

Safety Data Sheet**ARYAJOINT**

Safety Data Sheet dated 08/09/2023 version 3

This Safety Data Sheet is prepared voluntarily: it is not required according to Article 31 of Regulation (EC) No 1907/2006.

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

Mixture identification:

Trade name: ARYAJOINT

Trade code: 1261

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

Recommended use: Paste filler

1.3. Details of the supplier of the safety data sheet

Company: FASSA Srl

Via Lazzaris, 3 - 31027 Spresiano (TV) - ITALY

Tel. +39 0422 7222

Fax +39 0422 887509

Responsible: laboratorio.spresiano@fassabortolo.it

1.4. Emergency telephone number

NHS 111

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) n. 1272/2008 (CLP)**

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Special Provisions:

EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

EUH208 Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None.

2.3. Other hazardsNo PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$

No other hazards

SECTION 3: Composition/information on ingredients**3.1. Substances**

N.A.

3.2. Mixtures

Mixture identification: ARYAJOINT

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number:
$\geq 1 - < 2.5$ %	2-imidazolidone	CAS:120-93-4 EC:204-436-4	Eye Irrit. 2, H319; STOT RE 2, H373	01-2119980933-25-xxxx
$\geq 0.3 -$ < 0.5 %	titanium dioxide	CAS:13463-67-7 EC:236-675-5 Index:022-006- 00-2	Carc. 2, H351	01-2119489379-17-xxxx

≥0.005 - 1,2-benzisothiazol-3(2H)-one
<0.025 %

CAS:2634-33-5 Acute Tox. 2, H330 Acute Tox. 4,
EC:220-120-9 H302 Skin Irrit. 2, H315 Eye Dam.
Index:613-088-1, H318 Skin Sens. 1, H317
00-6 Aquatic Acute 1, H400 Aquatic
Chronic 1, H410, M:1

Specific Concentration Limits:
0.05% ≤ C < 100%: Skin Sens. 1
H317

Acute Toxicity Estimate:
ATE - Oral: 500mg/kg bw
ATE - Inhalation (Dust/mist):
0.05mg/l

≥0.00015 - reaction mass of 5-chloro-2-
<0.0015 % methyl-2H-isothiazol-3-one and 2-
methyl-2H-isothiazol-3-one (3:1)

CAS:55965-84-9 Acute Tox. 2, H330 Acute Tox. 2,
Index:613-167- H310 Acute Tox. 3, H301 Skin
00-5 Corr. 1C, H314 Eye Dam. 1, H318
Skin Sens. 1A, H317 Aquatic Acute
1, H400 Aquatic Chronic 1, H410,
M-Chronic:100, M-Acute:100,
EUH071

Specific Concentration Limits:
0.6% ≤ C < 100%: Skin Corr. 1C
H314
0.06% ≤ C < 0.6%: Skin Irrit. 2
H315
0.6% ≤ C < 100%: Eye Dam. 1
H318
0.06% ≤ C < 0.6%: Eye Irrit. 2
H319
0.0015% ≤ C < 100%: Skin Sens.
1A H317

Acute Toxicity Estimate:
ATE - Oral: 100mg/kg bw
ATE - Dermal: 50mg/kg bw
ATE - Inhalation (Dust/mist):
0.05mg/l

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

If you feel unwell, seek medical advice.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Product is not flammable.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Burning produces heavy smoke.

In the event of fire and/or explosion do not breathe fumes.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Material suitable for collection: inert absorbent material (e.g. sand, vermiculite)

After the product has been recovered, rinse the area and materials involved with water.

Retain contaminated washing water and dispose it.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Advice on general occupational hygiene:

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a cool, well-ventilated place, away from heat.

Keep away from food, drink and feed.

Incompatible materials:

See chapter 10.5

Instructions as regards storage premises:

Adequately ventilated premises.

Protect from frost.

7.3. Specific end use(s)

Recommendation(s)

See chapter 1.2

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

	OEL Type	Country	Long Term mg/m ³	Long Term ppm	Short Term mg/m ³	Short Term ppm	Notes
titanium dioxide CAS: 13463-67-7	ACGIH		10				A4 - LRT irr
	VLEP	BELGIUM	10.000				
	VLEP	FRANCE	10.000				
	MAK	GERMANY	0.300		2.400		Respirable fraction, except ultrafine particles , Multiplied by the material density
	AGW	GERMANY	1.250				Respirable dust particles
	NDS	POLAND	10.000				Inhalable fraction
	VLEP	ROMANIA	10.000		15.000		
	VLA	SPAIN	10.000				Inhalable fraction
	SUVA D	SWITZERLAN D	3.000				Respirable aerosol
	WEL	U.K.	10.000				Inhalable aerosol
	WEL	U.K.	4.000				Respirable aerosol
	GVI	CROATIA	10.000				Inhalable fraction

	GVI	CROATIA	4.000		Respirable fraction
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) CAS: 55965-84-9	MAK	AUSTRIA	0.050		
	MAK	GERMANY	0.200	0.400	Inhalable fraction
	SUVA	SWITZERLAN D	0.200	0.400	Inhalable fraction

