

ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

400000011015 1.0 02/04/2021 Date of first issue: 02/04/2021

Print Date 10/24/2023

SECTION 1. IDENTIFICATION

Product name : ARALDITE® F 361-1 GB BULK

Manufacturer or supplier's details

Company name of supplier

: Huntsman Advanced Materials Americas LLC

P.O. Box 4980 Address

The Woodlands, TX 77387

United States of America (USA)

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

E-mail address of person responsible for the SDS

: 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

Restrictions on use : For industrial use only.

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

Specific target organ toxicity

- single exposure

Category 3 (Respiratory system)

Short-term (acute) aquatic

hazard

: Category 3

Chronic aquatic toxicity : Category 3

GHS label elements

Hazard pictograms







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ARALDITE® F 361-1 GB BULK

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1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**

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/ 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.

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 facility in accordance with local, regional, national and international

regulations.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

02/04/2021 400000011015 1.0 Date of first issue: 02/04/2021

Print Date 10/24/2023

Substance / Mixture : Mixture

Chemical nature : Adhesives and/or sealants

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
methyl methacrylate	80-62-6	50 - 70
methacrylic acid	79-41-4	5 - 10
2,6-di-tert-butyl-p-cresol	128-37-0	1 - 5
Silicon, amorphous	7631-86-9	1 - 5
Talc (Mg3H2(SiO3)4)	14807-96-6	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, remove to fresh air. If inhaled

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.

Small amounts splashed into eyes can cause irreversible In case of eye contact

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.

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.



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

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

No data is available on the product itself.

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.

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



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

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. 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

: 36 - 46 °F / 2 - 8 °C

Further information on : Stable under normal conditions.



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

storage stability

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/m3	OSHA Z-1
		TWA	100 ppm 410 mg/m3	NIOSH REL
		TWA	100 ppm 410 mg/m3	OSHA P0
methacrylic acid	79-41-4	TWA	20 ppm	ACGIH
		TWA	20 ppm 70 mg/m3	NIOSH REL
		TWA	20 ppm 70 mg/m3	OSHA P0
2,6-di-tert-butyl-p-cresol	128-37-0	TWA (Inhalable fraction and vapor)	2 mg/m3	ACGIH
		TWA	10 mg/m3	NIOSH REL
		TWA	10 mg/m3	OSHA P0
Silicon, amorphous	7631-86-9	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	OSHA Z-3
		TWA	6 mg/m3 (Silica)	NIOSH REL
Talc (Mg3H2(SiO3)4)	14807-96-6	TWA (Dust)	20 Million particles per cubic foot	OSHA Z-3
		TWA (Respirable)	2 mg/m3	NIOSH REL
		TWA	0.1 fibres per cubic centimeter	ACGIH
		TWA (Respirable particulate matter)	2 mg/m3	ACGIH
		TWA (respirable dust fraction)	2 mg/m3	OSHA P0

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to



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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 : 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : paste

Colour : white

Odour : acrylic-like

Odour Threshold : No data is available on the product itself.

pH : substance/mixture is non-soluble (in water)

Melting point/freezing point : No data is available on the product itself.

Boiling point : $> 212 \, ^{\circ}\text{F} \, / > 100 \, ^{\circ}\text{C}$

Flash point : 50 °F / 10 °C

Method: closed cup



ARALDITE® F 361-1 GB BULK

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Print Date 10/24/2023

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 : 1.01 - 1.02

Density : No data is available on the product itself.

Solubility(ies)

Water solubility : insoluble

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.

Thermal decomposition : No data is available on the product itself.

Self-Accelerating

decomposition temperature

(SADT)

No data is available on the product itself.

Viscosity

Viscosity, dynamic : 30,000 mPa.s (77 °F / 25 °C)

thixotropic

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 : Vapours may form explosive mixture with air.



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

02/04/2021 400000011015 1.0 Date of first issue: 02/04/2021

Print Date 10/24/2023

reactions

Conditions to avoid Heat, flames and sparks.

Incompatible materials Reducing agents

> Strong oxidizing agents Heavy metal salts

Hazardous decomposition

products

carbon dioxide carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

exposure

Information on likely routes of : No data is available on the product itself.

