

# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Duro-Last TECH-Bond™ TPO Bonding Adhesive

**Other means of identification**

**Product code** 1112T

**Recommended use** Construction. Adhesive.

**Recommended restrictions** Uses other than the recommended use.

**Manufacturer/Importer/Supplier/Distributor information**

**Distributed by** Duro-Last®, Inc.

**Address** 525 W Morley Dr.  
Saginaw, MI 48601

**Website** www.duro-last.com

**Telephone Number** (800) 248-0280

**Emergency Telephone Number** INFOTRAC (24 hours):  
1-800-535-5053 (US & Canada)  
1-352-323-3500 (International)

## 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable liquids	Category 2
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Carcinogenicity	Category 2
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
<b>OSHA defined hazards</b>	Not classified.	

**Label elements**



**Signal word** Danger

**Hazard statement** Highly flammable liquid and vapor. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

## Precautionary statement

### Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist/vapors. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

### Response

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If skin irritation occurs: Get medical advice/attention. If in eyes: 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. Take off contaminated clothing and wash it before reuse. In case of fire: Use carbon dioxide, dry powder; water fog (large fires) to extinguish. Collect spillage.

### Storage

Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Hazard(s) not otherwise classified (HNOC)

None known.

### Supplemental information

None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	CAS number	%
Toluene	108-88-3	15 - 40
Naphtha (petroleum), Solvent-refined Light	64741-84-0	10 - 30
Acetone	67-64-1	5 - 10
Formaldehyde, polymer with 4-(1,1-dimethylethyl) phenol	25085-50-1	1 - 5
Ethylbenzene	100-41-4	< 0.5
Zinc oxide	1314-13-2	< 0.5

### Constituents of Naphtha

Chemical name	Common name and synonyms	CAS number	%
n-Hexane		110-54-3	< 30
Methylcyclopentane		96-37-7	10 - 30
Heptane		142-82-5	< 25
Cyclohexane		110-82-7	< 4
Benzene		71-43-2	< 0.1

### Composition comments

All concentrations are in percent by weight.  
Components not listed are either non-hazardous or are below reportable limits.  
Any concentration shown as a range is to protect confidentiality or is due to batch variation.

## 4. First-aid measures

### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Call a poison center or doctor/physician if you feel unwell.

### Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

### Ingestion

Rinse mouth. Get medical attention if symptoms occur.

### Most important symptoms/effects, acute and delayed

May cause drowsiness or dizziness. Narcosis. Headache. Nausea, vomiting. Behavioral changes. Decrease in motor functions. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.

### Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

**General information** Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

## 5. Fire-fighting measures

**Suitable extinguishing media** Water fog. Dry sand. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical** Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed such as: Carbon oxides (CO<sub>x</sub>). Hydrogen Chloride (HCl). Hydrocarbons.

**Special protective equipment and precautions for firefighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions** In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards** Highly flammable liquid and vapor.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up** Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS. The product is insoluble in water.

**Environmental precautions** Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

**Precautions for safe handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities** Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Constituents of Naphtha	Type	Value
Benzene (CAS 71-43-2)	STEL	5 ppm

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Constituents of Naphtha	Type	Value
	TWA	1 ppm

**US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3 1000 ppm	
Ethylbenzene (CAS 100-41-4)	PEL	435 mg/m3 100 ppm	
Naphtha (petroleum), Solvent-refined Light (CAS 64741-84-0)	PEL	400 mg/m3 100 ppm	
Zinc oxide (CAS 1314-13-2)	PEL	5 mg/m3 5 mg/m3 15 mg/m3	Fume. Respirable fraction. Total dust.

Constituents of Naphtha	Type	Value
Heptane (CAS 142-82-5)	PEL	2000 mg/m3 500 ppm
n-Hexane (CAS 110-54-3)	PEL	1800 mg/m3 500 ppm
Cyclohexane (CAS 110-82-7)	PEL	1050 mg/m3 300 ppm

**US. OSHA Table Z-2 Permissible Exposure Limits (PEL) (29 CFR 1910.1000)**

Components	Type	Value
Toluene (CAS 108-88-3)	Ceiling TWA	300 ppm 200 ppm

Constituents of Naphtha	Type	Value
Benzene (CAS 71-43-2)	Ceiling TWA	25 ppm 10 ppm

**US. ACGIH Threshold Limit Values (TLV)**

Components	Type	Value	Form
Acetone (CAS 67-64-1)	STEL TWA	500 ppm 250 ppm	
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm	
Toluene (CAS 108-88-3)	TWA	20 ppm	
Zinc oxide (CAS 1314-13-2)	STEL TWA	10 mg/m3 2 mg/m3	Respirable fraction. Respirable fraction.

