

5310 Resin

Safety Data Sheet

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

Date of issue: 03/05/2014 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixtures
Product name. : 5310 Resin
Product code : 5310 Resin
Formula : 41032E

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

Use of the substance/mixture : Adhesive

1.3. Details of the supplier of the safety data sheet

Advanced Adhesive Systems, Inc.
681 North Mountain Road
Newington CT 06111

860-953-4100

1.4. Emergency telephone number

Emergency number : 1-800-255-3924 INTERNATIONAL: 001-813-248-0585
Chem-Tel (available 24 hours/day)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Aquatic Acute 3	H402

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS02

GHS07

Signal word (GHS-US) :

Danger.

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapor
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H402 - Harmful to aquatic life

Precautionary statements (GHS-US) :

P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P280 - Wear eye protection, protective clothing, protective gloves
P314 - Get medical advice/attention if you feel unwell
P304 + P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P363 - Wash contaminated clothing before reuse
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P337 + P313 - If eye irritation persists: Get medical advice/attention
P411 + P235 - Store at temperatures not exceeding 38C/100F. Keep cool.
P370 + P378 - In case of fire: Use Use dry chemical, CO2, or Foam to extinguish

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P403 + P235 - Store in a cool and well-ventilated place.
P501 - Dispose of contents/container to an approved waste disposal plant, in accordance with applicable local, state, national laws
P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing vapors
P262 - Do not get in eyes, on skin, or on clothing
P271 - Use only outdoors or in a well-ventilated area
P301 + P330 + P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P302 - IF ON SKIN: Wash skin with mild soap and water.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification (GHS-US)
methylmethacrylate, monomer, inhibited	(CAS No) 80-62-6	25 - 60	Flam. Liq. 2, H225 Aquatic Acute 3, H402
methacrylic acid, stabilized	(CAS No) 79-41-4	5 - 10	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Aquatic Acute 3, H402
Urethane Methacrylate Oligomer	(CAS No) Proprietary	< 5	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
maleic acid	(CAS No) 110-16-7	< 5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Aquatic Acute 2, H401
2,6-di-tert-butyl-p-cresol	(CAS No) 128-37-0	< 5	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400
p-toluenesulfonyl chloride	(CAS No) 98-59-9	0.81 - 1.35	Skin Irrit. 2, H315 Eye Dam. 1, H318
cumene hydroperoxide	(CAS No) 80-15-9	1.08 - 1.215	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation:vapour), H330 Aquatic Acute 2, H401

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Immediately consult a doctor/medical service.
First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs: Consult a doctor/medical service.
First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Get medical advice/attention.
First-aid measures after ingestion : Rinse mouth with water. Drink plenty of water. Do NOT induce vomiting. Get immediate medical attention.

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

Symptoms/injuries : If you feel unwell, seek medical advice.
Symptoms/injuries after inhalation : Cough.
Symptoms/injuries after skin contact : Slight irritation. Skin rash/inflammation.
Symptoms/injuries after eye contact : May cause severe irritation.
Symptoms/injuries after ingestion : No data available.
Chronic symptoms : No data available.

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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 : carbon dioxide (CO₂), dry chemical powder, foam.
Unsuitable extinguishing media : Do not use water jet to extinguish.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapor. Heat destroys stabilizer against polymerization. Insoluble in water.
Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. may be ignited by sparks.
Reactivity : May polymerize. Reducing agents. Alkalis. Amines. Moisture. Oxidizers. Ultraviolet radiation. Strong acids, bases.

5.3. Advice for firefighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation.
Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Ensure adequate ventilation. Eliminate ignition sources. Use protective clothing. Use special care to avoid static electric charges. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Protective clothing. Safety glasses.
Emergency procedures : Evacuate unnecessary personnel. Keep upwind. Remove all sources of ignition. Seal off low-lying areas. Use personal protective equipment as required.

6.1.2. For emergency responders

- Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Stop leak if safe to do so. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if liquid enters sewers or public waters. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

6.3. Methods and material for containment and cleaning up

- For containment : Dam up the liquid spill. Plug the leak, cut off the supply.
Methods for cleaning up : Take up liquid spill into inert absorbent material. Absorbed substance: shovel into open drums.