Acute toxicity

Acute oral toxicity - Product

: Acute toxicity estimate : > 5,000 mg/kg

Method: Calculation method

Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

Acute inhalation toxicity -

Product

: Acute toxicity estimate: 37.92 mg/l

Exposure time: 4 h Test atmosphere: vapour Method: Calculation method

Acute toxicity estimate: 38.25 mg/l

Exposure time: 4 h Test atmosphere: vapour Method: Calculation method

Acute dermal toxicity -

Product

: Acute toxicity estimate : 4,055 mg/kg

Method: Calculation method

Acute toxicity estimate: 4,111 mg/kg

Method: Calculation method

Acute toxicity (other routes of : No data available

administration)

Skin corrosion/irritation

Components:

methyl methacrylate: Species: Rabbit

Method: OPPTS 870.2500 Result: Skin irritation

methacrylic acid:



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

Species: Rabbit

Assessment: Causes severe burns. Method: OECD Test Guideline 404

Result: Extremely corrosive and destructive to tissue.

GLP: yes

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

Species: Rabbit

Assessment: No skin irritation Method: OECD Test Guideline 404

Result: No skin irritation

GLP: yes

Silicon, amorphous: 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

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

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

GLP: yes

Silicon, amorphous:
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.

methacrylic acid: Test Type: Buehler Test Exposure routes: Skin Species: Guinea pig



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

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.

Assessment: No data available

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

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

Genotoxicity in vitro : Test Type: reverse mutation assay

Metabolic activation: with and without metabolic activation

Result: negative

Test Type: Chromosome aberration test in vitro

Metabolic activation: with and without metabolic activation

Result: negative

Silicon, amorphous:

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Components:

methacrylic acid:

Genotoxicity in vivo : Test Type: in vivo assay

Species: Rat (male) Cell type: Somatic

Application Route: Inhalation



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

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 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

Silicon, amorphous:

Genotoxicity in vivo : Application Route: Inhalation

Dose: 50 mg/m3 Result: negative

Germ cell mutagenicity-

Assessment

: No data available

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



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

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

Silicon, amorphous:

Species: Rat, male and female

Application Route: Oral Exposure time: 103 weeks Dose: 1800 - 3200 mg/kg Frequency of Treatment: 7 daily Method: OECD Test Guideline 453

Result: negative

Carcinogenicity -Assessment : No data available

IARC Group 1: Carcinogenic to humans

Talc (Mg3H2(SiO3)4)

ACGIH Confirmed human carcinogen

Talc (Mg3H2(SiO3)4)

Confirmed human carcinogen

OSHA No component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP Known to be human carcinogen

Talc (Mg3H2(SiO3)4)

(Silica, Crystalline (Respirable Size))

Reproductive toxicity

Components:

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: No observed adverse effect level:

50 mg/kg body weight

Fertility: No observed adverse effect level F1: 400 mg/kg body

weight



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

400000011015 1.0 02/04/2021 Date of first issue: 02/04/2021

Print Date 10/24/2023

Symptoms: Reduced body weight Method: OECD Test Guideline 416

GLP: yes

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

Test Type: Two-generation study Species: Rat, male and female Application Route: Oral

Dose: 25/100/500 mg/kg bw/day

General Toxicity - Parent: No observed adverse effect level:

100 mg/kg body weight

General Toxicity F1: No observed adverse effect level: 25

mg/kg body weight Result: negative

GLP: no

Components:

methyl methacrylate:

Effects on foetal development

Species: Rat

Application Route: Inhalation Dose: 99, 304, 1178 ppm

Teratogenicity: No observed adverse effect concentration F1:

8,300 mg/m³

Embryo-foetal toxicity: No observed adverse effect

concentration F1: 8,300 mg/m³ Method: OECD Test Guideline 414 Result: No teratogenic effects

methacrylic acid:

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: No observed adverse effect level:

200 ppm

Developmental Toxicity: No observed adverse effect level: >=

300 ppm

Embryo-foetal toxicity: No observed adverse effect

concentration 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: No observed adverse effect level:

50 mg/kg body weight

Developmental Toxicity: No observed adverse effect level F1:

450 mg/kg body weight

Result: No effects on fertility and early embryonic



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

development were detected.