Predicted No Effect Concentration (PNEC) values

	PNEC Limit	Exposure Route	Exposure Frequency	Remark
2-imidazolidone CAS: 120-93-4	0.119 mg/l	Fresh Water		
	0.012 mg/l	Marine water		
	10000 mg/l	Microorganisms in sewage treatments		
	0.476 mg/kg	Freshwater sediments		
	0.048 mg/kg	Marine water sediments		
	0.886 mg/kg	Soil (agricultural)		

Derived No Effect Level (DNEL) values

	Worker Industrial	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
2-imidazolidone CAS: 120-93-4	1 mg/m ³	0.18 mg/m ³	0.18 mg/m ³	Human Inhalation	Long Term, systemic effects	
	2.9 mg/kg	1.04 mg/kg	1.04 mg/kg	Human Dermal	Long Term, systemic effects	
		0.1 mg/kg	0.1 mg/kg	Human Oral	Long Term (repeated)	

8.2. Exposure controls

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction.

Eye protection:

Eye glasses with side protection (EN 166).

Protection for skin:

Use suitable clothing that provides complete protection to the skin according to activity and exposure (EN 14605/EN 13982), e.g. overall, apron, safety shoes, suitable clothing.

Protection for hands:

There is no material or combination of materials for gloves that can guarantee unlimited resistance to any individual chemical or combination of chemicals.

For prolonged or repeated handling, use chemical resistant gloves.

Suitable materials for safety gloves (EN 374/EN 16523); Butyl caoutchouc (butyl rubber): thickness \geq 0.4 mm; permeation time \geq 480 min.; NBR (Nitril rubber): thickness \geq 0.4 mm; permeation time \geq 480 min.

The choice of suitable gloves does not only depend on the material, but also on other quality characteristics that vary from one manufacturer to another and on the manner and times according to which the mixture is used.

Respiratory protection:

If workers are exposed to concentrations above the exposure limit they must use appropriate, certified respirators.

Combination filtering device (EN 14387): mask with filter A-P2.

Environmental exposure controls:

See point 6.2

Hygienic and Technical measures

See section 7.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance: thick liquid
Color: white
Odour: Characteristic
Odour threshold: N.D.
Melting point / freezing point: N.D.
Initial boiling point and boiling range: N.D.
Flammability: Non-flammable
Upper/lower flammability or explosive limits: N.D.
Flash point: > 93°C (Internal assessment)
Auto-ignition temperature: N.D.
Decomposition temperature: N.D.
pH: $\geq 7.00 \leq 10.00$ (Internal method)
Kinematic viscosity: > 20.5 mm²/s (40 °C)
Relative density: 1.65 ÷ 1.75 kg/l (Internal method)
Vapour density: N.D.
Vapour pressure: N.D.
Solubility in water: miscible in all ratio
Solubility in oil: No data available
Partition coefficient (n-octanol/water): N.A.

Particle characteristics:

Particle size: N.A.

9.2. Other information

Conductivity: N.D.
Explosive properties: N.A. (Internal assessment)
Oxidizing properties: N.A. (Internal assessment)
Evaporation rate: N.A.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Keep away from heat sources.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

No hazardous decomposition products when stored and handled correctly.
See chapter 5.2

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological Information of the Preparation

a) acute toxicity	Not classified Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified Based on available data, the classification criteria are not met
c) serious eye damage/irritation	Not classified Based on available data, the classification criteria are not met
d) respiratory or skin sensitisation	Not classified Based on available data, the classification criteria are not met
e) germ cell mutagenicity	Not classified Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified Based on available data, the classification criteria are not met

g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified
	Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified
	Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

2-imidazolidone	a) acute toxicity	LD50 Oral Rat > 5010 mg/kg LD50 Skin Rat > 2000 mg/kg
titanium dioxide	a) acute toxicity	LD50 Oral Rat > 5000 mg/kg LC50 Inhalation Dust Rat > 6.82 mg/l 4h
1,2-benzisothiazol-3(2H)-one	a) acute toxicity	ATE - Oral : 500 mg/kg bw ATE - Inhalation (Dust/mist) : 0.05 mg/l
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	a) acute toxicity	ATE - Oral : 100 mg/kg bw ATE - Dermal : 50 mg/kg bw ATE - Inhalation (Dust/mist) : 0.05 mg/l

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 12: Ecological information

Adopt good working practices, so that the product is not released into the environment.

