

ARALDITE® 2085 US

Version 2.0 Revision Date: 05/10/2023 SDS Number: 400001019395 Date of last issue: 08/01/2019
 Date of first issue: 02/12/2016

Print Date 10/24/2023

SECTION 1. IDENTIFICATION

Product name : ARALDITE® 2085 US

Manufacturer or supplier's details

Company name of supplier : Huntsman Advanced Materials Americas LLC
 Address : P.O. Box 4980
 The Woodlands,
 TX 77387
 United States of America (USA)

Telephone : Non-Emergency: (800) 257-5547

E-mail address : Global_Product_EHS_AdMat@huntsman.com

Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Adhesives

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Flammable liquids : Category 2
 Skin irritation : Category 2
 || Serious eye damage : Category 1
 Skin sensitisation : Category 1
 Carcinogenicity : Category 2
 Specific target organ toxicity - single exposure : Category 3 (Respiratory system)
 Short-term (acute) aquatic hazard : Category 3

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GHS label elements

Hazard pictograms :    

Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
 H315 Causes skin irritation.

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H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H402 Harmful to aquatic life.

Precautionary statements

: **Prevention:**

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.
P261 Avoid breathing mist or vapours.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

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.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
 Chemical nature : Adhesives

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
methyl methacrylate	80-62-6	50 - 70
methacrylic acid	79-41-4	5 - 10
2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene and ethenylbenzene	25053-09-2	5 - 10
Talc (Mg ₃ H ₂ (SiO ₃) ₄)	14807-96-6	0.1 - 1
2,6-di-tert-butyl-p-cresol	128-37-0	0.1 - 1
1,1,2-trichloroethane	79-00-5	0.1 - 1

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
 Consult a physician.
 Show this safety data sheet to the doctor in attendance.
 Treat symptomatically.
 Get medical attention if symptoms occur.

If inhaled : If inhaled, remove to fresh air.
 Get medical attention if symptoms occur.

In case of skin contact : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
 If on skin, rinse well with water.
 If on clothes, remove clothes.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
 In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 Continue rinsing eyes during transport to hospital.
 Remove contact lenses.
 Keep eye wide open while rinsing.
 If eye irritation persists, consult a specialist.

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- If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : None known.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Avoid inhalation, ingestion and contact with skin and eyes.
No action shall be taken involving any personal risk or without suitable training.
It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : Exercise caution when using a high volume water jet as it may scatter and spread fire
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Carbon oxides
Sulphur oxides
Hydrogen chloride
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Refer to protective measures listed in sections 7 and 8.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).
Use only explosion-proof equipment.
Keep away from open flames, hot surfaces and sources of ignition.
- Advice on safe handling : Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitisation of susceptible persons.
Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Open drum carefully as content may be under pressure.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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Observe label precautions.
 Keep in properly labelled containers.

Materials to avoid : For incompatible materials please refer to Section 10 of this SDS.

Recommended storage temperature : 41 - 77 °F / 5 - 25 °C

Further information on storage stability : Stable under normal conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
methyl methacrylate	80-62-6	TWA	50 ppm	ACGIH
		STEL	100 ppm	ACGIH
		TWA	100 ppm 410 mg/m ³	OSHA Z-1
		TWA	100 ppm 410 mg/m ³	NIOSH REL
methacrylic acid	79-41-4	TWA	100 ppm 410 mg/m ³	OSHA P0
		TWA	20 ppm	ACGIH
		TWA	20 ppm 70 mg/m ³	NIOSH REL
Talc (Mg ₃ H ₂ (SiO ₃) ₄)	14807-96-6	TWA	20 ppm 70 mg/m ³	OSHA P0
		TWA (Dust)	20 Million particles per cubic foot	OSHA Z-3
		TWA (respirable dust fraction)	2 mg/m ³	OSHA P0
2,6-di-tert-butyl-p-cresol	128-37-0	TWA (Respirable)	2 mg/m ³	NIOSH REL
		TWA	0.1 fibres per cubic centimeter	ACGIH
		TWA (Respirable particulate matter)	2 mg/m ³	ACGIH
		PEL (respirable)	0.05 mg/m ³	OSHA CARC
		TWA (Inhalable fraction and vapor)	2 mg/m ³	ACGIH

