

SECTION 1: Identification**1.1. Identification**

Product form : Mixture
Product name : MARINE URETHANE ACCELERATOR
Product code : MAD0200

1.2. Relevant identified uses of the substance or mixture and uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Endura Manufacturing Company Ltd.
12425 149 Street NW
Edmonton, T5L 2J6 - Canada
T 1-780-451-4242 - F 1-780-452-5079
info@endura.ca - www.endurapaint.com/marine

1.4. Emergency telephone number

Emergency number : In the event of an emergency involving dangerous goods:
in Canada call CHEMTREC at 1-800-424-9300 24 hours / 7 days (Account Name for Canada
Endura Manufacturing Co. Ltd.)
in the US call CHEMTREC at 1-800-424-9300 24 hours / 7 days (Account Name for US is
Polyglass Coatings)

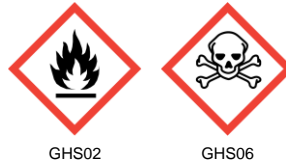
SECTION 2: Hazard(s) identification**2.1. Classification of the substance or mixture****GHS US classification**

Flammable liquids Category 3	H226	Flammable liquid and vapor
Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Acute toxicity (dermal) Category 3	H311	Toxic in contact with skin

Full text of H statements : see section 16

2.2. Label elements**GHS US labeling**

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H226 - Flammable liquid and vapor
H302 - Harmful if swallowed
H311 - Toxic in contact with skin

Precautionary statements (GHS-US) :

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.
P264 - Wash thoroughly after handling
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P312 - Call a poison center/doctor/physician if you feel unwell
P322 - Specific treatment (see supplemental first aid instruction on this label)
P330 - Rinse mouth.
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂) to extinguish

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P403+P235 - Store in a well-ventilated place. Keep cool.

P405 - Store locked up.

P501 - Dispose of contents/container in accordance with all local, regional, national and international regulations.

2.3. Other hazards

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	wt%	GHS US classification
2,4-pentanedione	(CAS-No.) 123-54-6	≥ 80	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311

Full text of H-phrases: 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. If you feel unwell, seek medical advice (show the label where possible). Call a poison center/doctor/physician if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	: Immediately call a poison center or doctor/physician. Wash with plenty of soap and water. Specific measures (see supplemental first aid instruction on this label). Wash contaminated clothing before reuse. Rinse skin with water/shower. Remove/Take off all contaminated clothing immediately.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist. Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard.
Symptoms/effects after eye contact	: Irritation to eyes.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. 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. Special hazards arising from the substance or mixture

Fire hazard	: Flammable liquid and vapor.
Explosion hazard	: May form flammable/explosive vapor-air mixture.
Reactivity	: Flammable liquid and vapor.

5.3. Advice for firefighters

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. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Avoid contact with skin, eyes and clothing.

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

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 8 : Exposure-controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Ensure good ventilation of the work station. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing.

Hygiene measures : Wash thoroughly after handling. 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. Use explosion-proof electrical/ventilating/lighting equipment. Ground/bond container and receiving equipment.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

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

2,4-pentanedione (123-54-6)		
ACGIH	ACGIH TWA (ppm)	25 ppm
ACGIH	Remark (ACGIH)	Neurotoxicity; CNS impair

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses. Safety glasses.

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Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Wear approved mask.
Environmental exposure controls	: Avoid release to the environment.
Other information	: When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: No data available
Odor	: characteristic
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 138 °C 280.4 °F
Flash point	: 35 °C 95 °F
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: 2.4 – 11.4 vol %
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Specific gravity / density	: 0.983 g/ml
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: 407.2 °C 764.9 °F
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

VOC content (Regulatory - Less water and exempt solvents)	: 953.27 g/l 7.955 lb/gal
VOC content (Material - Actual)	: 953.27 g/l 7.955 lb/gal
Percent Solids (Weight)	: 3.05 %
Percent Solids (Volume)	: 2.727 %
Percent Volatile (Weight)	: 96.95 %
Percent Volatile (Volume)	: 97.273 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapor.

10.2. Chemical stability

Flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

Not established.

