

**ARALDITE® 2021-1 B**

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Trade name : ARALDITE® 2021-1 B

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

Use of the Substance/Mixture : Adhesives and/or sealants

**1.3 Details of the supplier of the safety data sheet**

Company	: Huntsman Advanced Materials (Switzerland) GmbH
Address	: Klybeckstrasse 200 CH-4057 Basel Switzerland
Telephone	: +41 61 299 20 41
Telefax	: +41 61 299 20 40
E-mail address of person responsible for the SDS	: Global_Product_EHS_AdMat@huntsman.com

**1.4 Emergency telephone**Emergency telephone : EUROPE: +32 35 75 1234  
France ORFILA: +33(0)145425959  
ASIA: +65 6336-6011  
China: +86 20 39377888  
+86 532 83889090  
India: + 91 22 42 87 5333  
Australia: 1800 786 152  
New Zealand: 0800 767 437  
USA: +1/800/424.9300  
Swiss Toxicologic Information Centre - Emergency Phone 145  
(24 h)  
+41 44 251 5151 (from outside Switzerland)**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Flammable liquids, Category 2	H225: Highly flammable liquid and vapour.
Skin irritation, Category 2	H315: Causes skin irritation.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory	H335: May cause respiratory irritation.

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## 2.2 Label elements

## Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal Word : Danger

Hazard Statements	:	H225	Highly flammable liquid and vapour.
		H315	Causes skin irritation.
		H317	May cause an allergic skin reaction.
		H335	May cause respiratory irritation.

Precautionary Statements	:	<b>Prevention:</b>	
		P280	Wear protective gloves/ eye protection/ face protection.
		P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
		P233	Keep container tightly closed.
		<b>Response:</b>	
		P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
		<b>Storage:</b>	
		P235	Keep cool.
		<b>Disposal:</b>	
		P501	Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients which must be listed on the label:  
methyl methacrylate

## 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.  
No information available.

## SECTION 3: Composition/information on ingredients

## 3.2 Mixtures

## Hazardous ingredients

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
methyl methacrylate	80-62-6	F; R11	Flam. Liq.2; H225	60 - 100

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	201-297-1	Xi; R37/38 R43	STOT SE3; H335 Skin Irrit.2; H315 Skin Sens.1; H317	
3,5-diethyl-1,2-dihydro- 1-phenyl-2-propylpyridine	34562-31-7 252-091-3	Xn; R22 Xi; R38	Acute Tox.4; H302 Skin Irrit.2; H315	3 - 7

For explanation of abbreviations see section 16.

**SECTION 4: First aid measures****4.1 Description of first-aid measures**

- |                         |  |
|-------------------------|--|
| General advice          | : Move out of dangerous area.<br>Consult a physician.<br>Show this material safety data sheet to the doctor in attendance.   |
| If inhaled              | : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.<br>If symptoms persist, call a physician.  |
| In case of skin contact | : Take off contaminated clothing and shoes immediately.<br>Wash off with soap and plenty of water.<br>If symptoms persist, call a physician.   |
| In case of eye contact  | : Flush eyes with water as a precaution.<br>Remove contact lenses.<br>Protect unharmed eye.<br>Keep eye wide open while rinsing.<br>If eye irritation persists, consult a specialist.  |
| If swallowed            | : Clean mouth with water and drink afterwards plenty of water.<br>Do NOT induce vomiting.<br>Do not give milk or alcoholic beverages.<br>Never give anything by mouth to an unconscious person.<br>Obtain medical attention. |

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

None known.

**4.3 Indication of any immediate medical attention and special treatment needed****SECTION 5: Firefighting measures****5.1 Extinguishing media**

- |                              |   |
|------------------------------|---|
| Suitable extinguishing media | : No data is available on the product itself.<br><br>Alcohol-resistant foam<br>Carbon dioxide (CO2)<br>Dry chemical |
| Unsuitable extinguishing     | : High volume water jet   |

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media

No data is available on the product itself.

**5.2 Special hazards arising from the substance or mixture**

Specific hazards during fire fighting : Do not use a solid water stream as it may scatter and spread fire.

Hazardous combustion products : No data is available on the product itself.

**5.3 Advice for firefighters**

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

Specific extinguishing methods : No data is available on the product itself.

