STYROSHIELD PRIMER

Safety Data Sheet

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

Revision date: 11/11/2020

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Trade name : STYROSHIELD PRIMER

CAS-No. : mixture

Product code : 707-019

Formula : na

1.2. Recommended use and restrictions on use

Use of the substance/mixture : COATING

1.3. Supplier

Dura Technologies, Inc.

2720 South Willow Avenue #A

Bloomington, CA 92316

909-546-1162

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: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable liquids, Category 3	H226	Flammable liquid and vapour.
Skin corrosion/irritation, Category 2	H315	Causes skin irritation.
Serious eye damage/eye irritation, Category 2	H319	Causes serious eye irritation.
Skin sensitisation, Category 1	H317	May cause an allergic skin reaction.
Carcinogenicity, Category 2	H351	Suspected of causing cancer.
Reproductive toxicity, Category 2	H361	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity — Single exposure, Category 3, Narcosis	H336	May cause drowsiness or dizziness.
Specific target organ toxicity — Repeated exposure, Category 1	H372	Causes damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment — Acute Hazard, Category 3	H402	Harmful to aquatic life

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger

Hazard statements (GHS US) : H226 - Flammable liquid and vapour.

H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye 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.
H402 - Harmful to aquatic life

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, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe dust, fume, mist, spray, vapours.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear eye protection, protective clothing, protective gloves.
P302+P352 - If on skin: Wash with plenty of water.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep 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 if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P363 - Wash contaminated clothing before reuse.
P370+P378 - In case of fire: Use media other than water 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 federal regulations..

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
2-hydroxyethyl methacrylate, stabilized	(CAS-No.) 868-77-9	<= 15	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
acetone	(CAS-No.) 67-64-1	<= 14	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
2-propanol	(CAS-No.) 67-63-0	<= 14	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
talc	(CAS-No.) 14807-96-6	<= 13	Carc. 2, H351

Name	Product identifier	%	GHS-US classification
styrene, inhibited	(CAS-No.) 100-42-5	<= 10	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 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 Aquatic Acute 2, H401
titanium(IV) oxide	(CAS-No.) 13463-67-7	<= 7	Carc. 2, H351 Aquatic Acute 3, H402
1,6-hexanediol diacrylate	(CAS-No.) 13048-33-4	<= 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
cobalt(II) 2-ethylhexanoate	(CAS-No.) 136-52-7	<= 0.9	Eye Irrit. 2, H319 Skin Sens. 1, H317 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

Full text of hazard classes and H-statements : see section 16

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. Suspected of causing cancer. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. Call a poison center or a doctor if you feel unwell. Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. Wash with plenty of water/…. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). If skin irritation or rash occurs: If skin irritation or rash occurs: Get medical advice/attention.

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: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects : Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

Symptoms/effects after inhalation : May cause an allergic skin reaction. May cause respiratory irritation.

Symptoms/effects after skin contact : Causes skin irritation. Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye irritation. Eye irritation.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Sand. Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapour.

Explosion hazard : May form flammable/explosive vapour-air mixture.

Reactivity in case of fire : No reactivity hazard other than the effects described in sub-sections below.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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	:	Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. 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 product, pump into suitable containers.
Methods for cleaning up	:	Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Notify authorities if product enters sewers or public waters.
Other information	:	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	:	Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling	:	Wear personal protective equipment. 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 vapour. No open flames. No smoking. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapours/spray. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures	:	Wash hands, forearms and face thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the 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/lighting equipment.
Storage conditions	:	Keep only in the original container in a cool, well ventilated place away from : Keep in fireproof place. Keep container tightly closed. Store locked up. Store in a well-ventilated place. Keep cool.
Incompatible products	:	Strong bases. Strong acids.
Incompatible materials	:	Sources of ignition. Direct sunlight. Heat sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

styrene, inhibited (100-42-5)		
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	ACGIH STEL (ppm)	40 ppm

titanium(IV) oxide (13463-67-7)		
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³

talc (14807-96-6)		
ACGIH	ACGIH TWA (mg/m³)	2 mg/m³ (Respirable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica) 0.1 fibers/cm³ (Respirable fibers: length > 5 µm; aspect ratio ≥ 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination)

cobalt(II) 2-ethylhexanoate (136-52-7)
Not applicable

acetone (67-64-1)		
ACGIH	ACGIH TWA (ppm)	250 ppm
ACGIH	ACGIH STEL (ppm)	500 ppm

2-hydroxyethyl methacrylate, stabilized (868-77-9)
Not applicable

1,6-hexanediol diacrylate (13048-33-4)
Not applicable

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

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure exposure is below occupational exposure limits (where available). Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses. Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear appropriate mask. [In case of inadequate ventilation] wear respiratory protection.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Grey

Odour	:	characteristic
Odour threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	>= 56.1 °C
Flash point	:	≈ 31 - 32 °C
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	Highly flammable liquid and vapour.
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	< 0.9
Density	:	< 7.2 g/l
Solubility	:	No data available
Log Pow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	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. Highly flammable liquid and vapour.

