## Safety Data Sheet

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## **SECTION 1: Identification**

#### Identification

Product form : Mixtures

Trade name CLEAR VINYL ESTER HI-GLOSS TOPCOAT

CAS-No. mixture Product code 1904-045 Formula : na

#### Recommended use and restrictions on use

Use of the substance/mixture : TOOLING TOPCOAT

#### **Supplier**

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

#### **Emergency telephone number**

: ChemTrec US: 800.424.9300 Int: +1 70 3527 3887 Emergency number

CHEMTREC: 1-800-424-9300

#### SECTION 2: Hazard(s) identification

## Classification of the substance or mixture

#### **GHS-US** classification

Flammable liquids H226 Flammable liquid and vapor Category 3

Skin corrosion/irritation H315

Causes skin irritation Category 2

Serious eye damage/eye H319

Causes serious eye irritation

irritation Category 2A

Carcinogenicity Category 2 H351 Suspected of causing cancer

Reproductive toxicity H361 Suspected of damaging fertility or the unborn child

Category 2

Specific target organ H335 May cause respiratory irritation

toxicity (single exposure)

Category 3

Specific target organ H372

toxicity (repeated exposure) Category 1

Full text of H statements: see section 16

# Causes damage to organs (hearing sense) through prolonged or repeated exposure

## GHS Label elements, including precautionary statements

#### **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

H351 - Suspected of causing cancer

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H361 - Suspected of damaging fertility or the unborn child

H372 - Causes damage to organs (hearing sense) 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, 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

P260 - Do not breathe dust, mist, fume, spray, vapors

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

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, 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/doctor/... if you feel unwell

P314 - Get medical advice/attention if you feel unwell

P321 - Specific treatment (see SEEK MEDICAL AID. 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 (CO2), 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 LOCAL, STATE, AND NATIONAL 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
Unsaturated VINYL ESTER Resin	(CAS-No.) TRADE SECRET	<= 59.5	Not classified
styrene, inhibited	(CAS-No.) 100-42-5	<= 40	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
cobalt(II) 2-ethylhexanoate	(CAS-No.) 136-52-7	<= 0.5	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.

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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 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 (acute and delayed)

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

inhaled. May cause respiratory irritation.

Symptoms/effects after skin contact : Causes skin irritation.

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

#### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## **SECTION 5: Fire-fighting measures**

#### 5.1. Suitable (and unsuitable) 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. Specific hazards arising from the chemical

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. 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 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 product, 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.

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#### 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 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. 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.

## **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

styrene, inhibited (100-42-5)		
ACGIH	ACGIH TWA (ppm)	20 ppm (Styrene, monomer; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (ppm)	40 ppm (Styrene, monomer; USA; Short time value; TLV - Adopted Value)

## cobalt(II) 2-ethylhexanoate (136-52-7)

Not applicable

## Unsaturated VINYL ESTER Resin (TRADE SECRET)

Not applicable

## 8.2. Appropriate engineering controls

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

## 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

## 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 : Colourless to light yellow

Odor: characteristicOdor threshold: No data availablepH: No data availableMelting point: No data availableFreezing point: No data availableBoiling point: 146.1 (≥ 64) °CFlash point: 32.2 (30 - 34) °C

Flammability (solid, gas) : Highly flammable liquid and vapor. Flammable liquid and vapor.

: No data available

Vapor pressure : No data available Relative vapor density at 20 °C : No data available

Relative density : ≥ 1.1

Relative evaporation rate (butyl acetate=1)

Solubility : No data available Log Pow : No data available : No data available Auto-ignition temperature Decomposition temperature : No data available Viscosity, kinematic : No data available No data available Viscosity, dynamic **Explosion limits** No data available Explosive properties : No data available Oxidizing 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.