Constituents of Naphtha	Type	Value
Benzene (CAS 71-43-2)	TWA	0.02 ppm
Heptane (CAS 142-82-5)	STEL TWA	500 ppm 400 ppm
n-Hexane (CAS 110-54-3)	TWA	50 ppm

**US. ACGIH Threshold Limit Values (TLV)**

Constituents of Naphtha	Type	Value
Cyclohexane (CAS 110-82-7)	TWA	100 ppm

**NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended**

Components	Type	Value
Acetone (CAS 67-64-1)	IDLH	2.5 % 2500 ppm
Ethylbenzene (CAS 100-41-4)	IDLH	0.8 % 800 ppm
Naphtha (petroleum), Solvent-refined Light (CAS 64741-84-0)	IDLH	1 % 1000 ppm
Toluene (CAS 108-88-3)	IDLH	1.1 % 500 ppm
Zinc oxide (CAS 1314-13-2)	IDLH	500 mg/m3

Constituents of Naphtha	Type	Value
Benzene (CAS 71-43-2)	IDLH	1.2 % 500 ppm
Heptane (CAS 142-82-5)	IDLH	1.05 % 750 ppm
n-Hexane (CAS 110-54-3)	IDLH	1.1 % 1100 ppm
Cyclohexane (CAS 110-82-7)	IDLH	1.3 % 1300 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
Acetone (CAS 67-64-1)	TWA	590 mg/m3 250 ppm	
Ethylbenzene (CAS 100-41-4)	STEL	545 mg/m3 125 ppm	
	TWA	435 mg/m3 100 ppm	
Naphtha (petroleum), Solvent-refined Light (CAS 64741-84-0)	TWA	400 mg/m3 100 ppm	
Toluene (CAS 108-88-3)	STEL	560 mg/m3 150 ppm	
	TWA	375 mg/m3 100 ppm	
Zinc oxide (CAS 1314-13-2)	Ceiling	15 mg/m3	Dust.
	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
		5 mg/m3	Dust.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Constituents of Naphtha	Type	Value
Benzene (CAS 71-43-2)	STEL	1 ppm
	TWA	0.1 ppm
Heptane (CAS 142-82-5)	Ceiling	1800 mg/m3
		440 ppm
	TWA	350 mg/m3
n-Hexane (CAS 110-54-3)		85 ppm
	TWA	180 mg/m3
Cyclohexane (CAS 110-82-7)		50 ppm
	TWA	1050 mg/m3
		300 ppm

**Biological limit values**

**ACGIH**

Constituents of Naphtha	Value	Determinant	Specimen	Sampling Time
Benzene (CAS 71-43-2)	500 µg/g	t,t-Muconic acid	Creatinine in urine	*

**ACGIH Biological Exposure Indices (BEI)**

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	25 mg/l	Acetone	Urine	*
Ethylbenzene (CAS 100-41-4)	150 mg/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

Constituents of Naphtha	Value	Determinant	Specimen	Sampling Time
Benzene (CAS 71-43-2)	25 µg/g	S-Phenylmercapturic acid	Creatinine in urine	*
n-Hexane (CAS 110-54-3)	0.5 mg/l	2,5-Hexanedione, without hydrolysis	Urine	*
Cyclohexane (CAS 110-82-7)	50 mg/g	1,2-Cyclohexanediol, with hydrolysis	Creatinine in urine	*

\* - For sampling details, please see the source document.

**Exposure guidelines**

**US - California OELs: Skin designation**

Benzene (CAS 71-43-2) Can be absorbed through the skin.  
 n-Hexane (CAS 110-54-3) Can be absorbed through the skin.  
 Toluene (CAS 108-88-3) Can be absorbed through the skin.

**US - Minnesota Haz Subs: Skin designation applies**

Toluene (CAS 108-88-3) Skin designation applies.