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

Test Type: Pre-natal Species: Mouse, female Application Route: Oral

Duration of Single Treatment: 7 d

General Toxicity Maternal: No observed adverse effect level:

240 mg/kg body weight

Developmental Toxicity: No observed adverse effect level:

800 mg/kg body weight Target Organs: spleen, Kidney

Silicon, amorphous:

Species: Mouse

Application Route: Oral

General Toxicity Maternal: No observed adverse effect level:

1,340 mg/kg body weight

Method: OECD Test Guideline 414 Result: No teratogenic effects

Species: Rabbit Application Route: Oral

General Toxicity Maternal: No observed adverse effect level:

1,600 mg/kg body weight

Method: OECD Test Guideline 414 Result: No teratogenic effects

Species: Rat

Application Route: Oral

General Toxicity Maternal: No observed adverse effect level:

1,350 mg/kg body weight

Method: OECD Test Guideline 414 Result: No teratogenic effects

Reproductive toxicity -

Assessment

: No data available

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.



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

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)

Test atmosphere: vapour Exposure time: 90 d Number of exposures: 6 h Dose: 70/352/1232 mg/m3

Subsequent observation period: 5 days/week

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

Silicon, amorphous:

Species: Rat, male and female NOAEL: 7950 - 8980 mg/kg Application Route: Ingestion Exposure time: 4,320 h Number of exposures: 7 d Method: Subchronic toxicity

Species: Rat, male and female NOEC: 4000 - 4500 mg/m3
Application Route: Ingestion Test atmosphere: dust/mist Exposure time: 13 Weeks Number of exposures: 7 d

Method: OECD Test Guideline 413

Repeated dose toxicity -

Assessment

: No data available



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: 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

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.



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

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

GLP: no

Silicon, amorphous:

Toxicity to fish : LL50 (Brachydanio rerio (zebrafish)): > 10,000 mg/l

Exposure time: 96 h Test Type: static test

Test substance: Fresh water Method: OECD Test Guideline 202

Talc (Mg3H2(SiO3)4):

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 100 mg/l

Exposure time: 24 h

Components:

methyl methacrylate:

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

methacrylic acid:

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

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

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

Silicon, amorphous:

aquatic invertebrates

Toxicity to daphnia and other

: EL50 (Daphnia magna (Water flea)): >= 1,000 mg/l

Exposure time: 24 h
Test Type: static test

Test substance: Fresh water Method: OECD Test Guideline 202

Components:

methyl methacrylate:

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



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

methacrylic acid:

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

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

Toxicity to algae/aquatic

plants

: EC50 (Pseudokirchneriella subcapitata (green algae)): > 0.24

mg/

Exposure time: 72 h Test Type: static test

Test substance: Fresh water Method: OECD Test Guideline 201

GLP: yes

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

GLP: yes

Silicon, amorphous:

Toxicity to algae/aquatic

plants

: EL50 (Desmodesmus subspicatus (green algae)): > 10,000

mg/l

Exposure time: 72 h Test Type: static test

Test substance: Fresh water Method: OECD Test Guideline 201

M-Factor (Acute aquatic

toxicity)

: No data available

Components:

methacrylic acid:

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

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



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

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

GLP: yes

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

Components:

methyl methacrylate:

Toxicity to daphnia and other

aquatic invertebrates (Chronic toxicity)

: NOEC (Daphnia magna (Water flea)): 37 mg/l

Exposure time: 21 d

Test Type: flow-through test

Method: OECD Test Guideline 211

methacrylic acid:

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

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

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

GLP: yes

NOEC (Daphnia magna (Water flea)): 0.069 mg/l

Exposure time: 21 d

Test substance: Fresh water Method: OECD Test Guideline 211

GLP: yes

Components:

2,6-di-tert-butyl-p-cresol: M-Factor (Chronic aquatic

toxicity)

: 1

Components:

methacrylic acid:

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

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



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

Toxicity to microorganisms : ErC50 (activated sludge): 1.7 mg/l

Exposure time: 24 h Test Type: static test

Toxicity to soil dwelling

organisms

: No data available

Plant toxicity : No data available

Sediment toxicity : No data available

Toxicity to terrestrial

organisms

: No data available

Ecotoxicology Assessment

Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

Toxicity Data on Soil : No data available

Other organisms relevant to

the environment

: No data available

Persistence and degradability

Components:

methyl methacrylate:

Biodegradability : Result: Readily biodegradable.