10.2. Chemical stability

Polymerization can result in formation of solid deposits, even in vapour space. Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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 (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

styrene, inhibited (100-42-5)	
LD50 oral rat	5000 mg/kg (Rat; Literature study; >6000 mg/kg bodyweight; Rat; Weight of evidence)
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)
LD50 dermal rabbit	5010 mg/kg (Rabbit; Literature study)
LC50 Inhalation - Rat	11.8 mg/l air (4 h, Rat, Inconclusive, insufficient data, Inhalation (vapours))

styrene, inhibited (100-42-5)	
LC50 Inhalation - Rat [ppm]	2770 ppm/4h (Rat; Literature study)
ATE US (oral)	5000 mg/kg bodyweight
ATE US (dermal)	5010 mg/kg bodyweight
ATE US (gases)	2770 ppmv/4h
ATE US (vapours)	11 mg/l/4h
ATE US (dust,mist)	1.5 mg/l/4h

titanium(IV) oxide (13463-67-7)	
LD50 oral rat	> 5000 mg/kg bodyweight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value, Oral, 14 day(s))
LC50 Inhalation - Rat	> 6.82 mg/l (Other, 4 h, Rat, Male, Experimental value, Inhalation (dust), 14 day(s))

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

acetone (67-64-1)	
LD50 oral rat	5800 mg/kg (Equivalent or similar to OECD 401, Rat, Female, Experimental value, Oral)
LD50 dermal rabbit	20000 mg/kg (Equivalent or similar to OECD 402, Rabbit, Male, Experimental value, Dermal)
LC50 Inhalation - Rat	76 mg/l (Other, 4 h, Rat, Female, Experimental value, Inhalation (vapours))
ATE US (oral)	5800 mg/kg bodyweight
ATE US (dermal)	20000 mg/kg bodyweight
ATE US (vapours)	76 mg/l/4h
ATE US (dust,mist)	76 mg/l/4h

2-hydroxyethyl methacrylate, stabilized (868-77-9)	
LD50 oral rat	5564 mg/kg bodyweight (Rat; Experimental value)
LD50 dermal rabbit	> 5000 mg/kg bodyweight (Rabbit; Experimental value)
ATE US (oral)	5564 mg/kg bodyweight

2-propanol (67-63-0)	
LD50 oral rat	5840 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	16400 ml/kg (Equivalent or similar to OECD 402, 24 h, Rabbit, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat [ppm]	> 10000 ppm (Equivalent or similar to OECD 403, 6 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
ATE US (oral)	5840 mg/kg bodyweight
ATE US (dermal)	16400000 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer.

styrene, inhibited (100-42-5)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

titanium(IV) oxide (13463-67-7)	
IARC group	2B - Possibly carcinogenic to humans

talc (14807-96-6)	
IARC group	3 - Not classifiable, 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 : Suspected of damaging fertility or the unborn child.
STOT-single exposure : May cause drowsiness or dizziness.

styrene, inhibited (100-42-5)	
STOT-single exposure	May cause respiratory irritation.

acetone (67-64-1)	
STOT-single exposure	May cause drowsiness or dizziness.

2-propanol (67-63-0)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

styrene, inhibited (100-42-5)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.
Symptoms/effects : Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation : May cause an allergic skin reaction. May cause respiratory irritation.
Symptoms/effects after skin contact : Causes skin irritation. Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Causes serious eye irritation. Eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

styrene, inhibited (100-42-5)	
LC50 fish 1	10 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	4.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Flow-through system, Fresh water, Experimental value, GLP)
ErC50 (algae)	4.9 mg/l (EPA OTS 797.1050, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

titanium(IV) oxide (13463-67-7)	
LC50 fish 1	> 100 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Nominal concentration)
ErC50 (algae)	61 mg/l (EPA 600/9-78-018, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

