

SECTION 1: Identification**1.1. Identification**

Product form : Mixture
Product name : DURACOAT CLEAR A
Product code : FUA0207

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.endura.ca

1.4. Emergency telephone number

Emergency number : In the event of an emergency involving dangerous goods:
in Canada call CANUTEC at 613-996-6666 or *666 on a cellular phone.
in the US call CHEMTREC at 800-424-9300 (Account Name for US is Polyglass Coatings)

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

Flam. Liq. 2 H225 - Highly flammable liquid and vapor
Carc. 2 H351 - Suspected of causing cancer

Full text of H statements : see section 16

2.2. Label elements**GHS-US labeling**

Hazard pictograms (GHS-US) :



GHS02

GHS08

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapor
H351 - Suspected of causing cancer

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/sparks/open flames/hot surfaces. - 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
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P308+P313 - If exposed or concerned: Get medical advice/attention
P370+P378 - In case of fire: Use dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2) to extinguish
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

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2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
heptan-2-one	(CAS No) 110-43-0	40 - 50	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:vapour), H332
methyl isobutyl ketone	(CAS No) 108-10-1	3.298	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation:dust,mist), H332 Carc. 2, H351 STOT SE 3, H335

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off all contaminated clothing immediately.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

No additional information available

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 : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapor.
Reactivity	: Highly flammable liquid and vapor.

5.3. Advice for firefighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. NO open flames, NO sparks, and NO smoking.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8 Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up liquid spill into absorbent material. 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

For further information refer to section 8 : Exposure-controls/personal protection".

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. 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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- Hygiene measures : 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 : Ground/bond container and receiving equipment.
- Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

heptan-2-one (110-43-0)		
ACGIH	ACGIH TWA (ppm)	50 ppm (Methyl n-amyl ketone; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	Eye & skin irr
OSHA	OSHA PEL (TWA) (mg/m ³)	465 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	100 ppm

methyl isobutyl ketone (108-10-1)		
ACGIH	ACGIH TWA (ppm)	20 ppm (Methyl isobutyl ketone; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (ppm)	75 ppm (Methyl isobutyl ketone; USA; Short time value; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	URT irr; dizziness; headache
OSHA	OSHA PEL (TWA) (mg/m ³)	410 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	100 ppm

8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Hand protection : Protective gloves.
- Eye protection : Safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
- Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Color : Mixture contains one or more component(s) which have the following colour(s): Colourless to light yellow Colourless White Light yellow
- Odor : There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure.
Mixture contains one or more component(s) which have the following odour(s): Irritating/pungent odour Fruity odour Pleasant odour Sweet odour Camphor odour No data available on odour Petroleum-like odour Mild odour Ether-like odour Characteristic odour Strong odour
- Odor threshold : No data available
- pH : No data available
- Melting point : Not applicable
- Freezing point : No data available

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Boiling point	: 116.5 °C 241.7 °F
Flash point	: 22.77 °C 72.98 °F
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: 1 - 12 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	: 0.9555 g/cm ³
Solubility	: Water: Solubility in water of component(s) of the mixture : • heptan-2-one: 0.421 g/100ml (20 °C, poorly soluble) • methyl isobutyl ketone: 1.4 g/100ml (20 °C) • ethyl 3-ethoxypropionate: 9 g/100ml • Stoddard solvent: insoluble • 2-methoxy-1-methylethyl acetate: 19.8 g/100ml (20 °C, soluble) • n-butyl acetate: 0.53 g/100ml (20 °C) • bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebecate: insoluble • 2,4-pentanedione: 17 g/100ml • dibutyltin dilaurate: g/100ml (20 °C) 1.43E-4
Log Pow	: No data available
Auto-ignition temperature	: No data available
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)	: 544.295 g/l 4.542 lb/gal
VOC content (Material - Actual)	: 544.295 g/l 4.542 lb/gal
Percent Solids (Weight)	: 43.03 %
Percent Solids (Volume)	: 34.614 %
Percent Volatile (Weight)	: 56.97 %
Percent Volatile (Volume)	: 65.386 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapor.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, No sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

