

Duro-Last® Liquid-Applied Flashing Field Resin

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: Duro-Last® Liquid-Applied Flashing Field Resin
Version: 3
Identifier 1: DL-LAF Field
Chemical Family: Mixture
Product Use: PMMA Liquid Field Membrane

Company Information: Duro-Last®, Inc.
 525 W Morley Dr.
 Saginaw, MI 48601
 Phone: (800) 248-0280
 Internet Address: www.duro-last.com

Emergency Phone Numbers: INFOTRAC
 1-800-535-5053 (US & Canada)
 1-352-323-3500 (International)

SECTION 2 HAZARD(S) IDENTIFICATION

Hazard Classification: **Health Hazards**
 Flammable Liquid, Category 2
 Aspiration Hazard, Category 1
 Acute Toxicity (Oral, Inhalation), Category 4
 Skin Irritation, Category 2
 Skin Sensitization, Category 1
 Serious Eye irritation, Category 2A
 Specific Target Organ Toxicity - Single Exposure
 -Respiratory Tract Irritation, Category 3
 -Narcotic Effects, Category 3
 Specific Target Organ Toxicity - Repeated Exposure
 -Central Nervous System, Category 2

Pictogram(s):



Signal Word: DANGER

Hazard Statements:

H225	- Highly flammable liquid and vapor.
H302	- Harmful if swallowed.
H304	- May be fatal if swallowed and enters airways.
H315	- Causes skin irritation.
H317	- May cause an allergic skin reaction.
H319	- Causes serious eye irritation.
H332	- Harmful if inhaled.
H335+H336	- May cause respiratory irritation or dizziness/drowsiness.
H373	- May cause damage to the Central Nervous System through prolonged or repeated exposure if inhaled.

Precautionary Statements:	Prevention	
	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/fumes/gas/mist/vapors/spray.
	P264	- Wash skin 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.
	P280	- Wear protective gloves/protective clothing/eye protection/face protection.
	Response	
	P301+P310+P331 +P330	- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Rinse mouth.
	P303+P361+P353	- IF ON SKIN (or hair): Remove/Immediately take off all contaminated clothing. Rinse skin with water/shower.
	P304+P340	- IF INHALED: Move person to fresh air and keep comfortable for breathing.
	P305+351+338	- IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P314	- Get medical advice/attention if you feel unwell.
	P321	- Specific treatment (see additional information on this product's label)
	P333 + P313	- If skin irritation occurs: Get medical advice/attention.
	P337 + P313	- If eye irritation persists: Get medical advice/attention.
	P362	- Take off contaminated clothing.
	P363	- Wash contaminated clothing before reuse.
	P370+P378	- In case of fire: Use universal foam, dry chemical powder, Carbon Dioxide, or sand for extinction.
	Storage	
	P403+P233+P235	- Store in a well-ventilated place. Keep container tightly closed. Keep cool.
	P405	- Store locked up.
	Disposal	
	P501	- Dispose of contents/container in accordance with federal, state and local regulations.

SECTION 3

COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients

Chemical Name	CAS Number	Concentration (%)
Methyl Methacrylate (MMA)	80-62-6	10.00 - 30.00%
2-Ethylhexyl Acrylate (2-EHA)	103-11-7	10.00 - 30.00%
Polyethylene Glycol Diacrylate	26570-48-9	0.10 - 1.00%
Diisopropanol-P-Toluidine (DPPT)	38668-48-3	0.10 - 1.00%

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

FIRST-AID MEASURES

SECTION 4

Inhalation:	If affected: Move to fresh air. Restore breathing. Keep quiet and warm. Consult a physician after significant exposure, or if feeling unwell.
Skin (or Hair) Contact:	Immediately remove all contaminated clothing and wash before reuse. Wash off with plenty of water or shower. If skin irritation or rash occurs, get medical advice.
Eye Contact:	Immediately flush eye(s) with plenty of water for several minutes. Remove contact lenses, if present, and easy to do so. Continue rinsing. Keep eye(s) wide open while rinsing. If eye irritation persists, get medical advice.
Ingestion:	Immediately call a POISON CENTER. Do NOT induce vomiting. Rinse mouth. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed:	Irritant effects. Allergic reaction. ASPIRATION HAZARD.
Protection of first-aiders:	Move out of dangerous area. Consult a physician. Show this Safety Data Sheet to the doctor in attendance.
Notes to physician:	Treat symptomatically.