6.4. Reference to other sections

See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Keep away from Heat, sources of ignition. - No smoking.
Precautions for safe handling : Do no eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Do not handle until all safety precautions have been read and understood. Do not discharge the waste into the drain. Keep away from sources of ignition - No smoking. Take precautions against electrostatic charges. Use only in well ventilated area. Use only non-sparking tools. Use personal protective equipment as required. Wash hands before smoking, eating, drinking, using toilet facilities.
Hygiene measures : Wash contaminated clothing before reuse. Do no eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.

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7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations.
Storage conditions	: Keep container tightly closed. Keep only in the original container in a cool, well ventilated place away from : Direct sunlight., Heat sources.
Incompatible products	: strong acids. Reducing agents. amines. Oxidizing agent. Strong bases.
Incompatible materials	: Direct sunlight. Heat sources. Sources of ignition. Refer to Section 10 on Incompatible Materials.
Maximum storage period	: 6 months @23C in original SEALED container
Storage temperature	: ≤ 38 °C
Heat-ignition	: KEEP SUBSTANCE AWAY FROM: ignition sources. heat sources.
Storage area	: Keep out of direct sunlight. Store away from heat. Store in a cool area. Store in a dry area. Store in a well-ventilated place.

7.3. Specific end use(s)

Adhesive: component.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls	: Provide adequate general and local exhaust ventilation.
Personal protective equipment	: Gloves. Protective clothing. Safety glasses.



Materials for protective clothing	: Chemical resistant.
Hand protection	: Wear chemically resistant protective gloves.
Eye protection	: Wear safety glasses with side shields.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.
Thermal hazard protection	: None necessary.
Environmental exposure controls	: Specific risk management measures are not required beyond good industrial hygiene and safety procedures.
Other information	: Do no eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Paste.
Color	: Mixture contains one or more component(s) which have the following colour(s): Colourless, Colourless or white, White, On exposure to light: yellow, Yellow-green, Colourless to light yellow, Pure substance: colourless, Commercial substance: light yellow, White to light grey, White to yellow-brown, Colourless to yellow, Liquid: colourless, Solid: white to brown, Colourless to white, Commercial substance: light violet to black, white, Yellow, No data available on colour
Odor	: Acrylic
Odor threshold	: No data available
pH	: 3 - 3.5
Relative evaporation rate (butyl acetate=1)	: 3
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 101 °C
Flash point	: 10.5 °C

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Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 29 mm Hg
Relative vapor density at 20 °C	: > 1
Relative density	: 1.03
Solubility	: Insoluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 2.1 - 12.5 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

May polymerize. Reducing agents. Alkalis. Amines. Moisture. Oxidizers. Ultraviolet radiation. Strong acids, bases.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization may occur. Avoid Excessive aging, excessive heat, and inhibitor depletion.

10.4. Conditions to avoid

Direct sunlight. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. High temperature.

10.5. Incompatible materials

Refer to Section 10.1.

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide. hydrocarbons. Hydrogen Cyanide. Isocyanate containing vapors. irritating organic vapors. Oxides of Nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

methylmethacrylate, monomer, inhibited (80-62-6)	
LD50 oral rat	> 6000 mg/kg (7900 mg/kg bodyweight; 8400 mg/kg bodyweight; Rat; Rat; Rat)
LD50 dermal rabbit	> 7550 mg/kg (>5000 mg/kg bodyweight; Rabbit; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	27.5 mg/l/4h (Rat)
ATE US (vapours)	27.50000000 mg/l/4h
ATE US (dust,mist)	27.50000000 mg/l/4h

methacrylic acid, stabilized (79-41-4)	
LD50 oral rat	1060 (Rat)
LD50 dermal rabbit	500 (Rabbit)
LC50 inhalation rat (mg/l)	7 mg/l/4h (Rat)
ATE US (oral)	1060.00000000 mg/kg body weight
ATE US (dermal)	500.00000000 mg/kg body weight
ATE US (vapours)	7.00000000 mg/l/4h
ATE US (dust,mist)	7.00000000 mg/l/4h

maleic acid (110-16-7)	
LD50 oral rat	708 mg/kg (Rat)
LD50 dermal rabbit	1560 mg/kg (Rabbit)
ATE US (oral)	708.00000000 mg/kg body weight
ATE US (dermal)	1560.00000000 mg/kg body weight

