ACTIVATOR-EP-2C SEALER B

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : ACTIVATOR-EP-2C SEALER B

Product code : FUB0651

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
Resp. Sens. 1	H334 -	May cause allergy or asthma symptoms or breathing difficulties if inhaled
Skin Sens. 1	H317 -	May cause an allergic skin reaction
Muta. 1B	H340 -	May cause genetic defects
Carc. 1B	H350 -	May cause cancer
STOT SE 3	H336 -	May cause drowsiness or dizziness
STOT RE 2	H373 -	May cause damage to organs through prolonged or repeated exposure

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS02 GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H225 - Highly flammable liquid and vapor
H317 - May cause an allergic skin reaction
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H336 - May cause drowsiness or dizziness
H340 - May cause genetic defects
H350 - May cause cancer
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat/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
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
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

P284 - [In case of inadequate ventilation] wear respiratory protection
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
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing
P308+P313 - If exposed or concerned: Get medical advice/attention
P312 - Call a poison center or a doctor if you feel unwell
P314 - Get medical advice/attention if you feel unwell
P321 - Specific treatment (see 4.1. First aid procedures on this label)
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P342+P311 - If experiencing respiratory symptoms: Call a poison center/doctor/…
P363 - Wash contaminated clothing before reuse
P370+P378 - In case of fire: Use dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2) to extinguish
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/container 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	%	GHS-US classification
solvent naphtha (petroleum), light aromatic	(CAS-No.) 64742-95-6	11.046 - 12.274	Flam. Liq. 2, H225 Muta. 1B, H340 Carc. 1B, H350 Asp. Tox. 1, H304
heptan-2-one	(CAS-No.) 110-43-0	5 - 10	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:vapour), H332
1,2,4-trimethylbenzene	(CAS-No.) 95-63-6	0 - 4.296	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 STOT SE 3, H335 Aquatic Chronic 2, H411
4,4'-methylenediphenyl diisocyanate	(CAS-No.) 101-68-8	2.342 - 3.123	Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
methylenediphenyl diisocyanate, isomer mixture	(CAS-No.) 26447-40-5	1.171 - 1.952	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
cumene	(CAS-No.) 98-82-8	0.736	Flam. Liq. 3, H226 Carc. 2, H351 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
2,4-toluene diisocyanate	(CAS-No.) 584-84-9	0.125	Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 Aquatic Chronic 3, H412

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. Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off all contaminated clothing immediately. If skin irritation or rash occurs: Get medical advice/attention.

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

Symptoms/effects : May cause drowsiness or dizziness.

Symptoms/effects after inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : May cause an allergic skin reaction.

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 : NO open flames, NO sparks, and NO smoking. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapors/spray.

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. Notify authorities if product 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. 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"".

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. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Contaminated work clothing should not be allowed out of the workplace. 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 : 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

4,4'-methylenediphenyl diisocyanate (101-68-8)		
ACGIH	ACGIH TWA (ppm)	0.005 ppm (Methylene bisphenyl isocyanate (MDI); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	Resp sens
OSHA	OSHA PEL (Ceiling) (mg/m³)	0.2 mg/m³
OSHA	OSHA PEL (Ceiling) (ppm)	0.02 ppm

2,4-toluene diisocyanate (584-84-9)		
ACGIH	ACGIH TWA (ppm)	0.005 ppm (Toluene-2,4-diisocyanate; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)

2,4-toluene diisocyanate (584-84-9)		
ACGIH	ACGIH STEL (ppm)	0.02 ppm (Toluene-2,4-diisocyanate; USA; Short time value; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	Asthma; skin; DSEN; RSEN; A3
OSHA	OSHA PEL (Ceiling) (mg/m³)	0.14 mg/m³
OSHA	OSHA PEL (Ceiling) (ppm)	0.02 ppm

solvent naphtha (petroleum), light aromatic (64742-95-6)		
ACGIH	ACGIH TWA (ppm)	50 ppm

1,2,4-trimethylbenzene (95-63-6)		
ACGIH	ACGIH TWA (ppm)	25 ppm (Trimethyl benzene (mixed isomers); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)

cumene (98-82-8)		
ACGIH	ACGIH TWA (ppm)	50 ppm (Cumene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	Eye, skin, & URT irr; CNS impair
OSHA	OSHA PEL (TWA) (mg/m³)	245 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	50 ppm

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/m³)	465 mg/m³
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 : Wear respiratory protection.
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):
Dark amber White to light yellow No data available on colour Colourless Colourless to light yellow On exposure to light: turns dark
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):
Stuffy odour Mild odour Characteristic odour Fruity odour Pleasant odour Irritating/pungent odour Sweet odour No data available on odour Aromatic odour
Odor threshold : No data available
pH : No data available
Melting point : Not applicable
Freezing point : No data available
Boiling point : 75 °C
167 °F
Flash point : -4 °C
24.8 °F
Relative evaporation rate (butyl acetate=1) : No data available