**US ACGIH Threshold Limit Values: Skin designation**

Benzene (CAS 71-43-2) Danger of cutaneous absorption  
 n-Hexane (CAS 110-54-3) Danger of cutaneous absorption

**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

## Individual protection measures, such as personal protective equipment

<b>Eye/face protection</b>	Wear approved chemical safety goggles.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves. Examples of preferred glove barrier materials include: Fluoroelastomer (FKM). Polyethylene/Ethylene Vinyl Alcohol (PE/EVAL). Polyvinyl alcohol (PVA). Suitable gloves can be recommended by the glove supplier.
<b>Skin protection</b>	
<b>Other</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
<b>Respiratory protection</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Chemical respirator with organic vapor cartridge and full facepiece. Appropriate respirator selection should be made by a qualified professional. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Yellow.

**Odor** Characteristic.

**Odor threshold** Not available.

**pH** Not determined; product is not soluble in water.

**Melting point/freezing point** Not determined.

**Initial boiling point and boiling range** 132.8 °F (56 °C)

**Flash point** -0.4 °F (-18 °C)

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not applicable.

### Upper/lower flammability or explosive limits

**Explosive limit - lower (%)** 1.2

**Explosive limit - upper (%)** 7

**Vapor pressure** 29 hPa (68 °F (20 °C))  
21.8 mm Hg (68 °F (20 °C))

**Vapor density** Not determined.

**Relative density** 0.84

### Solubility(ies)

**Solubility (water)** Insoluble.

**Partition coefficient (n-octanol/water)** Not applicable, product is a mixture.

**Auto-ignition temperature** Not self-igniting.

**Decomposition temperature** Not applicable as the product is not unstable.

**Viscosity** > 3300 - < 3800 cP (73.4 °F (23 °C))

### Other information

Organic solvents: 76.2%  
Solids: 23.6%  
Ignition temperature: 465.0 °C (869 °F)

**Density** 7.02 lb/gal

**Explosive properties** Not explosive.

**Kinematic viscosity** 3436 mm<sup>2</sup>/s ASTM D 445 (104 °F (40 °C))

<b>Oxidizing properties</b>	Not oxidizing.
<b>VOC</b>	633 g/l 5.28 lb/gal

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Acids. Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known. In the event of fire: See Section 5.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	May cause drowsiness or dizziness. Narcosis. Headache. Nausea, vomiting. Behavioral changes. Decrease in motor functions. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
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### Information on toxicological effects

<b>Acute toxicity</b>	Not expected to be acutely toxic.
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Components	Species	Test Results
Acetone (CAS 67-64-1)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 15700 mg/kg, 24 Hours
<b>Inhalation</b>		
<i>Vapor</i>		
LC50	Rat	76 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	5800 mg/kg
Ethylbenzene (CAS 100-41-4)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	15400 mg/kg
<b>Inhalation</b>		
LC50	Rat	17.4 mg/l, 4 hours
<b>Oral</b>		
LD50	Rat	3500 - 4700 mg/kg
Toluene (CAS 108-88-3)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	12200 mg/kg
<b>Inhalation</b>		
<i>Vapor</i>		
LC50	Rat	28.1 mg/l, 4 Hours



Components	Species	Test Results
Zinc oxide (CAS 1314-13-2)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Mouse	> 5.7 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	> 5000 mg/kg
<b>Constituents of Naphtha</b>		
<b>Species</b>		
<b>Test Results</b>		
Benzene (CAS 71-43-2)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 8260 mg/kg
<b>Inhalation</b>		
<i>Vapor</i>		
LC50	Rat	44.66 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	810 mg/l
Heptane (CAS 142-82-5)		
<b>Acute</b>		
<b>Inhalation</b>		
<i>Vapor</i>		
LC50	Rat	> 29.29 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	15000 mg/kg
n-Hexane (CAS 110-54-3)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 2000 mg/kg
<b>Inhalation</b>		
<i>Vapor</i>		
LC50	Mouse, Rat	169.2 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	28710 mg/kg
Cyclohexane (CAS 110-82-7)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	12710 mg/kg
<b>Skin corrosion/irritation</b>	Causes skin irritation.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Carcinogenicity</b>	Suspected of causing cancer.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Benzene (CAS 71-43-2)	1 Carcinogenic to humans.	
Ethylbenzene (CAS 100-41-4)	2B Possibly carcinogenic to humans.	
Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.	
<b>NTP Report on Carcinogens</b>		
Benzene (CAS 71-43-2)	Known To Be Human Carcinogen.	

