

ARALDITE® 64-1

Version 2.0 Revision Date: 2019/01/14 SDS Number: 400001008934 Date of last issue: 2018/01/04
Date of first issue: 2018/01/04

irritation

- Skin sensitisation : Category 1
- Germ cell mutagenicity : Category 2
- Carcinogenicity (Inhalation) : Category 1B
- Reproductive toxicity : Category 2
- Specific target organ toxicity - single exposure : Category 1 (Bladder, Blood, Central nervous system, Eyes, Kidney, Liver, Nervous system, spleen)
- Specific target organ toxicity - single exposure : Category 3 (Narcotic effects)
- Specific target organ toxicity - repeated exposure : Category 2 (Liver, Lungs, Kidney, Central nervous system)
- Short-term (acute) aquatic hazard : Category 3
- Long-term (chronic) aquatic hazard : Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
H303 May be harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H341 Suspected of causing genetic defects.
H350i May cause cancer by inhalation.
H361 Suspected of damaging fertility or the unborn child.
H370 Causes damage to organs (Bladder, Blood, Central nervous system, Eyes, Kidney, Liver, Nervous system, spleen).
H373 May cause damage to organs (Liver, Lungs, Kidney, Central nervous system) through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

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.

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should 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 + P311 IF exposed or concerned: Call a POISON CENTER/doctor.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it 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.

Physical and chemical hazards

Highly flammable liquid and vapour.

Health hazards

May be harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer by inhalation. Suspected of damaging fertility or the unborn child. Causes damage to organs. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.

Environmental hazards

Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

ARALDITE® 64-1

Version 2.0 Revision Date: 2019/01/14 SDS Number: 400001008934 Date of last issue: 2018/01/04
Date of first issue: 2018/01/04

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Formaldehyde, oligomeric reaction products with phenol	9003-35-4	>= 30 - < 50
ethanol	64-17-5	>= 20 - < 30
toluene	108-88-3	>= 10 - < 20
phenol	108-95-2	>= 3 - < 5
methanol	67-56-1	>= 1 - < 10
formaldehyde	50-00-0	>= 0.25 - < 1

4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Treat symptomatically.
Get medical attention if symptoms occur.
- If inhaled : Call a physician or poison control centre immediately.
If inhaled, remove to fresh air.
Get medical attention if symptoms occur.
- In case of skin contact : If skin irritation persists, call a physician.
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.
- 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.
- Notes to physician : Treat symptomatically.

5. FIREFIGHTING MEASURES

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

- Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : No hazardous combustion products are known
- Specific extinguishing methods : 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.

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).

7. HANDLING AND STORAGE

Handling

- 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 : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.

ARALDITE® 64-1

Version 2.0 Revision Date: 2019/01/14 SDS Number: 400001008934 Date of last issue: 2018/01/04
Date of first issue: 2018/01/04

Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
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.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Storage

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 : 2 - 40 °C

Further information on storage stability : Stable under normal conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ethanol	64-17-5	STEL	1,000 ppm	ACGIH
toluene	108-88-3	PC-TWA	50 mg/m3	GBZ 2.1-2007
	Further information: Skin			
		PC-STEL	100 mg/m3	GBZ 2.1-2007
	Further information: Skin			
		TWA	20 ppm	ACGIH
phenol	108-95-2	PC-TWA	10 mg/m3	GBZ 2.1-2007
	Further information: Skin			
		TWA	5 ppm	ACGIH
methanol	67-56-1	PC-TWA	25 mg/m3	GBZ 2.1-2007
	Further information: Skin			
		PC-STEL	50 mg/m3	GBZ 2.1-2007
	Further information: Skin			
		TWA	200 ppm	ACGIH

ARALDITE® 64-1

Version 2.0 Revision Date: 2019/01/14 SDS Number: 400001008934 Date of last issue: 2018/01/04
Date of first issue: 2018/01/04

		STEL	250 ppm	ACGIH
formaldehyde	50-00-0	MAC	0.5 mg/m ³	GBZ 2.1-2007
Further information: G1 - Carcinogenic to humans, Sensitizing				
		TWA	0.1 ppm	ACGIH
		STEL	0.3 ppm	ACGIH