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2,6-di-tert-butyl-p-cresol (128-37-0)	
LD50 oral rat	890 mg/kg (>6000 mg/kg bodyweight; Rat; Rat; Experimental value,>6000 mg/kg bodyweight; Rat; Rat; Experimental value)
LD50 dermal rat	> 2000 mg/kg (>2000 mg/kg bodyweight; Rat; Rat; Experimental value)
ATE US (oral)	890.00000000 mg/kg body weight

cumene hydroperoxide (80-15-9)	
LD50 oral rat	382 mg/kg (Rat)
LD50 dermal rat	1200-1520,Rat
LD50 dermal rabbit	133 mg/kg body weight (Rabbit)
LC50 inhalation rat (mg/l)	1.37 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	220 ppm/4h (Rat)
ATE US (oral)	382.00000000 mg/kg body weight
ATE US (dermal)	133.00000000 mg/kg body weight
ATE US (gases)	220.00000000 ppmV/4h
ATE US (vapours)	1.37000000 mg/l/4h
ATE US (dust,mist)	1.37000000 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation. pH: 3 - 3.5
Serious eye damage/irritation	: Causes serious eye irritation. pH: 3 - 3.5
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

methymethacrylate, monomer, inhibited (80-62-6)	
IARC group	3 - Not Classifiable

2,6-di-tert-butyl-p-cresol (128-37-0)	
IARC group	3 - Not Classifiable

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: Cough.
Symptoms/injuries after skin contact	: Slight irritation. Skin rash/inflammation.
Symptoms/injuries after eye contact	: May cause severe irritation.
Symptoms/injuries after ingestion	: No data available.
Chronic symptoms	: No data available.

SECTION 12: Ecological information

12.1. Toxicity

methymethacrylate, monomer, inhibited (80-62-6)	
LC50 fish 1	130 mg/l (96 h; Pimephales promelas; Lethal)
EC50 Daphnia 1	69 mg/l (48 h; Daphnia magna; GLP)
LC50 fish 2	191 mg/l (96 h; Lepomis macrochirus)
EC50 Daphnia 2	502 mg/l (24 h; Daphnia magna)
TLM fish 1	159 mg/l (96 h; Pimephales promelas)
Threshold limit other aquatic organisms 1	100 mg/l (16 h; Pseudomonas putida)
Threshold limit algae 1	37 mg/l (168 h; Scenedesmus quadricauda; Toxicity test)
Threshold limit algae 2	120 mg/l (192 h; Microcystis aeruginosa)

methacrylic acid, stabilized (79-41-4)	
LC50 fish 1	100-180,96 h; Brachydanio rerio
EC50 Daphnia 1	100-180,24 h; Daphnia magna; Nocivity test
LC50 fish 2	85 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	> 130 mg/l (48 h; Daphnia magna)
Threshold limit algae 1	45 mg/l (72 h; Selenastrum capricornutum)

maleic acid (110-16-7)	
LC50 fish 1	240 mg/l (48 h; Gambusia affinis)

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maleic acid (110-16-7)	
EC50 Daphnia 1	316 mg/l (48 h; Daphnia magna)
LC50 fish 2	5 mg/l (96 h; Pimephales promelas)
TLM fish 1	240 ppm (48 h; Gambusia affinis)
TLM fish 2	5 ppm (96 h; Pimephales promelas)

2,6-di-tert-butyl-p-cresol (128-37-0)	
LC50 fish 1	0.199 mg/l (96 h; Pisces)
EC50 Daphnia 1	0.48 mg/l (48 h; Daphnia magna; GLP)
Threshold limit algae 1	> 0.4 mg/l (72 h; Scenedesmus subspicatus; GLP)
Threshold limit algae 2	0.363 mg/l (Algae; Chronic)

cumene hydroperoxide (80-15-9)	
LC50 fish 1	14 mg/l (48 h; Leuciscus idus; GLP)
EC50 Daphnia 1	7 mg/l (24 h; Daphnia magna; Static system)
LC50 fish 2	3.9 mg/l (96 h; Oncorhynchus mykiss)
EC50 Daphnia 2	18.84 mg/l (48 h; Daphnia magna; GLP)
Threshold limit algae 1	1.2 mg/l (Microcystis aeruginosa)
Threshold limit algae 2	7.4 mg/l (Scenedesmus quadricauda)

