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Document No.:	M0145	SDS-ID:	CA-EN/17.0

1. IDENTIFICATION

Product identifier

Product name: VIAFIX LIQUID
Cat. No. 40200069, 40200067

Container size: 500 ml, 1 l

Recommended use and restrictions on use

Application: For embedding and impregnation of materialographic specimens

Uses advised against: No specific uses advised against are identified. (*)

Details of the supplier of the safety data sheet

Supplier: Struers Ltd
7275 West Credit Avenue
Ontario L5N 5M9 Mississauga
Canada
Tel: +1 (905) 8148855

Responsible for safety data sheet authoring: Responsible for safety data sheet authoring: DHI
Any questions to the contents of this safety data sheet should be sent to:
struers@struers.dk

Emergency telephone number

Alberta & NWT:
Poison & Drug Information Service (PADIS): 1-800-332-1414
British Columbia:
Drug and Poison Information Centre (DPIC): 604-682-5050 / 1-800-567-8911
Ontario:
Poison Centre: 1-800-268-9017
Québec:
Poison Control Centre: 1-800-463-5060

Infotrac:
1-800-535-5053
Struers CAN:
+1 (905) 8148855
(Only during office hours)

2. HAZARDS IDENTIFICATION

Classification of the hazardous product

WHMIS 2015: Flammable Liquids — Category 3
Skin Irritation — Category 2
Skin Sensitizer — Category 1B
Specific Target Organ Toxicity — Single Exposure — Category 3 (respiratory tract irritation)(*)

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Label elements

(*)



Warning

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective clothing, gloves, eye and face protection.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P501	Dispose of contents/container in accordance with local regulations.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTRE/doctor if you feel unwell.
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 foam, carbon dioxide or dry powder to extinguish.
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.

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Other hazards

The product is flammable, and heating may generate vapours which may form explosive vapour/air mixtures.

PBT/vPvB: Not Classified as PBT/vPvB by current EU criteria.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

The product contains: acrylates and additives. (*)

WHMIS 2015:

<u>%:</u>	<u>CAS-No.:</u>	<u>EC No.:</u>	<u>REACH Reg. No.:</u>	<u>Chemical name:</u>	<u>Hazard classification:</u>	<u>Notes:</u>
80-100	97-86-9	202-613-0	01-2119488331-38-xxxx	Isobutyl methacrylate	Flammable Liquids Category 3 Specific Target Organ Toxicity Single Exposure Category 3 Skin Irritation Category 2 Skin Sensitizer Category 1B	D
10-15	3290-92-4	221-950-4	-	1,1,1-Trimethylolpropan-trimethacrylate	Aquatic Chronic Toxicity Category 2	
<4	99-97-8	202-805-4	-	N,N-Dimethyl-p-toluidine	Acute (Inhalation) Toxicity Category 3 Acute (Dermal) Toxicity Category 3 Acute (Oral) Toxicity Category 3 Category 2 Target organ toxicant, Repeated Exposure Aquatic Chronic Toxicity Category 3	C

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4. FIRST-AID MEASURES

Description of first-aid measures

Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

Inhalation: Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and take along these instructions.

Skin contact: Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring along these instructions. (*)

Ingestion: Rinse nose, mouth and throat with water. DO NOT induce vomiting. Get medical attention immediately. (*)

Most important symptoms and effects, both acute and delayed

Symptoms/effects: See section 11 for more detailed information on health effects and symptoms.

Indication of any immediate medical attention and special treatment needed

Medical attention/treatments: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Extinguishing media: Extinguish with foam, carbon dioxide or dry powder.

Unsuitable extinguishing media: Water. (*)

Specific hazards arising from the hazardous product

Specific hazards: By heating and fire, toxic vapors/gases may be formed.

Advice for fire-fighters

Protective equipment for fire-fighters: Use air-supplied respirator during fire fighting.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Do not smoke or use open fire, or other sources of ignition. Avoid inhalation of vapors and contact with skin and eyes. For personal protection, see section 8.

For emergency responders: No specific recommendations. For personal protection, see section 8.

Environmental precautions

Environmental precautions: Do not discharge into drains, water courses or onto the ground.

Methods and material for containment and cleaning up

Spill Cleanup Methods: Remove sources of ignition. Dam and absorb spillages with sand, earth or other non-combustible material.

Reference to other items

References: For personal protection, see section 8. For waste disposal, see section 13.