Further information : Use water spray to cool unopened containers.  
For safety reasons in case of fire, cans should be stored separately in closed containments.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Use personal protective equipment.  
Ensure adequate ventilation.  
Remove all sources of ignition.  
Evacuate personnel to safe areas.  
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**6.2 Environmental precautions**

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.

**6.3 Methods and material for containment and cleaning up**

Methods for 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).

**6.4 Reference to other sections**

None

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Advice on safe handling : Avoid contact with skin and eyes.

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For personal protection see section 8.  
Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.  
Smoking, eating and drinking should be prohibited in the application area.  
Take precautionary measures against static discharges.  
Container may be opened only under exhaust ventilation hood.

Advice on protection against fire and explosion : Avoid formation of aerosol. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

**7.2 Conditions for safe storage, including any incompatibilities**

Requirements for storage areas and containers : No smoking. Store in cool place. Keep in a well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Advice on common storage : Strong oxidizing agents  
Strong acids  
Strong bases

Storage class (TRGS 510) : 3, Flammable liquids

Recommended storage temperature : 2 - 8 °C

Other data : No decomposition if stored and applied as directed.

**7.3 Specific end use(s)****SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Occupational Exposure Limits**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
methyl methacrylate	80-62-6	TWA	50 ppm 210 mg/m <sup>3</sup>	CH SUVA
Further information	Sensitizers; Substances marked with an S can lead to very strong allergic reactions., National Institute for Occupational Safety and Health, Institut National de Recherche et de Sécurité pour la prévention des accidents du travail et des maladies professionnelles, Harm to the unborn child is not to be			

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	expected when the OEL-value is respected			
		STEL	100 ppm 420 mg/m <sup>3</sup>	CH SUVA
Further information	Sensitizers; Substances marked with an S can lead to very strong allergic reactions., National Institute for Occupational Safety and Health, Institut National de Recherche et de Sécurité pour la prévention des accidents du travail et des maladies professionnelles, Harm to the unborn child is not to be expected when the OEL-value is respected			
		TWA	50 ppm	2009/161/EU
Further information	Indicative			
		STEL	100 ppm	2009/161/EU
Further information	Indicative			

## 8.2 Exposure controls

## Personal protective equipment

Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles.

Hand protection

Material : butyl-rubber

Break through time : > 8 h

Solvent-resistant gloves (butyl-rubber)

Nitrile rubber

10 - 480 min

Remarks

: Solvent-resistant gloves  
The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.  
Before removing gloves clean them with soap and water.

Skin and body protection

: impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection

: In the case of vapor formation use a respirator with an approved filter.

## SECTION 9: Physical and chemical properties

## 9.1 Information on basic physical and chemical properties

Appearance : paste

Color : light yellow

Odor : like acrylic

Boiling point : > 100 °C

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Flash point	: 10 °C
	Method: closed cup
Density	: 0,95 g/cm3
Solubility(ies)	
Water solubility	: insoluble
Viscosity	
Viscosity, dynamic	: 15.000 - 20.000 mPa.s (25 °C)
	thixotropic

**9.2 Other information**

No data available

**SECTION 10: Stability and reactivity****10.1 Reactivity**

Stable under recommended storage conditions.

**10.2 Chemical stability**

No decomposition if stored and applied as directed.

**10.3 Possibility of hazardous reactions**

Hazardous reactions	: Stable under recommended storage conditions.
	No decomposition if used as directed.

Vapors may form explosive mixture with air.

**10.4 Conditions to avoid**

Conditions to avoid	: Heat, flames and sparks.
---------------------	----------------------------

**10.5 Incompatible materials****10.6 Hazardous decomposition products**Carbon oxides  
Burning produces obnoxious and toxic fumes.**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity****Ingredients:**

methyl methacrylate:

Acute oral toxicity	: LD50 (Rat): 7.900 - 9.400 mg/kg
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**Ingredients:**

methyl methacrylate:

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Acute inhalation toxicity : LC50 (Rat, male and female): 29,8 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
Method: Directive 67/548/EEC, Annex V, B.2.

**Ingredients:**

methyl methacrylate:

Acute dermal toxicity : LD50 (Rabbit, male): > 5.000 mg/kg  
Method: OECD Test Guideline 402

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

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization****Ingredients:**

methyl methacrylate:

Routes of exposure: Skin

Species: Mouse

Assessment: May cause sensitization by skin contact.