12.2. Persistence and degradability

methacrylate, monomer, inhibited (80-62-6)	
Persistence and degradability	Readily biodegradable in water. No (test)data on mobility of the substance available. Photolysis in the air.
Biochemical oxygen demand (BOD)	0.14 g O ₂ /g substance
ThOD	1.9 g O ₂ /g substance
BOD (% of ThOD)	0.073 % ThOD

methacrylic acid, stabilized (79-41-4)	
Persistence and degradability	Readily biodegradable in water. Photodegradation in the air.
Biochemical oxygen demand (BOD)	0.89 g O ₂ /g substance
ThOD	1.67 g O ₂ /g substance
BOD (% of ThOD)	0.5329 % ThOD

maleic acid (110-16-7)	
Biochemical oxygen demand (BOD)	0.38 g O ₂ /g substance
Chemical oxygen demand (COD)	0.83 g O ₂ /g substance
ThOD	0.83 g O ₂ /g substance
BOD (% of ThOD)	0.38 % ThOD

2,6-di-tert-butyl-p-cresol (128-37-0)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil. Adsorbs into the soil. Low potential for mobility in soil. Photooxidation in the air.
Biochemical oxygen demand (BOD)	0.51 g O ₂ /g substance
Chemical oxygen demand (COD)	2.27 g O ₂ /g substance
ThOD	2.977 g O ₂ /g substance
BOD (% of ThOD)	0.17 % ThOD

p-toluenesulfonyl chloride (98-59-9)	
Persistence and degradability	Biodegradability in water: no data available.

cumene hydroperoxide (80-15-9)	
Persistence and degradability	Not readily biodegradable in water. Highly mobile in soil.

12.3. Bioaccumulative potential

methacrylate, monomer, inhibited (80-62-6)	
BCF fish 1	2.97 - 3.5 (Pisces)
Log Pow	1.32 - 1.38 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 20 °C, Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 20 °C, Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

methacrylic acid, stabilized (79-41-4)	
Log Pow	0.93
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

maleic acid (110-16-7)	
BCF fish 1	< 10 (72 h; Leuciscus idus)
BCF other aquatic organisms 1	11 (24 h; Chlorella sp.)
Log Pow	-0.79 - -0.32

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maleic acid (110-16-7)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
2,6-di-tert-butyl-p-cresol (128-37-0)	
BCF fish 1	230 - 2500 (56 days; Cyprinus carpio)
Log Pow	5.1 (Experimental value)
p-toluenesulfonyl chloride (98-59-9)	
Log Pow	3.49
Bioaccumulative potential	No bioaccumulation data available.
cumene hydroperoxide (80-15-9)	
BCF other aquatic organisms 1	9
Log Pow	1.6 (Experimental value; 25 °C, Experimental value; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

methylmethacrylate, monomer, inhibited (80-62-6)	
Surface tension	0.028 N/m (20 °C)
methacrylic acid, stabilized (79-41-4)	
Surface tension	0.02 N/m (23 °C)
2,6-di-tert-butyl-p-cresol (128-37-0)	
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.
cumene hydroperoxide (80-15-9)	
Surface tension	0.028 N/m (-9 °C)

12.5. Other adverse effects

Effect on ozone layer	: No additional information available
Effect on the global warming	: No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Additional information	: Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT	
UN-No.(DOT)	: 1133
DOT Proper Shipping Name	: Adhesives
Department of Transportation (DOT) Hazard Classes	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT)	: 3 - Flammable liquid



Packing group (DOT)	: II - Medium Danger
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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).
DOT Packaging Exceptions (49 CFR 173.xxx)	:	150
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	173
DOT Packaging Bulk (49 CFR 173.xxx)	:	242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	5L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	60L
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.

Additional information

Other information	:	No supplementary information available.
Special transport precautions	:	Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.
State during transport (ADR-RID)	:	as liquid.

ADR

Transport document description	:	UN 1133, 3, II, (D/E)
Packing group (ADR)	:	II
Class (ADR)	:	3 - Flammable liquid
Hazard identification number (Kemler No.)	:	33
Classification code (ADR)	:	F1
Danger labels (ADR)	:	3 - Flammable liquids



Orange plates	:	An orange rectangular label with a black border. It is divided into two horizontal sections. The top section contains the number '33' and the bottom section contains the number '1133'.
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Tunnel restriction code (ADR)	:	D/E
LQ	:	5L
Excepted quantities (ADR)	:	E2