#### 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

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	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)

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styrene, inhibited (100-42-5)			
LC50 inhalation rat (mg/l)	12 mg/l/4h (Rat; Literature study)		
LC50 inhalation rat (ppm)	2770 ppm/4h (Rat; Literature study)		
ATE US (oral)	5000.000 mg/kg body weight		
ATE US (dermal)	2820.000 mg/kg body weight		
ATE US (gases)	2770.000 ppmV/4h		
ATE US (vapors)	12.000 mg/l/4h		
ATE US (dust, mist)	1.500 mg/l/4h		
cobalt(II) 2-ethylhexanoate (136-52-7)			
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 US (oral)	3129.000 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	: Suspected of causing cancer.		
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		
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.		
. topioddotro toxioity	Based on available data, the classification criteria are not met		
Specific target organ toxicity – single exposure	: May cause respiratory irritation.		
openio target organ toxicity — single exposure	. May oddoo roophatory intedion.		
Specific target organ toxicity – repeated exposure	: Causes damage to organs (hearing sense) through prolonged or repeated exposure.		
Aspiration hazard	: Not classified		
Potential Adverse human health effects and symptoms	: Harmful if inhaled. Based on available data, the classification criteria are not met.		
Symptoms/effects after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. May cause respiratory irritation.		
Symptoms/effects after skin contact	: Causes skin irritation.		
	: Causes serious eye irritation.		

## SECTION 12: Ecological information

## 12.1. Toxicity

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)

## 12.2. Persistence and degradability

CLEAR VINYL ESTER HI-GLOSS TOPCOAT (n	nixture)
Persistence and degradability	Not established.

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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)	2.8 g O₂/g substance	
ThOD	3.07 g O₂/g substance	
BOD (% of ThOD)	0.42	
cobalt(II) 2-ethylhexanoate (136-52-7)		
Persistence and degradability	Readily biodegradable in water. No (test)data on mobility of the substance available.	
Unsaturated VINYL ESTER Resin (TRAI	DE SECRET)	
Persistence and degradability	Not established.	

#### **Bioaccumulative potential** 12.3.

CLEAR VINYL ESTER HI-GLOSS TOPCOAT (	mixture)	
Bioaccumulative potential	Not established.	
styrene, inhibited (100-42-5)		
BCF fish 1	35.5 (BCF)	
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.	
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).	
Unsaturated VINYL ESTER Resin (TRADE SE	CRET)	
Digagoumulative notontial	Not optablished	

Bioaccumulative potential Not established.

#### 12.4. Mobility in soil

styrene, inhibited (100-42-5)	
Surface tension	0.032 N/m (19 °C)
Log Koc	Koc,352; Estimated value; log Koc; 2.55; Estimated value
cobalt(II) 2-ethylhexanoate (136-5	2-7)
Surface tension	0.064 N/m (20 °C; 1 g/l)

## Other adverse effects

Effect on the global warming : No known effects from this product. **GWPmix** comment : No known effects from this product. Other information : Avoid release to the environment.

## **SECTION 13: Disposal considerations**

## **Disposal methods**

Product/Packaging 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**

## **Department of Transportation (DOT)**

In accordance with DOT

Proper Shipping Name (DOT) : RESIN SOLUTION

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

Packing group (DOT) : III - Minor Danger

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Hazard labels (DOT) : 3 - Flammable liquid



Other information : No supplementary information available.

#### **Transportation of Dangerous Goods**

## Transport by sea

Transport document description (IMDG) : UN 1866 RESIN SOLUTION, 3, III

UN-No. (IMDG) : 1866

Proper Shipping Name (IMDG) : RESIN SOLUTION
Class (IMDG) : 3 - Flammable liquids

Packing group (IMDG) : III - substances presenting low danger

#### Air transport

Transport document description (IATA) : UN 1866 RESIN SOLUTION, 3, III

UN-No. (IATA) : 1866

Proper Shipping Name (IATA) : RESIN SOLUTION
Class (IATA) : 3 - Flammable Liquids
Packing group (IATA) : III - Minor Danger

## **SECTION 15: Regulatory information**

#### 15.1. US Federal regulations

styrene, inhibited (100-42-5)	
CERCLA RQ	1000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Reactive hazard Fire hazard Delayed (chronic) health hazard

## 15.2. International regulations

#### **CANADA**

No additional information available

## **EU-Regulations**

No additional information available

## **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 significant risk level (NSRL)
No	No	No	No	0.1 μg/day

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#### 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**

Other information : None.

#### Full text of H-phrases:

Flammable liquid and vapor
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation
Harmful if inhaled
May cause respiratory irritation
Suspected of causing cancer
Suspected of damaging fertility or the unborn child
Causes damage to organs through prolonged or repeated exposure
Very toxic to aquatic life
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

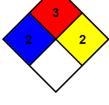
: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient

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.

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

## SDS US (GHS HazCom 2012)

Personal protection

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.

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