12.1. Toxicity

Eco-Toxicological Information:

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

No data available for the product

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
2-imidazolidone	CAS: 120-93-4 - EINECS: 204-436-4	a) Aquatic acute toxicity : LC50 Fish > 122 mg/l 96h a) Aquatic acute toxicity : EC50 Daphnia > 985 mg/l 48h a) Aquatic acute toxicity : EC50 Algae > 119 mg/l 72h
titanium dioxide	CAS: 13463-67-7 - EINECS: 236-675-5 - INDEX: 022-006-00-2	a) Aquatic acute toxicity : LC50 Fish > 1000 mg/l 96h a) Aquatic acute toxicity : EC50 Daphnia > 1000 mg/l 48h a) Aquatic acute toxicity : EC50 Algae 61 mg/l 72h
1,2-benzisothiazol-3(2H)-one	CAS: 2634-33-5 - EINECS: 220-120-9 - INDEX: 613-088-00-6	a) Aquatic acute toxicity : LC50 Fish 11 mg/l 96h a) Aquatic acute toxicity : EC50 Daphnia 16.4 mg/l 48h

- a) Aquatic acute toxicity : EC50 Algae 0.6 mg/l 72h
- b) Aquatic chronic toxicity : NOEC Fish 1.05 mg/l - 28d
- b) Aquatic chronic toxicity : NOEC Daphnia 6 mg/l - 21d
- b) Aquatic chronic toxicity : NOEC Algae 0.2 mg/l 72h

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) CAS: 55965-84-9 - INDEX: 613-167-00-5

- a) Aquatic acute toxicity : EC50 Daphnia 0.1 mg/l 48h
- a) Aquatic acute toxicity : EC50 Algae 0.0052 mg/l 48h
- a) Aquatic acute toxicity : EC50 Freshwater algae 0.048 mg/l 72h
- b) Aquatic chronic toxicity : NOEC Fish 0.098 mg/l - 28d
- b) Aquatic chronic toxicity : NOEC Daphnia 0.004 mg/l - 21d
- b) Aquatic chronic toxicity : NOEC Algae 0.00064 mg/l 48h
- b) Aquatic chronic toxicity : NOEC Freshwater algae 0.0012 mg/l 72h

12.2. Persistence and degradability

Component	Persistence/Degradability:
2-imidazolidone	Readily biodegradable
1,2-benzisothiazol-3(2H)-one	Non-readily biodegradable
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Non-readily biodegradable

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT/vPvB in percentage $\geq 0.1\%$.

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration $\geq 0.1\%$

12.7. Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

Do not allow it to enter drains or watercourses.

Dispose of containers contaminated by the product in accordance with local or national legal provisions.

Once the product has expired, it must be disposed of in accordance with current legislation.

SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number or ID number

N/A

14.2. UN proper shipping name

ADR-Shipping Name: N/A

IATA-Technical name: N/A

IMDG-Technical name: N/A

14.3. Transport hazard class(es)

ADR-Class: N/A

IATA-Class: N/A

IMDG-Class: N/A

14.4. Packing group

ADR-Packing Group: N/A

IATA-Packing group: N/A

IMDG-Packing group: N/A

14.5. Environmental hazards

Marine pollutant: No
Environmental Pollutant: No
IMDG-EMS: N/A

14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR-Label: N/A
ADR - Hazard identification number: N/A
ADR-Special Provisions: N/A
ADR-Transport category (Tunnel restriction code):

Air (IATA):

IATA-Passenger Aircraft: N/A
IATA-Cargo Aircraft: N/A
IATA-Label: N/A
IATA-Subsidiary hazards: N/A
IATA-Erg: N/A
IATA-Special Provisions: N/A

Sea (IMDG):

IMDG-Stowage Code: N/A
IMDG-Stowage Note: N/A
IMDG-Subsidiary hazards: N/A
IMDG-Special Provisions: N/A

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Directive 2010/75/EU

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 2020/878

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2021/849 (ATP 17 CLP)

Regulation (EU) n. 2022/692 (ATP 18 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: None.

Restrictions related to the substances contained: 30 (CAS 13463-41-7), 40, 65 (CAS 7783-20-2), 69, 75

Provisions related to directive EU 2012/18 (Seveso III):

None

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

Class 1: slightly hazardous for water.

SVHC Substances:

On the basis of available data, the product does not contain any SVHC in percentage $\geq 0.1\%$.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
H319	Causes serious eye irritation.
H351	Suspected of causing cancer if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.

Code	Hazard class and hazard category	Description
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.6/2	Carc. 2	Carcinogenicity, Category 2
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

Safety data sheets of raw materials suppliers.

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BEI: Biological Exposure Index

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DNEL: Derived No Effect Level.

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association.

IC50: half maximal inhibitory concentration

IMDG: International Maritime Code for Dangerous Goods.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

LDLo: Leathal Dose Low

N.A.: Not Applicable

N/A: Not Applicable

N/D: Not defined/ Not available

N.D.: Not available

NIOSH: National Institute for Occupational Safety and Health

NOAEL: No Observed Adverse Effect Level

OSHA: Occupational Safety and Health Administration.

PBT: Persistent, Bioaccumulative and Toxic

PGK: Packaging Instruction

PNEC: Predicted No Effect Concentration.

PSG: Passengers

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.

STEL: Short Term Exposure limit.

STOT: Specific Target Organ Toxicity.

TLV: Threshold Limiting Value.

TLV-TWA: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).

vPvB: Very Persistent, Very Bioaccumulative.

WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- SECTION 13: Disposal considerations