50 oral rat	2737 mg/kg (2054 mg/kg; 2328 mg/kg; Rat; Rat; Rat)
LD50 dermal rabbit	6480 mg/kg (>10; Rabbit; Rabbit; Experimental value,>10; Rabbit; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	34 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	11300 ppm/4h (Rat)
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

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

2-propanol (67-63-0)	
LD50 oral rat	5045 mg/kg (5840 mg/kg bodyweight; Rat; Rat; Experimental value,5840 mg/kg bodyweight; Rat; Rat; Experimental value)
LD50 dermal rabbit	12870 mg/kg (16.4; Rabbit; Rabbit; Experimental value,16.4; Rabbit; Rabbit; Experimental value)
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

isobutyl acetate (110-19-0)	
LD50 oral rat	13400 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)

isobutyl acetate (110-19-0)	
ATE CLP (oral)	13400.000 mg/kg

1,6-hexanediol diacrylate (13048-33-4)	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	3600 mg/kg (Rabbit)
ATE CLP (dermal)	3600.000 mg/kg body weight

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

Carcinogenicity : Not classified.

styrene, inhibited (100-42-5)	
IARC group	2B - Possibly Carcinogenic to Humans

cobalt(II) 2-ethylhexanoate (136-52-7)	
IARC group	2B - Possibly Carcinogenic to Humans

2-propanol (67-63-0)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified

Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Based on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms : Harmful if inhaled.

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

Symptoms/injuries after skin contact : Causes skin irritation.

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

SECTION 12: Ecological information

12.1. Toxicity

styrene, inhibited (100-42-5)	
LC50 fish 1	25 mg/l (96 h; Lepomis macrochirus)
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)
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)

methyl ethyl ketone (78-93-3)	
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)

methyl ethyl ketone (78-93-3)	
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)

n-butyl acetate (123-86-4)	
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)

2-propanol (67-63-0)	
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)

isobutyl acetate (110-19-0)	
LC50 fish 1	100 mg/l (96 h; Lepomis macrochirus; Static system)
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	411 mg/l (72 h; Protozoa)
Threshold limit algae 1	205 mg/l (192 h; Microcystis aeruginosa)
Threshold limit algae 2	80 mg/l (192 h; Scenedesmus quadricauda)

12.2. Persistence and degradability

SHUSHIELD CLEAR (mixture)	
Persistence and degradability	Not established.

styrene, inhibited (100-42-5)	
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^2/g substance
ThOD	3.07 g O^2/g substance
BOD (% of ThOD)	0.42 % ThOD

Proprietary Resin (TRADE SECRET)	
Persistence and degradability	Not established.

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

methyl ethyl ketone (78-93-3)	
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^2/g substance
Chemical oxygen demand (COD)	2.31 g O^2/g substance
ThOD	2.44 g O^2/g substance

methyl ethyl ketone (78-93-3)	
BOD (% of ThOD)	0.79 % ThOD

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

2-propanol (67-63-0)	
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^2/g substance
Chemical oxygen demand (COD)	2.23 g O^2/g substance
ThOD	2.40 g O^2/g substance
BOD (% of ThOD)	0.49 % ThOD

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

isobutyl acetate (110-19-0)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Photolysis in the air. Not established.
ThOD	2.2 g O^2/g substance
BOD (% of ThOD)	60 % ThOD

1,6-hexanediol diacrylate (13048-33-4)	
Persistence and degradability	Inherently biodegradable.

12.3. Bioaccumulative potential

SHUSHIELD CLEAR (mixture)	
Bioaccumulative potential	Not established.

styrene, inhibited (100-42-5)	
BCF fish 1	12 - 77 (QSAR)
BCF fish 2	35.5 (Carassius auratus)
Log Pow	2.95 - 3.16 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Not established.

Proprietary Resin (TRADE SECRET)	
Bioaccumulative potential	Not established.

cobalt(II) 2-ethylhexanoate (136-52-7)	
Bioaccumulative potential	No bioaccumulation data available.

methyl ethyl ketone (78-93-3)	
Log Pow	0.3 (Experimental value; 40 °C,Experimental value; 40 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4). Not established.

n-butyl acetate (123-86-4)	
BCF fish 1	14 (Pisces)
Log Pow	1.79 - 2.06
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Not established.

2-propanol (67-63-0)	
Log Pow	0.05 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4). Not established.

Solvent Naptha Petroleum Aliphatic (Proprietary)	
Bioaccumulative potential	Not established.

isobutyl acetate (110-19-0)	
BCF fish 1	4 - 9.7 (Pisces; Estimated value)

isobutyl acetate (110-19-0)	
Log Pow	1.59 - 1.78
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Not established.

1,6-hexanediol diacrylate (13048-33-4)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

styrene, inhibited (100-42-5)	
Surface tension	0.032 N/m (19 °C)

methyl ethyl ketone (78-93-3)	
Surface tension	0.024 N/m (20 °C)
Ecology - soil	Slightly harmful to plants.

n-butyl acetate (123-86-4)	
Surface tension	0.0145 N/m (25 °C)

2-propanol (67-63-0)	
Surface tension	0.021 N/m (25 °C)

isobutyl acetate (110-19-0)	
Surface tension	0.024 N/m (20 °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.

SECTION 14: Transport information

In accordance with DOT

UN-No.(DOT) : UN1263

DOT Proper Shipping Name : PAINT

Department of Transportation (DOT) Hazard Classes : 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

Danger 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

methyl ethyl ketone (78-93-3)	
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5000 lb

n-butyl acetate (123-86-4)	
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:dust,mist)	H332
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Muta. 1B	H340
Carc. 1B	H350

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

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

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

15.3. US State regulations

styrene, inhibited (100-42-5)				
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	No significance risk level (NSRL)

styrene, inhibited (100-42-5)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

SECTION 16: Other information

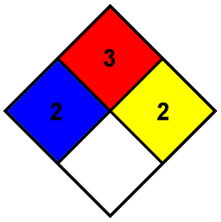
Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

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
Skin Irrit. 2	Skin corrosion/irritation Category 2
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H351	Suspected of causing cancer

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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