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
toluene	108-88-3	hippuric acid	Urine	End of workshift (after exposure has ended)	1 mol/mol creatinine	CN BEI
		hippuric acid	Urine	End of workshift (after exposure has ended)	1.5 g/g creatinine	CN BEI
		hippuric acid	Urine	End of workshift (after exposure has ended)	11 Millimoles per liter	CN BEI
		hippuric acid	Urine	End of workshift (after exposure has ended)	2 g/l	CN BEI
		toluene	terminal exhaled air	End of workshift (15-30 min after exposure has ended)	20 mg/m ³	CN BEI
		toluene	terminal exhaled air	Prior to shift	5 mg/m ³	CN BEI
		Toluene	In blood	Prior to last shift of workweek	0.02 mg/l	ACGIH BEI
		Toluene	Urine	End of shift (As soon as possible after	0.03 mg/l	ACGIH BEI

ARALDITE® 64-1

Version 2.0 Revision Date: 2019/01/14 SDS Number: 400001008934 Date of last issue: 2018/01/04
Date of first issue: 2018/01/04

				exposure ceases)		
		o-Cresol	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/g Creatinine	ACGIH BEI
phenol	108-95-2	phenol	total urine	End of weekend shift	150 Millimoles per mole Creatinine	CN BEI
		phenol	total urine	End of last shift of the week	125 mg/g Creatinine	CN BEI
		Phenol	Urine	End of shift (As soon as possible after exposure ceases)	250 mg/g Creatinine	ACGIH BEI
methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

Personal protective equipment

- Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines
- Filter type : Organic gas and low boiling vapour type
- Eye/face 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.
- Hand protection
 - Material : butyl-rubber
 - Break through time : > 8 h
 - Material : Ethyl Vinyl Alcohol Laminate (EVAL)
 - Break through time : > 8 h
 - Material : Nitrile rubber
 - Break through time : 10 - 480 min
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid
Colour : brown
Odour : No data is available on the product itself.
Odour Threshold : No data is available on the product itself.

pH : No data is available on the product itself.

Freezing point : No data is available on the product itself.

Melting point : No data is available on the product itself.
Boiling point : > 125 °C

Flash point : 1 °C
Method: ISO 2719, 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 : 1 g/cm³ (25 °C)

Solubility(ies)
Water solubility : insoluble (20 °C)

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 : > 200 °C

Self-Accelerating decomposition temperature (SADT) : No data is available on the product itself.

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	2019/01/14	400001008934	2018/01/04
			Date of first issue: 2018/01/04

Viscosity
Viscosity, dynamic : 1,500 - 3,000 mPa.s (25 °C)

Viscosity, kinematic : > 20.5 mm²/s (40 °C)
Method: estimated

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.

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 : Strong acids
Strong bases
Strong oxidizing agents

Hazardous decomposition products : carbon monoxide
carbon dioxide
Nitrogen oxides

11. TOXICOLOGICAL INFORMATION

Exposure routes : No data is available on the product itself.

Acute toxicity

Acute oral toxicity - Product : Acute toxicity estimate : 4,360 mg/kg
Method: Calculation method

Acute inhalation toxicity - Product : Acute toxicity estimate: > 40 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity - Product : Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method

Acute toxicity (other routes of administration) : No data available

Skin corrosion/irritation

Components:

toluene:
Species: Rabbit

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

Method: Directive 67/548/EEC, Annex V, B.4.
Result: Skin irritation

phenol:
Species: Rabbit
Method: OECD Test Guideline 404
Result: Causes burns.

methanol:
Species: Rabbit
Assessment: No skin irritation
Method: Other guidelines
Result: No skin irritation

formaldehyde:
Species: Rabbit
Assessment: Causes burns.
Method: OECD Test Guideline 404
Result: Corrosive after 3 minutes to 1 hour of exposure

Serious eye damage/eye irritation

Components:

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

phenol:
Species: Rabbit
Result: Risk of serious damage to eyes.
Method: OECD Test Guideline 405

methanol:
Species: Rabbit
Result: No eye irritation

formaldehyde:
Species: Rat
Result: Corrosive
Assessment: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Components:

Formaldehyde, oligomeric reaction products with phenol:
Exposure routes: Skin
Species: Humans
Assessment: May cause sensitisation by skin contact.
Result: May cause sensitisation by skin contact.

toluene:
Exposure routes: Skin
Species: Guinea pig
Method: Directive 67/548/EEC, Annex V, B.6.