talc (14807-96-6)	
LC50 fish 1	> 100 g/l (24 h, Brachydanio rerio, Semi-static system)

cobalt(II) 2-ethylhexanoate (136-52-7)	
LC50 fish 1	46.51 mg/l (LOEC; ASTM; 96 h; Pimephales promelas; Flow-through system; Fresh water; Read-across)
EC50 Daphnia 1	0.212 mg/l (NOEC; ASTM; 48 h; Ceriodaphnia dubia; Static system; Salt water; Read-across)
LC50 fish 2	54.1 mg/l (LC50; ASTM; 96 h; Pimephales promelas; Flow-through system; Fresh water; Read-across)
EC50 Daphnia 2	0.605 mg/l (LC50; ASTM; 48 h; Ceriodaphnia dubia; Static system; Salt water; Read-across)
Threshold limit algae 1	144 µg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Read-across)
Threshold limit algae 2	32.2 µg/l (NOEC; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Read-across)

acetone (67-64-1)	
LC50 fish 1	5540 mg/l (EU Method C.1, 96 h, Salmo gairdneri, Static system, Fresh water, Experimental value, Nominal concentration)

2-hydroxyethyl methacrylate, stabilized (868-77-9)	
LC50 fish 1	227 mg/l (LC50; 96 h)
EC50 Daphnia 1	171 mg/l (NOEC; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
EC50 Daphnia 2	380 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 1	836 mg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)
Threshold limit algae 2	345 mg/l (EbC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)

2-propanol (67-63-0)	
LC50 fish 1	9640 - 10000 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)

12.2. Persistence and degradability

STYROSHIELD PRIMER (mixture)	
Persistence and degradability	Not established.

styrene, inhibited (100-42-5)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Chemical oxygen demand (COD)	2.8 g O_2/g substance
ThOD	3.07 g O_2/g substance
BOD (% of ThOD)	0.42 (Literature study)

titanium(IV) oxide (13463-67-7)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

talc (14807-96-6)	
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

cobalt(II) 2-ethylhexanoate (136-52-7)	
Persistence and degradability	Readily biodegradable in water. No (test)data on mobility of the substance available.

acetone (67-64-1)	
Persistence and degradability	Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.43 g O_2/g substance
Chemical oxygen demand (COD)	1.92 g O_2/g substance
ThOD	2.2 g O_2/g substance
BOD (% of ThOD)	0.872 (20 day(s), Literature study)

2-hydroxyethyl methacrylate, stabilized (868-77-9)	
Persistence and degradability	Readily biodegradable in water. Biodegradability in soil: no data available. Adsorbs into the soil.

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

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	2.4 g O_2/g substance

12.3. Bioaccumulative potential

STYROSHIELD PRIMER (mixture)	
Bioaccumulative potential	Not established.

styrene, inhibited (100-42-5)	
BCF fish 1	35.5 (Carassius auratus, Literature study)
Log Pow	2.96 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

titanium(IV) oxide (13463-67-7)	
Bioaccumulative potential	Not bioaccumulative.

cobalt(II) 2-ethylhexanoate (136-52-7)	
BCF fish 1	1.2 (BCF; 131 days; Seriola quinqueradiata; Static system; Salt water; Read-across)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

acetone (67-64-1)	
BCF fish 1	0.69 (Pisces)
BCF other aquatic organisms 1	3 (BCFWIN, Calculated value)
Log Pow	-0.24 (Test data)
Bioaccumulative potential	Not bioaccumulative.

2-hydroxyethyl methacrylate, stabilized (868-77-9)	
BCF fish 1	1.3 - 1.5 (BCF)
Log Pow	-0.55 - 0.49 (0.42; Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

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

2-propanol (67-63-0)	
Log Pow	0.05 (Weight of evidence approach, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4). Not established.

12.4. Mobility in soil

styrene, inhibited (100-42-5)	
Surface tension	0.032 N/m (20 °C)
Log Koc	2.55 (log Koc, Estimated value)
Ecology - soil	Low potential for adsorption in soil.

titanium(IV) oxide (13463-67-7)	
Ecology - soil	Low potential for mobility in soil.

cobalt(II) 2-ethylhexanoate (136-52-7)	
Surface tension	0.064 N/m (20 °C; 1 g/l)

acetone (67-64-1)	
Surface tension	0.0237 N/m
Ecology - soil	No (test)data on mobility of the substance available.