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		TWA	10 mg/m3	NIOSH REL
		TWA	10 mg/m3	OSHA P0
1,1,2-trichloroethane	79-00-5	TWA	10 ppm	ACGIH
		TWA	10 ppm 45 mg/m3	OSHA Z-1
		TWA	10 ppm 45 mg/m3	NIOSH REL
		TWA	10 ppm 45 mg/m3	OSHA P0

Personal protective equipment

- Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
- Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
- Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
- Hand protection
- Remarks : For prolonged or repeated contact use protective gloves. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.
- Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: off-white
Odour	: acrylic-like
Odour Threshold	: No data is available on the product itself.
pH	: No data is available on the product itself.
Melting point/freezing point	: No data is available on the product itself.
Boiling point	: 212 °F / 100 °C
Flash point	: 48.0 °F / 8.9 °C Method: closed cup
Evaporation rate	: No data is available on the product itself.
Flammability (solid, gas)	: No data is available on the product itself.
Flammability (liquids)	: No data is available on the product itself.
Upper explosion limit / Upper flammability limit	: No data is available on the product itself.
Lower explosion limit / Lower flammability limit	: No data is available on the product itself.
Vapour pressure	: No data is available on the product itself.
Relative vapour density	: No data is available on the product itself.
Relative density	: No data is available on the product itself.
Density	: 0.97 g/cm3
Solubility(ies)	
Water solubility	: No data is available on the product itself.
Solubility in other solvents	: No data is available on the product itself.
Partition coefficient: n-octanol/water	: No data is available on the product itself.
Auto-ignition temperature	: No data is available on the product itself.
Decomposition temperature	: No data is available on the product itself.
Self-Accelerating decomposition temperature (SADT)	: No data is available on the product itself.

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Viscosity : No data is available on the product itself.
Explosive properties : No data is available on the product itself.
Oxidizing properties : No data is available on the product itself.
Particle size : No data is available on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : Vapours may form explosive mixture with air.
Conditions to avoid : Heat, flames and sparks.
Incompatible materials : None known.
Hazardous decomposition products : No decomposition if stored and applied as directed.
Hazardous decomposition products : carbon dioxide
carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Product:**

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method
Acute inhalation toxicity : Acute toxicity estimate: 34.1 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method
Acute dermal toxicity : Acute toxicity estimate: 3,001 mg/kg
Method: Calculation method

Components:**methyl methacrylate:**

Acute oral toxicity : LD50 (Rat): 7,900 - 9,400 mg/kg
Acute inhalation toxicity : LC50 (Rat, male and female): 29.8 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Directive 67/548/EEC, Annex V, B.2.
Acute dermal toxicity : LD50 (Rabbit, male): > 5,000 mg/kg

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Method: OECD Test Guideline 402

methacrylic acid:

Acute oral toxicity : LD50 (Rat, male): 1,320 mg/kg
Method: OECD Test Guideline 401
GLP: no
Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : LC50 (Rat, male and female): 7.1 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
GLP: yes
Assessment: The component/mixture is moderately toxic after short term inhalation.

Acute dermal toxicity : LD50 (Rabbit): 500 - 1,000 mg/kg
GLP: no
Assessment: The component/mixture is toxic after single contact with skin.

2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene and ethenylbenzene:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

2,6-di-tert-butyl-p-cresol:

Acute oral toxicity : LD50 (Rat, male and female): > 6,000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

1,1,2-trichloroethane:

Acute oral toxicity : LD50 (Rat, male): 837 mg/kg

Acute inhalation toxicity : Assessment: The component/mixture is moderately toxic after short term inhalation.

Acute dermal toxicity : Assessment: The component/mixture is moderately toxic after single contact with skin.