SECTION 5

FIRE-FIGHTING MEASURES

Flammability:	Flammable Liquid, Class 1B (NFPA)
Flash Point:	2°C or 35.6°F (MMA, closed cup)
Auto-Ignition Temperature:	230°C or 446°F (2-EHA)
Suitable extinguishing media:	Universal foam, dry chemical powder, Carbon Dioxide, or sand.
Unsuitable extinguishing media:	Use of water spray when fighting fire may be inefficient because of the low flash point of the product.
Fire and Explosion Hazards:	This product and its vapors are easily ignited by heat, sparks, or flames. Vapors may form explosive mixtures with air. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back to a leak or open container. This product may ignite on contact with strong oxidizing agents. Do not cut, puncture, or weld empty containers.

Fire Fighting Instructions:	<p>Evacuate area.</p> <p>Wear self-contained breathing apparatus and appropriate protective clothing in accordance with standards.</p> <p>Approach fire from upwind and fight fire from maximum distance or use unmanned hose holders or monitor nozzles.</p> <p>Always stay away from containers because of the high risk of explosion.</p> <p>Stop leak before attempting to put out the fire.</p> <p>If leak cannot be stopped, and if there is no risk to the surrounding area, let the fire burn itself out.</p> <p>Move containers from fire area if this can be done without risk.</p> <p>Cool containers with flooding quantities of water until well after fire is out.</p>
Combustion Products:	<p>Thermal decomposition or combustion may generate irritating and/or toxic gases or fumes.</p> <p>Toxic and/or irritating gases or fumes can emanate from empty containers when submitted to high temperatures: Carbon Monoxide, Carbon Dioxide, and/or Methacrylic Acid fumes.</p>

SECTION 6

ACCIDENTAL RELEASE MEASURES

Handling Precautions:	<p>Ventilate area.</p> <p>Wear appropriate protective equipment during cleanup.</p> <p>Eliminate all ignition sources.</p> <p>Shut off source of leak if it can be done without risk.</p> <p>Contain the spill.</p> <p>Wash spill area with soap and water.</p>
Environmental precautions:	<p>Do not flush into or allow chemical to enter surface water, sanitary sewer system, other waterways, or basements.</p> <p>If the product contaminates rivers, lakes, or drains inform respective authorities.</p> <p>Local authorities should be advised if significant spillages cannot be contained.</p> <p>Wash spill area with soap and water.</p>
Cleanup:	<p>Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, or sawdust).</p> <p>Sweep or shovel into containers with lids, use clean non-sparking tools (sp: plastic) to collect absorbed material.</p> <p>Cover and remove to appropriate well-ventilated area until disposal.</p> <p>Keep in suitable, closed containers for disposal.</p>
Regulatory Requirements:	<p>Dispose of this product according to local environmental regulations and follow applicable OSHA regulations (29 CFR 1940.120).</p>

SECTION 7

HANDLING AND STORAGE

Handling Precautions:

This product and its vapors are extremely flammable and toxic. Before handling, it is very important that ventilation controls are operating and protective equipment requirements are being followed. Avoid contact with eyes, skin, and clothing. Do not ingest. Avoid breathing mist, vapor, or dust. Wash thoroughly after handling. People working with this product should be properly trained regarding its hazards and its safe use. Eliminate all ignition sources (e.g. sparks, open flames, hot surfaces). Keep away from heat. Ground transfer containers to avoid static accumulation. Tightly reseal all partially used containers. Do not cut, puncture, or weld containers. Avoid exceeding the given occupational exposure limits (see Section 8). For personal protection, see Section 8. Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Smoking, eating, and drinking should be prohibited in the application area. Follow standard hygiene measures when handling chemical products.