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Benzene (CAS 71-43-2)

Cancer

**Reproductive toxicity** Suspected of damaging fertility or the unborn child.**Specific target organ toxicity - single exposure** May cause drowsiness or dizziness.**Specific target organ toxicity - repeated exposure** May cause damage to organs through prolonged or repeated exposure.**Aspiration hazard** Not an aspiration hazard.**12. Ecological information****Ecotoxicity** Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Acetone (CAS 67-64-1)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	LC50	Daphnia pulex	8800 mg/l, 48 Hours
Fish	LC50	Pimephales promelas	7163 mg/l, 96 Hours
<i>Chronic</i>			
Crustacea	NOEC	Daphnia magna	> 79 mg/l, 21 days
Ethylbenzene (CAS 100-41-4)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	1.81 - 2.38 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4.2 mg/l, 96 hours
<i>Chronic</i>			
Crustacea	EC50	Ceriodaphnia dubia	3.6 mg/l, 7 days
Toluene (CAS 108-88-3)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	EC50	Daphnia magna	11.5 mg/l, 48 hours
Fish	LC50	Oncorhynchus kisutch	5.5 mg/l, 96 hours
<i>Chronic</i>			
Crustacea	NOEC	Ceriodaphnia dubia	0.74 mg/l, 7 days
Fish	NOEC	Oncorhynchus kisutch	1.4 mg/l, 40 days
<b>Constituents of Naphtha</b>			
<b>Species</b>			
<b>Test Results</b>			
Benzene (CAS 71-43-2)			
<b>Aquatic</b>			
<i>Acute</i>			
Algae	EC50	Pseudokirchneriella subcapitata	29 mg/l, 72 Hours
Crustacea	EC50	Daphnia magna	10 mg/l, 48 hours
Fish	LC50	Oncorhynchus mykiss	5.3 mg/l, 96 hours
<i>Chronic</i>			
Algae	NOEC	Selenastrum capricornutum	41 mg/l, 8 days
Crustacea	NOEC	Ceriodaphnia dubia	3 mg/l, 7 days
Fish	NOEC	Pimephales promelas	0.8 mg/l, 32 days
n-Hexane (CAS 110-54-3)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	LC50	Daphnia magna	2.1 mg/l, 48 hours
Fish	LC50	Pimephales promelas	2.5 mg/l, 96 hours

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available for this product.

**Partition coefficient n-octanol / water (log Kow)**

Acetone (CAS 67-64-1)	-0.24
Ethylbenzene (CAS 100-41-4)	3.15
Toluene (CAS 108-88-3)	2.73

**Mobility in soil** No data available.

**Other adverse effects** The product contains volatile organic compounds which have a photochemical ozone creation potential. This product contains one or more substances identified as hazardous air pollutants (HAPs) per the US Federal Clean Air Act (see section 15).

### 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**US RCRA Hazardous Waste U List: Reference**

Cyclohexane (CAS 110-82-7)	U056
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**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

#### DOT

<b>UN number</b>	UN1133
<b>UN proper shipping name</b>	Adhesives
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary hazard</b>	-
<b>Label(s)</b>	3
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	149, B52, IB2, T4, TP1, TP8
<b>Packaging exceptions</b>	150
<b>Packaging non bulk</b>	173
<b>Packaging bulk</b>	242

#### IATA

<b>UN number</b>	UN1133
<b>UN proper shipping name</b>	Adhesives
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary hazard</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	Yes
<b>ERG Code</b>	3L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

#### IMDG

<b>UN number</b>	UN1133
<b>UN proper shipping name</b>	ADHESIVES
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary hazard</b>	-

**Packing group** II

**Environmental hazards**

**Marine pollutant** Yes

**EmS** F-E, S-D

**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)	Listed
Benzene (CAS 71-43-2)	Listed
Cyclohexane (CAS 110-82-7)	Listed
Ethylbenzene (CAS 100-41-4)	Listed
Heptane (CAS 142-82-5)	Listed
Methylcyclopentane (CAS 96-37-7)	Listed
Naphtha (petroleum), Solvent-refined Light (CAS 64741-84-0)	Listed
n-Hexane (CAS 110-54-3)	Listed
Toluene (CAS 108-88-3)	Listed
Zinc oxide (CAS 1314-13-2)	Listed

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Benzene (CAS 71-43-2)	Cancer Central nervous system Blood Aspiration Skin Eye respiratory tract irritation Flammability
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**Toxic Substances Control Act (TSCA)** All components of the mixture on the TSCA 8(b) inventory are designated "active".