Method: OECD Test Guideline 429

Result: Causes sensitization.

Assessment: No data available

**Germ cell mutagenicity**

Genotoxicity in vitro : No data available

Genotoxicity in vivo : No data available

**Carcinogenicity**

No data available

Carcinogenicity - Assessment : No data available

**Reproductive toxicity**

Effects on fertility : No data available



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Effects on fetal development : No data available

Reproductive toxicity - : No data available  
Assessment

**STOT-single exposure****Ingredients:**

methyl methacrylate:

Routes of exposure: Inhalation

Target Organs: Respiratory Tract

Assessment: May cause respiratory irritation.

**STOT-repeated exposure**

No data available

**Repeated dose toxicity**

No data available

Repeated dose toxicity - : No data available  
Assessment

**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

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**Further information****Product:**

Remarks: Solvents may degrease the skin.

**SECTION 12: Ecological information****12.1 Toxicity****Ingredients:**

methyl methacrylate:

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

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

Toxicity to algae : IC50 : > 110 mg/l  
Exposure time: 72 h

**12.2 Persistence and degradability****Ingredients:**

methyl methacrylate:

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

**12.3 Bioaccumulative potential****Ingredients:**

methyl methacrylate:

Bioaccumulation : Bioconcentration factor (BCF): 3

Partition coefficient: n- : log Pow: 1,38  
octanol/water

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment****Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

**12.6 Other adverse effects****Product:**

Additional ecological : Remarks: There is no data available for this product.

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information

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Product	: Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Offer surplus and non-recyclable solutions to a licensed disposal company.
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****IATA**

14.1 UN number	: UN 1993
14.2 UN proper shipping name	: Flammable liquid, n.o.s. (METHYL METHACRYLATE)
14.3 Transport hazard class(es)	: 3
14.4 Packing group	: II
Labels	: Flammable Liquids
Packing instruction (cargo aircraft)	: 364
Packing instruction (passenger aircraft)	: 353

**IMDG**

14.1 UN number	: UN 1993
14.2 UN proper shipping name	: FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE)
14.3 Transport hazard class(es)	: 3
14.4 Packing group	: II
Labels	: 3
EmS Code	: F-E, <u>S-E</u>
14.5 Environmental hazards	
Marine pollutant	: no

**ADR**

14.1 UN number	: UN 1993
14.2 UN proper shipping name	: FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE)

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**14.3 Transport hazard class(es)** : 3

**14.4 Packing group** : II

**Labels** : 3

**14.5 Environmental hazards**

Marine pollutant : no

**RID**

**14.1 UN number** : UN 1993

**14.2 UN proper shipping name** : FLAMMABLE LIQUID, N.O.S.

(METHYL METHACRYLATE)

**14.3 Transport hazard class(es)** : 3

**14.4 Packing group** : II

**Labels** : 3

**14.5 Environmental hazards**

Marine pollutant : no

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

Not applicable for product as supplied.

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Volatile organic compounds : Law on the incentive tax for volatile organic compounds (VOCV)  
Volatile organic compounds (VOC) content: < 0,01 %  
Remarks: no VOC duties

**The ingredients of this product are reported in the following inventories:**

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

TSCA : On TSCA Inventory

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

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

NZIoC : Not in compliance with the inventory

ENCS : Not in compliance with the inventory

ISHL : Not in compliance with the inventory

KECI : Not in compliance with the inventory

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PICCS : Not in compliance with the inventory

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

**Inventories**

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

**15.2 Chemical Safety Assessment****SECTION 16: Other information****Full text of R-Phrases**

R11	: Highly flammable.
R22	: Harmful if swallowed.
R37/38	: Irritating to respiratory system and skin.
R38	: Irritating to skin.
R43	: May cause sensitization by skin contact.

**Full text of H-Statements**

H225	: Highly flammable liquid and vapour.
H302	: Harmful if swallowed.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H335	: May cause respiratory irritation.

**Full text of other abbreviations**

Acute Tox.	: Acute toxicity
Flam. Liq.	: Flammable liquids
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitization
STOT SE	: Specific target organ systemic toxicity - single exposure

While 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.

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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