Transport by sea

UN-No. (IMDG)	:	1133
Proper Shipping Name (IMDG)	:	Adhesives
Class (IMDG)	:	3 - Flammable liquids
Packing group (IMDG)	:	II - substances presenting medium danger
Limited quantities (IMDG)	:	5L

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EmS-No. (1) : F-E
EmS-No. (2) : S-D

Air transport

UN-No.(IATA) : 1133
Proper Shipping Name (IATA) : Adhesives
Class (IATA) : 3 - Flammable Liquids
Packing group (IATA) : II - Medium Danger
Instruction "cargo" (ICAO) : 364
Instruction "passenger" (ICAO) : 353
Instruction "passenger" - Limited quantities (ICAO) : Y341

SECTION 15: Regulatory information

15.1. US Federal regulations

5310 Resin	
EPA TSCA Regulatory Flag	All components of this product are listed on the TSCA Inventory of Chemical Substances or are exempt from listing.
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Fire hazard Immediate (acute) health hazard Reactive hazard

methylmethacrylate, monomer, inhibited (80-62-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	All components of this product are listed on the TSCA Inventory of Chemical Substances or are exempt from listing.
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	None
SARA Section 302 Threshold Planning Quantity (TPQ)	None
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Reactive hazard
SARA Section 313 - Emission Reporting	100 %

methacrylic acid, stabilized (79-41-4)	
EPA TSCA Regulatory Flag	All components of this product are listed on the TSCA Inventory of Chemical Substances or are exempt from listing.
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	None
SARA Section 302 Threshold Planning Quantity (TPQ)	None
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Fire hazard
SARA Section 313 - Emission Reporting	None

maleic acid (110-16-7)	
EPA TSCA Regulatory Flag	All components of this product are listed on the TSCA Inventory of Chemical Substances or are exempt from listing.
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Immediate (acute) health hazard

p-toluenesulfonyl chloride (98-59-9)	
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	None
SARA Section 302 Threshold Planning Quantity (TPQ)	None
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	None

cumene hydroperoxide (80-15-9)	
EPA TSCA Regulatory Flag	All components of this product are listed on the TSCA Inventory of Chemical Substances or are exempt from listing.
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	10 lb None
SARA Section 302 Threshold Planning Quantity (TPQ)	None

5310 Resin

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cumene hydroperoxide (80-15-9)	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Fire hazard Immediate (acute) health hazard Reactive hazard
SARA Section 313 - Emission Reporting	100 %

15.2. International regulations

CANADA

5310 Resin	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects

methylmethacrylate, monomer, inhibited (80-62-6)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects

methacrylic acid, stabilized (79-41-4)	
WHMIS Classification	Class B Division 3 - Combustible Liquid Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class E - Corrosive Material Class F - Dangerously Reactive Material

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2	H225
Org. Perox. F	H242
Skin Corr. 1A	H314
Skin Sens. 1	H317
Muta. 1B	H340
Carc. 1B	H350
STOT SE 3	H335
Aquatic Chronic 3	H412

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

15.2.2. National regulations

5310 Resin
Components of this product are listed or exempt from listing on the Canadian Domestic Substance List.

15.3. US State regulations

5310 Resin()	
State or local regulations	This product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

p-toluenesulfonyl chloride (98-59-9)	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) List	

cumene hydroperoxide (80-15-9)	
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	
This product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.	

SECTION 16: Other information

Full text of H-phrases: see section 16:

Acute Tox. 2 (Dermal)	Acute toxicity (dermal) Category 2
Acute Tox. 2 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4

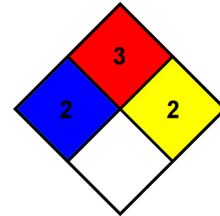
5310 Resin

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Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 4	Flammable liquids Category 4
Skin Corr. 1A	skin corrosion/irritation Category 1A
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H227	Combustible liquid
H302	Harmful if swallowed
H310	Fatal in contact with skin
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H330	Fatal if inhaled
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life

- NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
- NFPA fire hazard : 3 - Liquids and solids that can be ignited under almost all ambient conditions.
- NFPA reactivity : 2 - Normally unstable and readily undergo violent decomposition but do not detonate. Also: may react violently with water or may form potentially explosive mixtures with water.



HMIS III Rating

- Health : 2 Moderate Hazard - Temporary or minor injury may occur
- Flammability : 3 Serious Hazard
- Physical : 2 Moderate Hazard
- Personal Protection : X

SDS US (GHS HazCom 2012)

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