Skin corrosion/irritation**Components:****methyl methacrylate:**

Species : Rabbit

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Method : OPPTS 870.2500
Result : Skin irritation

methacrylic acid:

Species : Rabbit
Assessment : Causes severe burns.
Method : OECD Test Guideline 404
Result : Extremely corrosive and destructive to tissue.
GLP : yes

2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene and ethenylbenzene:

Species : Rabbit
Assessment : Mild skin irritant
Result : slight irritation

2,6-di-tert-butyl-p-cresol:

Species : Rabbit
Assessment : No skin irritation
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation**Components:****methacrylic acid:**

Species : Rabbit
Result : Irreversible effects on the eye
Assessment : Risk of serious damage to eyes.
Method : Draize Test
GLP : no

2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene and ethenylbenzene:

Species : Rabbit
Result : slight irritation
Assessment : Mild eye irritant

2,6-di-tert-butyl-p-cresol:

Species : Rabbit
Result : No eye irritation
Assessment : No eye irritation
Method : OECD Test Guideline 405

Respiratory or skin sensitisation**Components:****methyl methacrylate:**

Exposure routes : Skin
Species : Mouse
Assessment : May cause sensitisation by skin contact.
Method : OECD Test Guideline 429
Result : May cause sensitisation by skin contact.

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methacrylic acid:

Test Type : Buehler Test
Exposure routes : Skin
Species : Guinea pig
Assessment : Did not cause sensitisation on laboratory animals.
Method : OECD Test Guideline 406
Result : Did not cause sensitisation on laboratory animals.

2,6-di-tert-butyl-p-cresol:

Exposure routes : Skin
Species : Humans
Result : Does not cause skin sensitisation.

Germ cell mutagenicity**Components:****methyl methacrylate:**

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)
Test system: Salmonella typhimurium
Method: OECD Test Guideline 471
Result: negative

methacrylic acid:

Genotoxicity in vitro : Test Type: reverse mutation assay
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: in vivo assay
Species: Rat (male)
Cell type: Somatic
Application Route: Inhalation
Exposure time: 2 h
Dose: 0.4, 1.6, 2.8 and 4 mg/L
Method: OECD Test Guideline 475
Result: Not classified due to inconclusive data.
GLP: no

Test Type: dominant lethal test
Species: Mouse (male)
Application Route: Inhalation
Exposure time: 6 h
Dose: 0.405, 4.05 and 36.45 mg/L
Method: OECD Test Guideline 478
Result: negative
GLP: no

2,6-di-tert-butyl-p-cresol:

Genotoxicity in vitro : Test Type: reverse mutation assay
Metabolic activation: with and without metabolic activation

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Result: negative

Test Type: Chromosome aberration test in vitro
 Metabolic activation: with and without metabolic activation
 Result: negative

Genotoxicity in vivo : Application Route: Intraperitoneal injection
 Dose: 75 mg/kg
 Result: negative

Application Route: Oral
 Exposure time: 9 Months
 Dose: ca 750 mg/kg
 Result: negative

Carcinogenicity**Components:****methyl methacrylate:**

Species : Rat, male and female
 Application Route : Oral
 Exposure time : 2 Years
 Dose : 6, 60, 2000 ppm
 Frequency of Treatment : once daily
 NOAEL : 90.3 mg/kg bw/day
 Result : negative

methacrylic acid:

Species : Rat, male and female
 Application Route : inhalation (vapour)
 Exposure time : 102 weeks
 Frequency of Treatment : 5 days/week
 NOAEL : >= 2.05 mg/kg body weight
 Method : OECD Test Guideline 451

Species : Mouse, male and female
 Application Route : inhalation (vapour)
 Exposure time : 102 weeks
 Dose : ca. 2.05 and 4.1 mg/L
 Frequency of Treatment : 5 days/week
 LOAEL : ca. 2.05 mg/l
 Method : OECD Test Guideline 451

2,6-di-tert-butyl-p-cresol:

Species : Rat, male and female
 Application Route : Oral
 Result : negative

1,1,2-trichloroethane:

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

IARC Group 1: Carcinogenic to humans

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	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	14807-96-6
OSHA	OSHA specifically regulated carcinogen Talc (Mg ₃ H ₂ (SiO ₃) ₄) (crystalline silica)	14807-96-6
NTP	Known to be human carcinogen Talc (Mg ₃ H ₂ (SiO ₃) ₄) (Silica, Crystalline (Respirable Size))	14807-96-6

Reproductive toxicity**Components:****methyl methacrylate:**

Effects on foetal development : Species: Rat
Application Route: Inhalation
Dose: 99, 304, 1178 ppm
Teratogenicity: NOAEC F1: 8,300 mg/m³
Embryo-foetal toxicity: NOAEC F1: 8,300 mg/m³
Method: OECD Test Guideline 414
Result: No teratogenic effects

methacrylic acid:

Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female
Application Route: Oral
Dose: 0, 50, 150, 450 mg/kg/day
General Toxicity - Parent: NOAEL: 50 mg/kg body weight
Fertility: NOAEL F1: 400 mg/kg body weight
Symptoms: Reduced body weight
Method: OECD Test Guideline 416
GLP: yes

Effects on foetal development : Test Type: Pre-natal
Species: Rat, female
Application Route: Inhalation
Dose: 0, 50, 100, 200 or 300 ppm
Duration of Single Treatment: 14 d
Frequency of Treatment: 7 days/week
General Toxicity Maternal: NOAEL: 200 ppm
Developmental Toxicity: NOAEL: >= 300 ppm
Embryo-foetal toxicity: NOAEC F1: 300 ppm
Method: OECD Test Guideline 414
Result: No effects on fertility and early embryonic development were detected.

Test Type: Pre-natal
Species: Rabbit, male and female
Application Route: Oral
Dose: 50, 150, 450 milligram per kilogram
Duration of Single Treatment: 23 d
Frequency of Treatment: 7 days/week
General Toxicity Maternal: NOAEL: 50 mg/kg body weight
Developmental Toxicity: NOAEL F1: 450 mg/kg body weight

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Result: No effects on fertility and early embryonic development were detected.

2,6-di-tert-butyl-p-cresol:

Effects on fertility : Test Type: Two-generation study
 Species: Rat, male and female
 Application Route: Oral
 Dose: 25/100/500 mg/kg bw/day
 General Toxicity - Parent: NOAEL: 100 mg/kg body weight
 General Toxicity F1: NOAEL: 25 mg/kg body weight
 Result: negative

Effects on foetal development : Test Type: Pre-natal
 Species: Mouse, female
 Application Route: Oral
 Duration of Single Treatment: 7 d
 General Toxicity Maternal: NOAEL: 240 mg/kg body weight
 Developmental Toxicity: NOAEL: 800 mg/kg body weight
 Target Organs: spleen, Kidney

STOT - single exposure**Components:****methyl methacrylate:**

Exposure routes : Inhalation
 Target Organs : Respiratory Tract
 Assessment : May cause respiratory irritation.

methacrylic acid:

Exposure routes : Inhalation
 Target Organs : Respiratory Tract
 Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure

No data available

Repeated dose toxicity**Components:****methyl methacrylate:**

Species : Rat, male and female
 NOAEL : 124.1 mg/kg
 Application Route : oral (drinking water)
 Exposure time : 2 years
 Number of exposures : daily
 Dose : 6, 60, 2000 ppm

methacrylic acid:

Species : Rat, male and female
 NOEC : 352 - 1232 mg/m³
 Application Route : inhalation (vapour)

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Test atmosphere : vapour
Exposure time : 90 d
Number of exposures : 6 h
Dose : 70/352/1232 mg/m3
Subsequent observation : 5 days/week
period
Method : OECD Test Guideline 413
GLP : yes

2,6-di-tert-butyl-p-cresol:

Species : Pig, male and female
NOAEL : >= 61 mg/kg
Application Route : oral (feed)
Exposure time : daily
Method : Chronic toxicity

Aspiration toxicity

No data available

Experience with human exposure

No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information**Product:**

Remarks : Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****methyl methacrylate:**