ARALDITE® 64-1

Version 2.0 Revision Date: 2019/01/14 SDS Number: 400001008934 Date of last issue: 2018/01/04
Date of first issue: 2018/01/04

Result: negative

formaldehyde:
Genotoxicity in vitro

: Result: positive

Concentration: 60 ug/plate
Metabolic activation: negative
Method: OECD Test Guideline 471
Result: positive

Components:

ethanol:
Genotoxicity in vivo

: Application Route: Oral
Exposure time: 5 d
Dose: .63 mg/kg
Method: OECD Test Guideline 478
Result: Not classified due to data which are conclusive
although insufficient for classification.

toluene:
Genotoxicity in vivo

: Application Route: Intraperitoneal injection
Method: OPPTS 870.5385
Result: negative

methanol:
Genotoxicity in vivo

: Application Route: Intraperitoneal injection
Dose: 1920 - 4480 mg/kg
Method: OECD Test Guideline 474
Result: negative

formaldehyde:
Genotoxicity in vivo

: Cell type: Germ + somatic
Result: Positive results were obtained in some in vivo tests.

Components:

phenol:
Germ cell mutagenicity-
Assessment

: In vitro tests showed mutagenic effects

formaldehyde:
Germ cell mutagenicity-
Assessment

: Positive result(s) from in vivo non-mammalian somatic cell
mutagenicity tests, supported by positive results from in vitro
mutagenicity assays.

Germ cell mutagenicity-
Assessment

: No data available

Carcinogenicity

Components:

toluene:
Species: Rat, male and female
Application Route: Inhalation

ARALDITE® 64-1

Version 2.0 Revision Date: 2019/01/14 SDS Number: 400001008934 Date of last issue: 2018/01/04
Date of first issue: 2018/01/04

Exposure time: 103 weeks
Dose: 4522 mg/m³
Frequency of Treatment: 6.5 hour
Method: OECD Test Guideline 453
Result: negative
Target Organs: Respiratory Tract, Kidney

phenol:
Species: Mouse, male and female
Application Route: Oral
Exposure time: 103 weeks
Dose: 5000 ppm
Method: OECD Test Guideline 451
Result: negative

methanol:
Species: Rat, male and female
Application Route: Inhalation
Exposure time: 24 month(s)
Dose: >= 1300 mg/m³
Frequency of Treatment: 20 hour
Method: OECD Test Guideline 453
Result: negative

Species: Mouse, male and female
Application Route: Inhalation
Exposure time: 18 month(s)
Dose: 13 - 1300 mg/m³
Frequency of Treatment: 19 hour
Method: OECD Test Guideline 453
Result: negative

formaldehyde:
Species: Rat, male
Application Route: Inhalation
Exposure time: 24 month(s)
Dose: 6 ppm
Frequency of Treatment: 6 hour
Result: positive

Components:

formaldehyde:
Carcinogenicity - Assessment : Sufficient evidence of carcinogenicity in inhalation studies with animals

Reproductive toxicity

Components:

ethanol:
Effects on fertility :
Species: Mouse, male and female
Application Route: Oral
Method: OECD Test Guideline 416
Result: No effects on fertility and early embryonic development were detected.

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	2019/01/14	400001008934	2018/01/04
			Date of first issue: 2018/01/04

toluene:

Species: Rat, male and female
Application Route: Inhalation
General Toxicity - Parent: No observed adverse effect level:
1.875 mg/l
General Toxicity F1: No observed adverse effect level: 1.875
mg/l
Symptoms: Reduced foetal weight
Method: OECD Test Guideline 416

phenol:

Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 416
Remarks: No significant adverse effects were reported

Species: Mouse, female
Application Route: Oral

methanol:

Species: Rat, male and female
Application Route: Inhalation
Method: OECD Test Guideline 416
Result: negative

Species: Monkey, female
Application Route: Inhalation
Result: negative

Species: Mouse, male
Application Route: Oral
Result: negative

Components:

ethanol:

Effects on foetal
development

: Species: Mouse, male and female
Application Route: Oral
Result: Teratogenic effects

toluene:

Species: Rat, female
Application Route: Inhalation
General Toxicity Maternal: No observed adverse effect level:
2,812 mg/m³
Method: Other guidelines
Result: No teratogenic effects

phenol:

Species: Rat, female
Application Route: Oral
General Toxicity Maternal: No observed adverse effect level:
60 mg/kg body weight
Method: OECD Test Guideline 414
Result: No teratogenic effects

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

methanol:

Species: Monkey
Application Route: Inhalation
General Toxicity Maternal: No observed adverse effect level:
2,390 mg/m³
Result: No teratogenic effects

Components:

toluene:

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

STOT - single exposure

Components:

toluene:

Target Organs: Central nervous system
Assessment: May cause drowsiness or dizziness.

phenol:

Exposure routes: Inhalation
Target Organs: Narcotic effects
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

methanol:

Target Organs: Bladder, Blood, Central nervous system, Eyes, Kidney, Liver, Nervous system, spleen
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.

STOT - repeated exposure

Components:

toluene:

Target Organs: Liver, Lungs, Kidney
Assessment: May cause damage to organs through prolonged or repeated exposure.

phenol:

Target Organs: Central nervous system
Assessment: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

ethanol:

Species: Rat, male
NOAEL: 1.28 g/kg
Application Route: Ingestion
Exposure time: 14 Weeks
Number of exposures: 7 d

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

Method: Subchronic toxicity

toluene:

Species: Rat, male and female
LOEC: 625 mg/kg, 600 ppm
Application Route: Ingestion
Test atmosphere: vapour
Exposure time: 13 Weeks
Number of exposures: 6 d
Method: OECD Test Guideline 453

phenol:

Species: Monkey, male
: 1.8 mg/kg, > 19.6 mg/m³
Application Route: Ingestion
Test atmosphere: dust/mist
Exposure time: 672 h
Number of exposures: 8 h
Method: Subacute toxicity

Species: Rabbit

LOEL: 260 mg/kg
Application Route: Skin contact
Exposure time: 432 h
Method: Subacute toxicity

Species: Rat, male and female

NOAEL: 450 mg/kg
Application Route: Ingestion
Exposure time: 103 Weeks
Number of exposures: 7 d
Method: Chronic toxicity

methanol:

Species: Monkey
: 13 mg/m³
Test atmosphere: vapour
Exposure time: 5,040 h
Number of exposures: 21 h

Species: Monkey, male and female

: 6660 mg/m³
Application Route: Ingestion
Test atmosphere: vapour
Exposure time: 72 h
Number of exposures: 6 h
Method: OECD Test Guideline 412

Species: Monkey

: 1300 mg/m³
Test atmosphere: vapour
Exposure time: 1,440 h
Number of exposures: 21 h

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

Species: Monkey
LOEC: 3990 mg/m³
Test atmosphere: vapour
Exposure time: 480 h
Number of exposures: 21 h

formaldehyde:
Species: Mouse, male and female
LOAEL: 6 ppm
Test atmosphere: gas
Exposure time: 2 yr
Number of exposures: 6 h
Method: OECD Test Guideline 453

Species: Rat, male and female
NOAEL: 15 - 21 mg/kg
Application Route: Ingestion
Exposure time: 105 Weeks
Number of exposures: 7 d
Method: Chronic toxicity

Species: Rat, male and female
NOAEL: 82 mg/kg/d
Application Route: Ingestion
Exposure time: 105 Weeks
Number of exposures: 7 d
Method: Chronic toxicity

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

Components:

toluene:
May be fatal if swallowed and enters airways.
methanol:
May be harmful if swallowed and enters airways.

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

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Product:

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Concentrations substantially above the TLV value may cause narcotic effects.