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heptan-2-one (110-43-0)	
LD50 oral rat	1670 mg/kg (Rat; Experimental value; 1600 mg/kg bodyweight; Rat)
LD50 dermal rat	10300 mg/kg (Rat; Experimental value; OECD 402: Acute Dermal Toxicity; >2000 mg/kg bodyweight; Rat)
LC50 inhalation rat (mg/l)	14 mg/l/4h (Rat; Experimental value; >16.7 mg/l/4h; Rat)
ATE US (oral)	1670.000 mg/kg body weight
ATE US (dermal)	10300.000 mg/kg body weight
ATE US (vapors)	14.000 mg/l/4h
ATE US (dust, mist)	14.000 mg/l/4h

methyl isobutyl ketone (108-10-1)	
LD50 oral rat	2080 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rat	>= 2000 mg/kg body weight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	8.2- 16.4,Rat; Experimental value
LC50 inhalation rat (ppm)	2000 - 4000 ppm/4h (Rat; Experimental value)
ATE US (oral)	2080.000 mg/kg body weight
ATE US (gases)	2000.000 ppmV/4h
ATE US (dust, mist)	1.500 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.

methyl isobutyl ketone (108-10-1)	
IARC group	2B - Possibly Carcinogenic to Humans

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

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.
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heptan-2-one (110-43-0)	
LC50 fish 1	131 mg/l (LC50; EPA OPP 72-1; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 2	> 90.1 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Semi-static system; Fresh water; Experimental value)
Threshold limit algae 2	98.2 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)

12.2. Persistence and degradability

heptan-2-one (110-43-0)	
Persistence and degradability	Readily biodegradable in water. Highly mobile in soil.
BOD (% of ThOD)	0.44

methyl isobutyl ketone (108-10-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Low potential for adsorption in soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	2.06 g O ₂ /g substance
Chemical oxygen demand (COD)	2.16 g O ₂ /g substance

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methyl isobutyl ketone (108-10-1)	
ThOD	2.72 g O ₂ /g substance
BOD (% of ThOD)	0.76

12.3. Bioaccumulative potential

heptan-2-one (110-43-0)	
Log Pow	2.26 (Experimental value; EU Method A.8: Partition Coefficient; 30 °C; 2.26; Experimental value; EU Method A.8: Partition Coefficient; 30 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

methyl isobutyl ketone (108-10-1)	
BCF fish 1	2 - 5 (BCF)
Log Pow	1.9 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

heptan-2-one (110-43-0)	
Surface tension	0.0591 N/m (21.6 °C)
Log Koc	log Koc,EU Method C.19; 1.45; Experimental value

methyl isobutyl ketone (108-10-1)	
Surface tension	0.024 N/m (20 °C)
Log Koc	Koc,101.85; Weight of evidence; Calculated value; log Koc; 2.008; Weight of evidence; Calculated value

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapors may accumulate in the container.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1263 Paint (including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler, and liquid lacquer base), 3, II

UN-No.(DOT) : UN1263

Proper Shipping Name (DOT) : Paint
including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler, and liquid lacquer base

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

Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : II - Medium 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) : 149 - When transported as a limited quantity or a consumer commodity, the maximum net capacity specified in 173.150(b)(2) of this subchapter for inner packaging may be increased to 5 L (1.3 gallons)
B52 - Notwithstanding the provisions of 173.24b of this subchapter, non-reclosing pressure relief devices are authorized on DOT 57 portable tanks
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling
TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32 F)
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, 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) : 5 L
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
- DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded
- Other information : No supplementary information available.

TDG

- Transport document description : UN1263 PAINT (PAINT), 3, II
- UN-No. (TDG) : UN1263
- TDG Proper Shipping Name : PAINT
- TDG Primary Hazard Classes : 3 - Class 3 - Flammable Liquids
- Packing group : II - Medium 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 : 5

Transport by sea

- UN-No. (IMDG) : 1263
- Proper Shipping Name (IMDG) : PAINT
- Class (IMDG) : 3 - Flammable liquids
- Packing group (IMDG) : II - substances presenting medium danger

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

heptan-2-one (110-43-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
methyl isobutyl ketone (108-10-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 313 (Specific toxic chemical listings)	
CERCLA RQ	5000 lb

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15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

methyl isobutyl ketone (108-10-1)

Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

methyl isobutyl ketone (108-10-1)

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 significance risk level (NSRL)
Yes	Yes	No	No	

heptan-2-one (110-43-0)

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

methyl isobutyl ketone (108-10-1)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-phrases:

H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H332	Harmful if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer

SDS US Endura

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