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10.4. Conditions to avoid

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

Likely routes of exposure : Dermal; Inhalation; Skin and eye contact

Acute toxicity : Not classified

MARINE URETHANE ACCELERATOR	
ATE US (oral)	582.889 mg/kg body weight
ATE US (dermal)	814.86 mg/kg body weight
2,4-pentanedione (123-54-6)	
LD50 oral rat	570 – 760 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	790 mg/kg body weight (24 h, Rabbit, Female, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	5.1 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))
ATE US (oral)	570 mg/kg body weight
ATE US (dermal)	790 mg/kg body weight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if swallowed. Toxic in contact with skin.

Symptoms/effects after inhalation : May cause drowsiness or dizziness.

Symptoms/effects after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard.

Symptoms/effects after eye contact : Irritation to eyes.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

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.

2,4-pentanedione (123-54-6)	
LC50 fish 1	71.6 mg/l (96 h, Salmo gairdneri, Flow-through system)
EC50 Daphnia 1	25.9 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
LC50 fish 2	104 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)

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12.2. Persistence and degradability

MARINE URETHANE ACCELERATOR	
Persistence and degradability	Not established.
2,4-pentanedione (123-54-6)	
Persistence and degradability	Readily biodegradable in water.
Chemical oxygen demand (COD)	1.787 g O ₂ /g substance
ThOD	1.92 g O ₂ /g substance
BOD (% of ThOD)	0.056

12.3. Bioaccumulative potential

MARINE URETHANE ACCELERATOR	
Bioaccumulative potential	Not established.
2,4-pentanedione (123-54-6)	
Partition coefficient n-octanol/water (Log Pow)	68 (Experimental value, EU Method A.8: Partition Coefficient, 40 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

2,4-pentanedione (123-54-6)	
Surface tension	0.0312 N/m (20 °C)
Ecology - soil	Low potential for adsorption in soil.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment 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 in accordance with all local, regional, national and international regulations.

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

Ecology - waste materials : Hazardous waste due to toxicity. Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1263 Paint related material (including paint thinning, drying, removing, or reducing compound), 3, III

UN-No. (DOT) : UN1263

Proper Shipping Name (DOT) : Paint related material including paint thinning, drying, removing, or reducing compound

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

Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger

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

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

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- DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.
B52 - Notwithstanding the provisions of 173.24b of this subchapter, non-reclosing pressure relief devices are authorized on DOT 57 portable tanks.
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). 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, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T2 - 1.5 178.274(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.
TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
- DOT Packaging Exceptions (49 CFR 173.xxx) : 150
- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L
- DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
- Other information : No supplementary information available.

Transportation of Dangerous Goods

- Transport document description : UN1263 PAINT RELATED MATERIAL (PAINT RELATED MATERIAL), 3, III
- UN-No. (TDG) : UN1263
- Proper Shipping Name (Transportation of Dangerous Goods) : PAINT RELATED MATERIAL
- TDG Primary Hazard Classes : 3 - Class 3 - Flammable Liquids
- Packing group : III - Minor Danger
- TDG Special Provisions : 59 - Substances that are listed by name in Schedule 1 must not be transported under this shipping name. Substances transported under this shipping name may contain not more than 20 per cent nitrocellulose if the nitrocellulose contains not more than 12.6 per cent nitrogen (by dry mass),83 - Repealed SOR/2014-152
- Explosive Limit and Limited Quantity Index : 5
- Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 60

Transport by sea

- Proper Shipping Name (IMDG) : PAINT RELATED MATERIAL
- Class (IMDG) : 3 - Flammable liquids
- Packing group (IMDG) : III - substances presenting low danger

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

2,4-pentanedione (123-54-6)

EPA TSCA Regulatory Flag

S - S - indicates a substance that is identified in a proposed or final Significant New Uses Rule.

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15.2. International regulations

CANADA

MARINE URETHANE ACCELERATOR

Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

2,4-pentanedione (123-54-6)

U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Other information : None.

Full text of H-phrases:

H226	Flammable liquid and vapor
H302	Harmful if swallowed
H311	Toxic in contact with skin

SDS US Endura

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