Toxicity to fish : LC50 : 191 mg/l
Exposure time: 96 h

LC50 (Oncorhynchus mykiss (rainbow trout)): > 79 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: Fish Early-life Stage Toxicity Test

Toxicity to daphnia and other : EC50: 69 mg/l
aquatic invertebrates Exposure time: 48 h

Toxicity to algae/aquatic : EC50: > 110 mg/l
plants Exposure time: 72 h

Toxicity to daphnia and other : NOEC (Daphnia magna (Water flea)): 37 mg/l

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aquatic invertebrates
(Chronic toxicity)

Exposure time: 21 d
Test Type: flow-through test
Method: OECD Test Guideline 211

methacrylic acid:

Toxicity to fish

: LC50 (Oncorhynchus mykiss (rainbow trout)): 85 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test
Test substance: Fresh water
Method: Fish Acute Toxicity Test
GLP: yes
Remarks: Toxic to aquatic organisms.

Toxicity to daphnia and other
aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): > 130 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: flow-through test
Analytical monitoring: yes
Test substance: Fresh water
Method: Aquatic Invertebrate Acute Toxicity Test, Freshwater
Daphnids
GLP: yes

Toxicity to algae/aquatic
plants

: ErC50 (Selenastrum capricornutum (green algae)): 45 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 201
GLP: yes

NOEC (Selenastrum capricornutum (green algae)): 8.2 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 201
GLP: yes

Toxicity to fish (Chronic
toxicity)

: NOEC (Brachydanio rerio (zebrafish)): 10 mg/l
Exposure time: 35 d
Test Type: flow-through test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 210
GLP: yes

Toxicity to daphnia and other
aquatic invertebrates
(Chronic toxicity)

: NOEC (Daphnia magna (Water flea)): 53 mg/l
Exposure time: 21 d
Test Type: flow-through test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 211
GLP: yes

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Toxicity to microorganisms : EC50 (*Pseudomonas putida*): 270 mg/l
 Exposure time: 16.5 h
 Test Type: static test
 Analytical monitoring: no
 Test substance: Fresh water
 Method: DIN 38 412 Part 8
 GLP: yes

Talc (Mg₃H₂(SiO₃)₄):

Toxicity to fish : LC50 (*Brachydanio rerio* (zebrafish)): > 100 mg/l
 Exposure time: 24 h

2,6-di-tert-butyl-p-cresol:

Toxicity to fish : LC50 (Fish): 0.199 mg/l
 Exposure time: 96 h
 Test substance: Fresh water
 Method: QSAR

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 0.48 mg/l
 End point: Immobilization
 Exposure time: 48 h
 Test Type: static test
 Test substance: Fresh water
 Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (*Pseudokirchneriella subcapitata* (green algae)): > 0.24 mg/l
 Exposure time: 72 h
 Test Type: static test
 Test substance: Fresh water
 Method: OECD Test Guideline 201

NOEC (*Pseudokirchneriella subcapitata* (green algae)): 0.24 mg/l
 Exposure time: 72 h
 Test Type: static test
 Test substance: Fresh water
 Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC (*Oryzias latipes* (Orange-red killifish)): 0.053 mg/l
 Exposure time: 30 d
 Test substance: Fresh water
 Method: OECD Test Guideline 210

NOEC (Fish): >= 23.8 mg/l
 Exposure time: 70 d
 Test substance: Fresh water

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50 (*Daphnia magna* (Water flea)): 0.096 mg/l
 Exposure time: 21 d
 Test substance: Fresh water
 Method: OECD Test Guideline 211

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NOEC (Daphnia magna (Water flea)): 0.069 mg/l
 Exposure time: 21 d
 Test substance: Fresh water
 Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 1

Toxicity to microorganisms : ErC50 (activated sludge): 1.7 mg/l
 Exposure time: 24 h
 Test Type: static test

Persistence and degradability**Components:****methyl methacrylate:**

Biodegradability : Result: Readily biodegradable.
 Biodegradation: > 60 %
 Exposure time: 28 d

methacrylic acid:

Biodegradability : aerobic
 Inoculum: activated sludge
 Concentration: 3 mg/l
 Result: Readily biodegradable.
 Biodegradation: 86 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301D
 GLP: yes