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Flammable (gases, aerosols, liquids, or solids)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Carcinogenicity  
Reproductive toxicity  
Specific target organ toxicity (single or repeated exposure)

#### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Ethylbenzene	100-41-4	< 0.5
Toluene	108-88-3	15 - 40
Benzene	71-43-2	< 0.1
Cyclohexane	110-82-7	< 4
n-Hexane	110-54-3	< 30

## Other federal regulations

### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Benzene (CAS 71-43-2)  
Ethylbenzene (CAS 100-41-4)  
n-Hexane (CAS 110-54-3)  
Toluene (CAS 108-88-3)

### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Contains component(s) regulated under the Safe Drinking Water Act.

### Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1)	6532
Toluene (CAS 108-88-3)	6594

### Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1)	35 %WV
Toluene (CAS 108-88-3)	35 %WV

### DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1)	6532
Toluene (CAS 108-88-3)	594

### FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Acetone (CAS 67-64-1)	Low priority
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## US state regulations

### US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)  
Benzene (CAS 71-43-2)  
Cyclohexane (CAS 110-82-7)  
Ethylbenzene (CAS 100-41-4)  
Heptane (CAS 142-82-5)  
Methylcyclopentane (CAS 96-37-7)  
Naphtha (petroleum), Solvent-refined Light (CAS 64741-84-0)  
n-Hexane (CAS 110-54-3)  
Toluene (CAS 108-88-3)  
Zinc oxide (CAS 1314-13-2)

### US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)  
Benzene (CAS 71-43-2)  
Cyclohexane (CAS 110-82-7)  
Ethylbenzene (CAS 100-41-4)  
Heptane (CAS 142-82-5)  
Methylcyclopentane (CAS 96-37-7)  
Naphtha (petroleum), Solvent-refined Light (CAS 64741-84-0)  
n-Hexane (CAS 110-54-3)  
Toluene (CAS 108-88-3)  
Zinc oxide (CAS 1314-13-2)

### US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)  
Benzene (CAS 71-43-2)  
Cyclohexane (CAS 110-82-7)  
Ethylbenzene (CAS 100-41-4)  
Heptane (CAS 142-82-5)  
Methylcyclopentane (CAS 96-37-7)  
n-Hexane (CAS 110-54-3)  
Toluene (CAS 108-88-3)  
Zinc oxide (CAS 1314-13-2)

### US. Rhode Island RTK

Acetone (CAS 67-64-1)  
Benzene (CAS 71-43-2)  
Cyclohexane (CAS 110-82-7)  
Ethylbenzene (CAS 100-41-4)  
Heptane (CAS 142-82-5)

Methylcyclopentane (CAS 96-37-7)  
Naphtha (petroleum), Solvent-refined Light (CAS 64741-84-0)  
n-Hexane (CAS 110-54-3)  
Toluene (CAS 108-88-3)  
Zinc oxide (CAS 1314-13-2)

### California Proposition 65



**WARNING:** This product can expose you to chemicals including Benzene, Ethylbenzene, which is known to the State of California to cause cancer, and Benzene, Toluene, n-Hexane, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### California Proposition 65 - CRT: Listed date/Carcinogenic substance

Benzene (CAS 71-43-2) Listed: February 27, 1987  
Ethylbenzene (CAS 100-41-4) Listed: June 11, 2004

#### California Proposition 65 - CRT: Listed date/Developmental toxin

Benzene (CAS 71-43-2) Listed: December 26, 1997  
Toluene (CAS 108-88-3) Listed: January 1, 1991

#### California Proposition 65 - CRT: Listed date/Male reproductive toxin

Benzene (CAS 71-43-2) Listed: December 26, 1997  
n-Hexane (CAS 110-54-3) Listed: December 15, 2017

#### US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Cyclohexane (CAS 110-82-7)  
Heptane (CAS 142-82-5)

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

### 16. Other information, including date of preparation or last revision

**Issue date** 14-November-2024

**Revision date** -

**Version #** 01

**HMIS® ratings** Health: 2\*  
Flammability: 3  
Physical hazard: 0

**Disclaimer** Duro-Last®, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.