Flammability (solid, gas)	: No data available
Explosion limits	: 1 - 11.5 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	: 0.9825 g/cm³
Solubility	: No data available
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)	: 675.665 g/l
	: 5.639 lb/gal
VOC content (Material - Actual)	: 675.665 g/l
	: 5.639 lb/gal
Percent Solids (Weight)	: 31.23 %
Percent Solids (Volume)	: 23.899 %
Percent Volatile (Weight)	: 68.77 %
Percent Volatile (Volume)	: 76.101 %

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

4,4'-methylenediphenyl diisocyanate (101-68-8)	
LD50 oral rat	> 7616 mg/kg (Rat; Equivalent or similar to OECD 401; Read-across)
LD50 dermal rabbit	> 9400 mg/kg body weight (Rabbit; Read-across; Equivalent or similar to OECD 402)
ATE US (dust, mist)	1.5 mg/l/4h

methylenediphenyl diisocyanate, isomer mixture (26447-40-5)	
LD50 oral rat	> 2000 mg/kg body weight (Rat; Other; Experimental value)
LD50 dermal rabbit	> 9400 mg/kg body weight (Rabbit; Read-across; Equivalent or similar to OECD 402)
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h

methylenediphenyl diisocyanate, isomer mixture (26447-40-5)	
ATE US (dust, mist)	1.5 mg/l/4h

2,4-toluene diisocyanate (584-84-9)	
LD50 oral rat	5800 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 4130 mg/kg bodyweight; Rat; Equivalent or similar to OECD 401; Read-across; 5110 mg/kg bodyweight; Rat; Read-across)
LD50 dermal rabbit	> 19590 mg/kg (Rabbit; Literature study; Equivalent or similar to OECD 402; >9400 mg/kg bodyweight; Rabbit; Read-across)
LC50 inhalation rat (mg/l)	0.1 mg/l/4h (Rat; Literature study; 0.35-0.36 mg/l/4h; Rat; Literature study)
LC50 inhalation rat (ppm)	14 ppm/4h (Rat; Literature study)
ATE US (oral)	5800 mg/kg body weight
ATE US (gases)	14 ppmV/4h
ATE US (vapors)	0.1 mg/l/4h
ATE US (dust, mist)	0.1 mg/l/4h

1,2,4-trimethylbenzene (95-63-6)	
LD50 oral rat	> 5000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature; 6000 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 3440 mg/kg (Rat; Read-across; OECD 402: Acute Dermal Toxicity)
LC50 inhalation rat (mg/l)	18 mg/l/4h (Rat)
ATE US (vapors)	18 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

cumene (98-82-8)	
LD50 oral rat	> 2000 mg/kg (Rat; Other; Literature study; 4000 mg/kg bodyweight; Rat; Other; Inconclusive, insufficient data)
LD50 dermal rabbit	10578 mg/kg (Rabbit; Literature study; Other)
LC50 inhalation rat (mg/l)	40 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	8000 ppm/4h (Rat; Literature study)
ATE US (dermal)	10578 mg/kg body weight
ATE US (gases)	8000 ppmV/4h
ATE US (vapors)	40 mg/l/4h
ATE US (dust, mist)	40 mg/l/4h

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 mg/kg body weight
ATE US (dermal)	10300 mg/kg body weight
ATE US (vapors)	14 mg/l/4h
ATE US (dust, mist)	14 mg/l/4h

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity : May cause genetic defects.

Carcinogenicity : May cause cancer.

4,4'-methylenediphenyl diisocyanate (101-68-8)	
IARC group	3 - Not Classifiable

methylenediphenyl diisocyanate, isomer mixture (26447-40-5)	
IARC group	3 - Not Classifiable

2,4-toluene diisocyanate (584-84-9)	
IARC group	2B - Possibly Carcinogenic to Humans

cumene (98-82-8)	
IARC group	2B - Possibly Carcinogenic to Humans

Reproductive toxicity : Not classified

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 classified

Symptoms/effects after inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : May cause an allergic skin reaction.

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.

4,4'-methylenediphenyl diisocyanate (101-68-8)	
EC50 Daphnia 1	129.7 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 24 h; Daphnia magna; Static system; Fresh water; Read-across)
LC50 fish 2	> 1000 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Danio rerio; Static system; Fresh water; Read-across)
Threshold limit algae 1	> 1640 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Desmodesmus subspicatus; Static system; Fresh water; Read-across)

methylenediphenyl diisocyanate, isomer mixture (26447-40-5)	
LC50 fish 1	> 1000 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Brachydanio rerio; Static system; Fresh water; Read-across)
EC50 Daphnia 1	> 1000 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 24 h; Daphnia magna; Static system; Fresh water; Read-across)
Threshold limit algae 1	> 1640 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Scenedesmus subspicatus; Static system; Fresh water; Read-across)

2,4-toluene diisocyanate (584-84-9)	
EC50 Daphnia 2	12.5 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Read-across)
Threshold limit algae 1	3230 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 96 h; Skeletonema costatum)

1,2,4-trimethylbenzene (95-63-6)	
LC50 fish 1	7.72 mg/l (LC50; 96 h; Pimephales promelas; Flow-through system; Fresh water)
EC50 Daphnia 1	3.6 mg/l (LC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 2	2.356 mg/l (EC50; ECOSAR; 96 h; Algae; Fresh water)

cumene (98-82-8)	
EC50 Daphnia 1	2.14 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)

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

4,4'-methylenediphenyl diisocyanate (101-68-8)	
Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available.

methylenediphenyl diisocyanate, isomer mixture (26447-40-5)	
Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available.