Solvents may degrease the skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

ethanol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 14.2 g/l
Exposure time: 96 h
Test Type: flow-through test
Test substance: Fresh water

toluene:

Toxicity to fish : LC50: 5.5 mg/l
Exposure time: 96 h
Test Type: flow-through test
Test substance: Fresh water

phenol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 8.9 mg/l
Exposure time: 96 h
Test Type: flow-through test
Test substance: Fresh water

methanol:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 mg/l
Exposure time: 96 h
Test Type: flow-through test
Test substance: Fresh water

formaldehyde:

Toxicity to fish : LC50 (Other): 6.7 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: Fresh water

Components:

ARALDITE® 64-1

Version 2.0 Revision Date: 2019/01/14 SDS Number: 400001008934 Date of last issue: 2018/01/04
Date of first issue: 2018/01/04

ethanol:

Toxicity to daphnia and other aquatic invertebrates : LC50 (Ceriodaphnia dubia (Water flea)): 5,012 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: ASTM Method, other

toluene:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (Water flea)): 3.78 mg/l
Exposure time: 48 h
Test Type: Other guidelines
Test substance: Fresh water
Method: Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids

phenol:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3.1 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids

methanol:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: DIN 38412

formaldehyde:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia pulex (Water flea)): 5.8 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

Components:

ethanol:

Toxicity to algae/aquatic plants : EC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

methanol:

Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): ca. 22,000 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

formaldehyde:

Toxicity to algae/aquatic plants : EgC50 (Other): 3.48 mg/l

ARALDITE® 64-1

Version 2.0 Revision Date: 2019/01/14 SDS Number: 400001008934 Date of last issue: 2018/01/04
Date of first issue: 2018/01/04

plants Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

EC50 (Other): 3.48 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:

toluene:
Toxicity to fish (Chronic toxicity) : NOEC: 1.39 mg/l
Exposure time: 40 d
Test Type: flow-through test
Test substance: Fresh water

phenol:
Toxicity to fish (Chronic toxicity) : NOEC (Other): 0.077 mg/l
Exposure time: 60 d
Test Type: semi-static test
Test substance: Fresh water

Components:

ethanol:
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 9.6 mg/l
Exposure time: 10 d
Test Type: semi-static test
Test substance: Fresh water

NOEC (Ceriodaphnia dubia (Water flea)): 9.6 mg/l
Exposure time: 7 d
Test Type: semi-static test
Test substance: Fresh water

toluene:
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (Water flea)): 0.74 mg/l
Exposure time: 7 d
Test Type: Other guidelines
Test substance: Fresh water
Method: Daphnid Chronic Toxicity Test

phenol:
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (Daphnia magna (Water flea)): 4.6 mg/l
Exposure time: 16 d
Test Type: semi-static test
Test substance: Fresh water

M-Factor (Chronic aquatic toxicity) : No data available

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

Components:

methanol:

Toxicity to microorganisms : IC50 (activated sludge): > 1,000 mg/l
Exposure time: 3 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 209

formaldehyde:

Toxicity to microorganisms : EC50 (Bacteria): 34.1 mg/l
Exposure time: 120 h
Test Type: static test
Test substance: Fresh water

: EC50 (activated sludge): 20.4 mg/l
Exposure time: 3 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 209

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:

ethanol:

Biodegradability : Inoculum: Domestic sewage
Concentration: 10 mg/l
Result: Readily biodegradable.
Biodegradation: 96 %
Exposure time: 20 d

toluene:

Biodegradability : Inoculum: Sewage (STP effluent)
Concentration: 10 mg/l
Result: Readily biodegradable.

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

Biodegradation: 81 %
Exposure time: 5 d

phenol:
Biodegradability : Inoculum: activated sludge
Concentration: 30 mg/l
Result: Readily biodegradable.
Biodegradation: 62 %
Exposure time: 4.16667 d
Method: OECD Test Guideline 301C

methanol:
Biodegradability : Inoculum: Marine water
Result: Readily biodegradable.
Biodegradation: 69 - 97 %
Exposure time: 5 - 20 d

formaldehyde:
Biodegradability : Inoculum: activated sludge
Concentration: 1,360 mg/l
Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 4 d

Inoculum: activated sludge
Concentration: 100 mg/l
Result: Readily biodegradable.
Biodegradation: 91 %
Exposure time: 14 d
Method: OECD Test Guideline 301C

Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 99.5 %
Exposure time: 160 d
Method: Simulation Test - Aerobic Sewage Treatment. A:
Activated Sludge Units

Components:

ethanol:
Biochemical Oxygen Demand (BOD) : 1.67 g/g
Incubation time: 5 d

formaldehyde:
Biochemical Oxygen Demand (BOD) : 0.33 - 1.07 mg/l
Incubation time: 5 d