2,6-di-tert-butyl-p-cresol:

Biodegradability : Result: Not biodegradable

1,1,2-trichloroethane:

Biodegradability : Result: Not biodegradable

Bioaccumulative potential**Components:****methyl methacrylate:**

Bioaccumulation : Bioconcentration factor (BCF): 3

Partition coefficient: n-octanol/water : log Pow: 1.38

methacrylic acid:

Partition coefficient: n-octanol/water : log Pow: 0.93 (72 °F / 22 °C)
 pH: 2.2

2,6-di-tert-butyl-p-cresol:

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Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 330 - 1,800
Exposure time: 28 d
Method: flow-through test

Partition coefficient: n-octanol/water : log Pow: 5.2

Mobility in soil**Components:****2,6-di-tert-butyl-p-cresol:**

Distribution among environmental compartments : Koc: 8183

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82
Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of contents and container in accordance with all local, regional, national and international regulations.
Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION**International Regulations****IATA-DGR**

UN/ID No. : UN 1133
Proper shipping name : Adhesives
Class : 3

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Packing group : II
 Labels : Flammable Liquids
 Packing instruction (cargo aircraft) : 364
 Packing instruction (passenger aircraft) : 353

IMDG-Code

UN number : UN 1133
 Proper shipping name : ADHESIVES

Class : 3
 Packing group : II
 Labels : 3
 EmS Code : F-E, S-D
 Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**49 CFR**

UN/ID/NA number : UN 1133
 Proper shipping name : Adhesives

Class : 3
 Packing group : II
 Labels : FLAMMABLE LIQUID
 ERG Code : 128
 Marine pollutant : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
methyl methacrylate	80-62-6	1000	1658
alpha,alpha-dimethylbenzyl hydroperoxide	80-15-9	10	2272

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
 Skin corrosion or irritation
 Respiratory or skin sensitisation
 Carcinogenicity
 Specific target organ toxicity (single or repeated exposure)
 Serious eye damage or eye irritation

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SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

methyl methacrylate 80-62-6 >= 50 - < 70 %

The following chemical(s), >= 0.1%, are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

methyl methacrylate 80-62-6

1,1,2-trichloroethane 79-00-5

California Prop. 65

WARNING: This product can expose you to chemicals including 1,1,2-trichloroethane, cumene, buta-1,3-diene, which is/are known to the State of California to cause cancer, and buta-1,3-diene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AIIC : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : All substances listed as active on the TSCA inventory

Inventories

AIIC (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TECI (Thailand), TSCA (USA)

TSCA - 5(a) Significant New Use Rule List of Chemicals

No substances are subject to a Significant New Use Rule.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No substances are subject to TSCA 12(b) export notification requirements.

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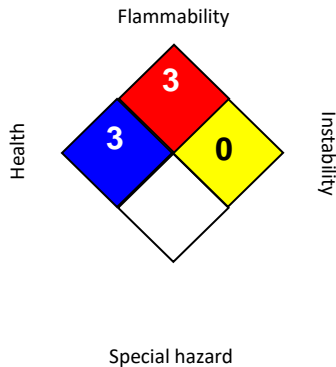
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SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:

HEALTH	*	2
FLAMMABILITY	3	
PHYSICAL HAZARD	0	

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard

- Revision Date : 05/10/2023
- ACGIH : USA. ACGIH Threshold Limit Values (TLV)
- NIOSH REL : USA. NIOSH Recommended Exposure Limits
- OSHA CARC : OSHA Specifically Regulated Chemicals/Carcinogens
- OSHA P0 : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
- OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
- OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
- ACGIH / TWA : 8-hour, time-weighted average
- ACGIH / STEL : Short-term exposure limit
- NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
- OSHA CARC / PEL : Permissible exposure limit (PEL)
- OSHA P0 / TWA : 8-hour time weighted average
- OSHA Z-1 / TWA : 8-hour time weighted average
- OSHA Z-3 / TWA : 8-hour time weighted average

The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

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Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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