Biodegradation: > 60 % Exposure time: 28 d

methacrylic acid:

Biodegradability : Test Type: 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

Biochemical Oxygen

Demand (BOD)

: No data available

Chemical Oxygen Demand

(COD)

: No data available

BOD/COD : No data available

ThOD : No data available



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

BOD/ThOD : No data available

Dissolved organic carbon

(DOC)

: No data available

Physico-chemical

removability

: No data available

Stability in water : No data available

Photodegradation : No data available

Impact on Sewage

Treatment

: No data available

Bioaccumulative potential

Components:

methyl methacrylate:

Bioaccumulation : Bioconcentration factor (BCF): 3

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

Bioaccumulation : Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 330 - 1,800

Exposure time: 28 d Method: flow-through test

Components:

methyl methacrylate:

Partition coefficient: n-

octanol/water

: log Pow: 1.38

methacrylic acid:

Partition coefficient: n-

nt: n- : log Pow: 0.93 (72 °F / 22 °C)

pH: 2.2

octanol/water

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

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

Mobility in soil

Mobility : No data available

Components:

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

Distribution among : Koc: 8183

environmental compartments

Stability in soil : No data available

Other adverse effects

Environmental fate and

: No data available

pathways



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

02/04/2021 400000011015 1.0 Date of first issue: 02/04/2021

Print Date 10/24/2023

Results of PBT and vPvB

assessment

: No data available

Endocrine disrupting

potential

: No data available

Adsorbed organic bound

halogens (AOX)

: No data available

Hazardous to the ozone layer

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 +

Additional ecological

information - Product

: An environmental hazard cannot be excluded in the event of

unprofessional handling or disposal.

Harmful to aquatic life with long lasting effects.

Global warming potential

(GWP)

: No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues The product should not be allowed to enter drains, water

courses or the soil.

Do not contaminate ponds, waterways or ditches with

chemical or used container.

Send to a licensed waste management company.

Dispose of as hazardous waste in compliance with local and

national regulations.

Dispose of contents/ container to an approved waste disposal

plant.

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

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



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

364

Print Date 10/24/2023

Class : 3 Packing group : II

Labels : Flammable Liquids

Packing instruction (cargo

aircraft)

Packing instruction : 353

(passenger aircraft)

IMDG

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

DOT Classification

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 Calculated product R0	
		(lbs)	(lbs)
alpha,alpha-dimethylbenzyl	80-15-9	10	1388
hydroperoxide			
methyl methacrylate	80-62-6	1000	1719

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)

Skin corrosion or irritation

Serious eye damage or eye irritation Respiratory or skin sensitisation

Specific target organ toxicity (single or repeated exposure)



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

Flammable (gases, aerosols, liquids, or solids)

Respiratory or skin sensitisation Skin corrosion or irritation

Serious eye damage or eye irritation

Specific target organ toxicity (single or repeated exposure)

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 components are subject to reporting levels

established by SARA Title III, Section 313:

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

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR

61):

methyl methacrylate 80-62-6

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR

61):

methyl methacrylate 80-62-6

California Prop. 65

WARNING: This product can expose you to chemicals including 1,1,2-trichloroethane, cumene, which is/are known to the State of California to cause cancer. 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

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

ENCS : On the inventory, or 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), TSCA (USA)

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

No substances are subject to a Significant New Use Rule.



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

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.

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

No substances are subject to a Significant New Use Rule.

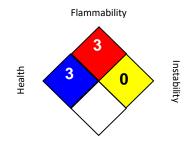
US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

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

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



Special hazard

HMIS® IV:



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 : 02/04/2021

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA PO : USA. OSHA - TABLE Z-1 Limits for Air Contaminants -

1910.1000

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 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.



ARALDITE® F 361-1 GB BULK

Version Revision Date: SDS Number: Date of last issue: -

1.0 02/04/2021 400000011015 Date of first issue: 02/04/2021

Print Date 10/24/2023

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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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