2,4-toluene diisocyanate (584-84-9)	
Persistence and degradability	Not readily biodegradable in water. Hydrolysis in water. Non degradable in the soil. Low potential for adsorption in soil.

1,2,4-trimethylbenzene (95-63-6)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. Low potential for mobility in soil. Photodegradation in the air.
Chemical oxygen demand (COD)	0.44 g O_2/g substance

cumene (98-82-8)	
Persistence and degradability	Inherently biodegradable. Not readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	1.28 g O_2/g substance
Chemical oxygen demand (COD)	2.42 g O_2/g substance
ThOD	3.2 g O_2/g substance
BOD (% of ThOD)	0.4

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

12.3. Bioaccumulative potential

4,4'-methylenediphenyl diisocyanate (101-68-8)	
BCF fish 2	92 - 200 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 4 weeks; Cyprinus carpio; Flow-through system; Fresh water; Experimental value; GLP)
Log Pow	5.22 (Estimated value; 4.51; Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

methylenediphenyl diisocyanate, isomer mixture (26447-40-5)	
BCF fish 1	92 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 28 days; Cyprinus carpio; Flow-through system; Fresh water; Read-across; GLP)
Log Pow	4.51 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

2,4-toluene diisocyanate (584-84-9)	
BCF fish 1	< 5 (BCF; Cyprinus carpio)
Log Pow	3.43 (Conclusion by analogy; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

solvent naphtha (petroleum), light aromatic (64742-95-6)	
Log Pow	2.1 - 6

1,2,4-trimethylbenzene (95-63-6)	
BCF fish 1	31 - 275 (BCF; Other; 8 weeks; Cyprinus carpio)
Log Pow	3.63 - 4.09 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

cumene (98-82-8)	
BCF fish 1	35.5 (BCF)
BCF other aquatic organisms 1	94.69 (BCF; BCFBAF v3.00)
Log Pow	3.66 (Experimental value; 3.55; Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

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).

12.4. Mobility in soil

2,4-toluene diisocyanate (584-84-9)	
Surface tension	0.025 N/m (25 °C)

1,2,4-trimethylbenzene (95-63-6)	
Surface tension	0.029 N/m
Log Koc	log Koc,3.04; Calculated value
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

cumene (98-82-8)	
Log Koc	Koc,884; Calculated value; log Koc; 2.946; Calculated value

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

12.5. Other adverse effects

Effect on the global warming : No known effects from 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 related material (including paint thinning, drying, removing, or reducing compound), 3, II

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) : II - Medium Danger

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

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

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.

Transportation of Dangerous Goods

Transport document description	:	UN1263 PAINT RELATED MATERIAL (PAINT RELATED MATERIAL), 3, II
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	:	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
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

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

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

polymethylene polyphenyl isocyanate	CAS-No. 9016-87-9	3.123 - 3.904%
4,4'-methylenediphenyl diisocyanate	CAS-No. 101-68-8	2.342 - 3.123%
2,4-toluene diisocyanate	CAS-No. 584-84-9	0.125%
2,6-toluene diisocyanate	CAS-No. 91-08-7	0.031%
1,2,4-trimethylbenzene	CAS-No. 95-63-6	0 - 4.296%
cumene	CAS-No. 98-82-8	0.736%
xylene, mixture of isomers	CAS-No. 1330-20-7	0.368%

4,4'-methylenediphenyl diisocyanate (101-68-8)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
CERCLA RQ	5000 lb

2,4-toluene diisocyanate (584-84-9)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
CERCLA RQ	100 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb

1,2,4-trimethylbenzene (95-63-6)
Listed on SARA Section 313 (Specific toxic chemical listings)

cumene (98-82-8)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
CERCLA RQ	5000 lb

15.2. International regulations

CANADA

ACTIVATOR-EP-2C SEALER B
Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

No additional information available

National regulations

cumene (98-82-8)
Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

cumene (98-82-8)				
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	No	No	No	

4,4'-methylenediphenyl diisocyanate (101-68-8)
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

2,4-toluene diisocyanate (584-84-9)
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

1,2,4-trimethylbenzene (95-63-6)
U.S. - New Jersey - Right to Know Hazardous Substance List

cumene (98-82-8)
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

heptan-2-one (110-43-0)
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Revision date : 06/11/2018

Full text of H-phrases:

H225	Highly flammable liquid and vapor
H226	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
H330	Fatal if inhaled
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

SDS US Endura

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