Storage Requirements:

Store in a cool, well-ventilated area out of direct sunlight and away from heat and ignition sources. No smoking near storage area. Store away from incompatible materials. Store the product according to occupational health and safety regulations and fire and building codes. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Have appropriate fire extinguishers and spill clean-up equipment near storage area. Inspect all containers to make sure they are properly labeled. Store in original container. Keep container tightly closed. Observe label precautions. Store in accordance with local regulations.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Component	CAS Number	Basis **	Value	Exposure Limit(s)* / Form of Exposure
Methyl Methacrylate	80-62-6	OSHA	TWA	410 mg/m ³
		ACGIH	TLV	50 ppm (ST) 100 ppm
Polyethylene Glycol Diacrylate	26570-48-9	N/A	N/A	N/A
2-Ethylhexyl Acrylate (2-EHA)	103-11-7	N/A	N/A	N/A
Diisopropanol-P-Toluidine	38668-48-3	N/A	N/A	N/A

*The above mentioned values are in accordance with the legislation in effect at the date of the release of this Safety Data Sheet.

****Basis**

ACGIH. Threshold Limit Values (TLV)

OSHA P0. Table Z-1, Limit for Air Contaminant (1989 Vacated Values)

OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant

OSHA P2. Permissible Exposure Limits (PEL), Table Z-2

OSHA Z3. Table Z-3, Mineral Dust

Engineering Measures:

Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

Personal Protective Equipment:

Respiratory Protection

Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used. Filtering face piece or dust mask is not acceptable for use with this product if TLV filtering levels have been exceeded.

Hand Protection

Wear Butyl Rubber or Nitrile gloves when mixing or applying this product.

In general, chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye Protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.

Skin and Body Protection

Workers must wear a long sleeved shirt with long pants and work boots.

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace.

Hygiene Measures

Avoid contact with skin, eyes, and clothing.

Wash hands before breaks and immediately after handling the product.

Remove respiratory and skin/eye protection only after vapors have been cleared from the area.

Remove contaminated clothing and protective equipment before entering eating areas.

Wash contaminated clothing thoroughly before reuse.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Color:	Grey or White
Vapor Density:	Heavier than Air
pH:	N/A
Odor:	Strong Solvent Odor
Solubility:	Insoluble in Water
Flash Point:	2°C or 35.6°F (MMA, closed cup)
VOC:	2.4 g/L
Viscosity:	2,500 centipoises (Visco Brookfield LVT)
Specific Gravity (H₂O = 1):	1.20 kg/L

SECTION 10

STABILITY AND REACTIVITY

Stability:	This material is stable.
Reactivity:	Avoid excessive heat.
Incompatibility:	Strong acids, strong oxidizing and reducing agents, bases, and halogenated compounds.
Hazardous Decomposition Products:	During a fire, irritating/toxic gases, such as Carbon Monoxide, Carbon Dioxide, Nitrogen Oxides, Hydrocarbon by-products, and Black Smoke.
Conditions to Avoid:	Open flames, sparks, electrostatic discharge, heat and other ignition sources; prolonged exposure to direct sunlight.
Hazardous Polymerization:	Direct exposure to sunlight or storage temperatures over 60°C or 140°F can produce uncontrolled and exothermic polymerization.