2-propanol (67-63-0)	
Surface tension	0.021 N/m (25 °C)
Log Koc	0.185 - 0.541 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information : Handle empty containers with care because residual vapours are flammable. Flammable vapours may accumulate in the container.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1866 Resin solution, 3, II

UN-No.(DOT) : UN1866

Proper Shipping Name (DOT) : Resin solution

Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) : II - Medium Danger

Hazard labels (DOT) : 3 - Flammable liquid

DOT Packaging Non Bulk (49 CFR 173.xxx) : 173

DOT Packaging Bulk (49 CFR 173.xxx) : 242

DOT Special Provisions (49 CFR 172.102) : 149 - When transported as a limited quantity or a consumer commodity, the maximum net capacity specified in 173.150(b)(2) of this subchapter for inner packagings may be increased to 5 L (1.3 gallons).
383 - Packages containing toy plastic or paper caps for toy pistols described as "UN0349, Articles, explosive, n.o.s. (Toy caps), 1.4S" or "NA0337, Toy caps, 1.4S" are not subject to the subpart E (labeling) requirements of this part when offered for transportation by motor vehicle, rail freight, cargo vessel, and cargo aircraft and, notwithstanding the packing method assigned in §173.62 of this subchapter, in conformance with the following conditions:
B52 - Notwithstanding the provisions of 173.24b of this subchapter, non-reclosing pressure relief devices are authorized on DOT 57 portable tanks.
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / (1 + a (tr - tf)) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32 F).

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

DOT Vessel Stowage Location	:	B - (i) The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ''On deck only'' on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
Emergency Response Guide (ERG) Number	:	127
Other information	:	No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Transport document description (IMDG)	:	UN 1866 RESIN SOLUTION, 3, II
UN-No. (IMDG)	:	1866
Proper Shipping Name (IMDG)	:	RESIN SOLUTION
Class (IMDG)	:	3 - Flammable liquids
Packing group (IMDG)	:	II - substances presenting medium danger

Air transport

Transport document description (IATA)	:	UN 1866 Resin solution, 3, II
UN-No. (IATA)	:	1866
Proper Shipping Name (IATA)	:	Resin solution
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)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313 Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Reactive hazard - No Fire hazard Delayed (chronic) health hazard

titanium(IV) oxide (13463-67-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

talc (14807-96-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

cobalt(II) 2-ethylhexanoate (136-52-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

acetone (67-64-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	5000 lb

2-hydroxyethyl methacrylate, stabilized (868-77-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

1,6-hexanediol diacrylate (13048-33-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

2-propanol (67-63-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313

15.2. International regulations

CANADA

styrene, inhibited (100-42-5)
Listed on the Canadian DSL (Domestic Substances List)

titanium(IV) oxide (13463-67-7)
Listed on the Canadian DSL (Domestic Substances List)

talc (14807-96-6)
Listed on the Canadian DSL (Domestic Substances List)

cobalt(II) 2-ethylhexanoate (136-52-7)
Listed on the Canadian DSL (Domestic Substances List)

acetone (67-64-1)
Listed on the Canadian DSL (Domestic Substances List)

2-hydroxyethyl methacrylate, stabilized (868-77-9)
Listed on the Canadian DSL (Domestic Substances List)

1,6-hexanediol diacrylate (13048-33-4)
Listed on the Canadian DSL (Domestic Substances List)

2-propanol (67-63-0)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

styrene, inhibited (100-42-5)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program)

titanium(IV) oxide (13463-67-7)
Listed on IARC (International Agency for Research on Cancer)

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 significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	27 µg/day	

Component	State or local regulations
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) List
talc(14807-96-6)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
titanium(IV) oxide(13463-67-7)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
acetone(67-64-1)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
2-propanol(67-63-0)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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

Revision date : 11/11/2020

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling 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.

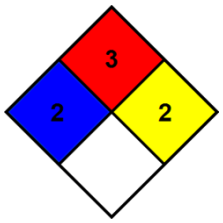
Full text of H-statements:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
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.
H400	Very toxic to aquatic life.
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects.

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity : 2 - Materials that readily undergo violent chemical change at elevated temperatures and pressures.



Hazard Rating

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

Flammability : 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Personal protection : H

H - Splash goggles, Gloves, Synthetic apron, Vapor respirator

SDS US (GHS HazCom 2012)

To the best of our knowledge this SDS is accurate. The the extent allowed by law, this statement is made in lieu of an other warranties, expressed or implied including but not limited to any implied warranty of merchantability or fitness for a particular purpose and is in lieu of any other obligations or liability on the part of Dura Technoligies, Inc.