Components:

ethanol:
Chemical Oxygen Demand (COD) : 1990 mgO₂/g
formaldehyde:
Chemical Oxygen Demand (COD) : 1.07 mgO₂/g

ARALDITE® 64-1

Version 2.0 Revision Date: 2019/01/14 SDS Number: 400001008934 Date of last issue: 2018/01/04
Date of first issue: 2018/01/04

BOD/COD : No data available
ThOD : No data available
BOD/ThOD : No data available
Dissolved organic carbon (DOC) : No data available
Physico-chemical removability : No data available
Stability in water : No data available

Components:

methanol:
Photodegradation : Test Type: Air
Rate constant: 0.0093
Degradation (direct photolysis): 50 %
Impact on Sewage Treatment : No data available

Bioaccumulative potential

Components:

ethanol:
Bioaccumulation : Bioconcentration factor (BCF): 0.5
methanol:
Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): < 10
Exposure time: 3 d
Test substance: Fresh water

Components:

ethanol:
Partition coefficient: n-octanol/water : log Pow: -0.35 (24 °C)
pH: 7.4
Method: OECD Test Guideline 107

toluene:
Partition coefficient: n-octanol/water : log Pow: 2.73 (20 °C)
pH: 7

phenol:
Partition coefficient: n-octanol/water : log Pow: 1.47 (30 °C)
pH: 3.8

methanol:
Partition coefficient: n-octanol/water : log Pow: -0.77

formaldehyde:

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

Partition coefficient: n-octanol/water : log Pow: 0.35 (25 °C)

Mobility in soil

Mobility : No data available

Components:

toluene:

Distribution among environmental compartments : Koc: 34 - 120
Method: OECD Test Guideline 312

formaldehyde:

Distribution among environmental compartments : Koc: 15.9
Stability in soil : No data available

Other adverse effects

Environmental fate and pathways : No data available

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 : Not applicable

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

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.

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION

International Regulations

IATA

UN/ID No. : UN 1866
Proper shipping name : Resin solution
Class : 3
Packing group : II
Labels : Flammable Liquids
Packing instruction (cargo aircraft) : 364
Packing instruction (passenger aircraft) : 353

IMDG

UN number : UN 1866
Proper shipping name : RESIN SOLUTION
Class : 3
Packing group : II
Labels : 3
EmS Code : F-E, S-E
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

GB 6944/12268

UN number : UN 1866
Proper shipping name : RESIN SOLUTION
Class : 3
Packing group : II
Labels : 3

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.

15. REGULATORY INFORMATION

National regulatory information

China Occupational Disease Prevention Law

Occupational hazard factor classification category : Not listed

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

Occupational disease list : Not listed

Regulations on Safety Management of Hazardous Chemicals

Hazardous chemicals list : Not listed

Identification of major hazard installations for dangerous chemicals : Not listed

Hazardous Chemicals Under Priority Management : Not listed

Labor Protection Regulations

High toxic substances catalog : Not listed

Environmental management regulations for first import of chemicals and import & export of toxic chemicals

Strictly controlled toxic chemicals for import/export : Not listed

Environmental Administration of New Chemical Substances

Inventory of existing chemicals in China : On the inventory, or in compliance with the inventory

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

CH INV : The formulation contains substances listed on the Swiss Inventory

DSL : This product contains one or several components that are not on the Canadian DSL nor NDSL.

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

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

ENCS : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : The mixture contains a polymer. The monomers for this polymer have been notified.

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

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

TSCA : Not On TSCA Inventory

Inventories

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

16. OTHER INFORMATION

Date format : yyyy/mm/dd

ARALDITE® 64-1

Version	Revision Date:	SDS Number:	Date of last issue: 2018/01/04
2.0	2019/01/14	400001008934	Date of first issue: 2018/01/04

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
CN BEI	:	China. Biological Occupational Exposure Limits for 15 chemicals.
GBZ 2.1-2007	:	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
GBZ 2.1-2007 / PC-TWA	:	Permissible concentration - time weighted average
GBZ 2.1-2007 / PC-STEEL	:	Permissible concentration - short term exposure limit
GBZ 2.1-2007 / MAC	:	Maximum allowable concentration

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