SECTION 11

TOXICOLOGICAL INFORMATION

Toxicity

Hazardous Ingredient Name	Acute or Chronic?	Oral LD ₅₀	Dermal LD ₅₀	Dermal LC ₅₀
Methyl Methacrylate	Chronic	3,205 mg/kg (rat)	> 7,550 mg/kg (rabbit)	NE
Diisopropanol-P-Toluidine	Acute	100 mg/kg (rat)	NE	NE
2-Ethylhexyl Acrylate (2-EHA)	Chronic	4,400 mg/kg (mouse)	8,480 mg/kg (rabbit)	NE
Polyethylene Glycol Diacrylate	Chronic	NE	NE	NE

*NE = No Evidence

Irritation:	Skin irritation. Eye irritation. Respiratory Tract irritation.
Sensitization:	This product contains a known skin sensitizer. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

SECTION 12

ECOLOGICAL INFORMATION

Environmental Data

Components	Species	Test Results
Methyl Methacrylate	Poecilia Reticulata	LC50; Dose: 326.4 - 426.9 mg/L; Exposure time: 96 h static
	Oncorhynchus Mykiss	LC50; Dose: > 79 mg/L; Exposure time: 96 h static
	Pimephales Promelas	LC50; Dose: 243 - 275 mg/L; Exposure time: 96 h flow-through
	Lepomis Macrochirus	LC50; Dose: 170 - 206 mg/L; Exposure time: 96 h flow-through
	Daphnia Magna	EC50; Dose: 69 mg/L; Exposure time: 48 h
Diisopropanol-P-Toluidine	Pseudokirchneriella Subcapitata	EC50; Dose: 170 mg/L; Exposure time: 96 h
	Brachydanio Rerio	LC50; Dose: 17 mg/L; Exposure time: 96 h
	Daphnia Magna	EC50; Dose: 28.8 mg/L; Exposure time: 48 h
2-Ethylhexyl Acrylate (2-EHA)	Desmodesmus Subspicatus	EC50; Dose: 245 mg/L; Exposure time: 72 h
	Leuciscus Idus Melanotus	LC50; Dose: 23 mg/L; Exposure time: 48 h
	Daphnia Magna	EC50; Dose: 17.45 mg/L; Exposure time: 48 h
	Desmodesmus Subspicatus	EC50; Dose: 44 mg/L; Exposure time: 72 h

Other Information:

Do not allow product or runoff from fire control to enter grounds, basements, storm or sanitary sewers, lakes, rivers, streams, or public waterways.

Block off drains and ditches.

Regional and federal regulations may require that environmental and/or agencies be notified of a spill incident.

Spill area must be cleaned and restored to original condition or to the satisfaction of authorities.

May be harmful to aquatic life.

SECTION 13

DISPOSAL CONSIDERATIONS

Disposal Methods:

This product is considered hazardous material.

Waste from Residues

Disposal of this product, solutions, and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Contaminated Packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal in accordance with federal, state and local regulations.

SECTION 14

TRANSPORT INFORMATION

DOT and TDG:

Classification: Class 3
 Identification Number: UN 1263
 Shipping Name: Paint
 Packing Group: II



CONTAINERS FOLLOW THE STANDARDS.
 Classification based on Section 5 of this document.

SECTION 15

REGULATORY INFORMATION

TSCA list:	All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
CERCLA Reportable Quantity:	This material contains Methyl Methacrylate (MMA), a chemical with a CERCLA RQ of 1,000.
SARA304 Reportable Quantity:	This material does not contain any components with a section 304 EHS RQ.
SARA 302:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313:	This material contains Methyl Methacrylate (MMA) which has a (De Minimis) reporting level of 1.0, established by SARA Title III, Section 313.
Clean Air Act:	<p>This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).</p> <p>This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).</p>
Ozone-Depletion Potential:	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
California Prop 65:	This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. For more information, go to www.P65Warnings.ca.gov .

SECTION 16

OTHER INFORMATION

Previous Editions:	First Edition: 02/01/2018 Revision Dates: 03/29/2018 05/02/2019
Further Information:	This SDS was prepared in accordance with OSHA regulatory standards for Toxic and Hazardous Substances: 29 CFR 1910.1200.
Disclaimer:	To the best of our knowledge, the information contained herein is accurate. However Duro-Last®, Inc. does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be handled with care. Although Duro-Last®, Inc. has described herein all of the hazards to which we are currently aware, we cannot guarantee that these are the only hazards which exist.