7. HANDLING AND STORAGE

Precautions for safe handling

Safe handling advice: Avoid inhalation of vapors and contact with skin and eyes. Observe good chemical hygiene practices.

Technical measures: Work practice should minimize contact.

Technical precautions: Local exhaust is recommended.

Conditions for safe storage, including any incompatibilities

Technical measures for safe storage: Follow rules for flammable liquids.

Storage conditions: Store in a cool and well-ventilated place. Keep containers tightly closed. Avoid contact with oxidizing agents. Protect against direct sunlight. (*)

Specific end-use(s)

Specific use(s): No information available.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Other provincial OEL's may apply. (*)

Occupational exposure limits:

<u>CAS-No.:</u>	<u>Chemical name:</u>	<u>As:</u>	<u>Exposure limits:</u>	<u>Type:</u>	<u>Notes:</u>	<u>References:</u>
99-97-8	N,N-Dimethyl-p-toluidine	-			2B	BC

Notes: 2B: Possibly carcinogen to humans (IARC).

Exposure controls

Engineering measures:

Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors. Minimize the risk of inhalation of vapours. Provide easy access to water supply and eye wash facilities.

Personal protection:

Personal protection equipment should be chosen according to relevant standards and in discussion with the supplier of the personal protective equipment.

Respiratory equipment:

In case of inadequate ventilation: Use respiratory equipment with gas filter, type A2.

Hand protection:

Wear protective gloves. Butyl rubber gloves are recommended. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.
Thickness: 0,3 mm
Breakthrough time: 480 min (*)

Eye protection:

Risk of contact: Wear goggles/face shield.

Skin protection:

Risk of contact: Wear apron or protective clothing in case of splashes.

Environmental Exposure Controls:

Not available.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<u>Form:</u>	Liquid.
<u>Colour:</u>	Colourless.
<u>Odour:</u>	Ester.
<u>Odour threshold:</u>	Not available.
<u>pH:</u>	Not available.
<u>Melting point:</u>	-35°C (*)
<u>Boiling point:</u>	155°C
<u>Flash point:</u>	42.5°C (*)
<u>Evaporation rate:</u>	Not available.
<u>Flammability (solid, gas):</u>	Not available.
<u>Explosion limits:</u>	2-8 vol%
<u>Vapour pressure:</u>	2.11 hPa (20°C) (*)
<u>Vapour density:</u>	Not available.
<u>Relative density:</u>	0,89
<u>Solubility:</u>	Water: 470 mg/l (20°C) (*)
<u>Partition coefficient (n-octanol/water):</u>	log Pow: = 2.66 (*)
<u>Auto-ignition temperature (°C):</u>	Not available.
<u>Decomposition temperature (°C):</u>	Not available.
<u>Viscosity:</u>	Kinematic viscosity: 1.01 mm ² /s (20°C) (*)
<u>Explosive properties:</u>	Not available.
<u>Oxidising properties:</u>	Not available.
<u>Other information</u>	
<u>Other data:</u>	Volatile Organic Compound (VOC): 778 g/l (calculated)

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10. STABILITY AND REACTIVITY

Reactivity

Reactivity: No data available.

Chemical stability

Stability: Stable under normal temperature conditions.

Possibility of hazardous reactions

Hazardous Reactions: Polymerises generating heat. (*)

Conditions to avoid

Conditions/materials to avoid: Avoid exposure to high temperatures or direct sunlight.

Incompatible materials

Incompatible materials: Avoid contact with oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products: By heating and fire, toxic vapors/gases may be formed.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity (Oral): Based on available data, the classification criteria are not met.

Acute Toxicity (Dermal): Based on available data, the classification criteria are not met.

Acute Toxicity (Inhalation): Based on available data, the classification criteria are not met.

Skin Corrosion/Irritation: Causes skin irritation.

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

Respiratory or skin sensitization: May cause an allergic skin reaction.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.
National Toxicology Program (NTP): No.
IARC Cancer Review: Group 2B for N,N-Dimethyl-p-toluidine

Reproductive Toxicity: Based on available data, the classification criteria are not met.

STOT - Single exposure: May cause respiratory irritation.

STOT - Repeated exposure: Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

Inhalation: Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

Eye contact: May cause temporary eye irritation. (*)

Ingestion: Irritating. May be absorbed in the body and cause dizziness, nausea and vomiting.

Specific effects: Frequent inhalation of even small concentrations may cause irritability, fatigue and memory failure and eventually permanent damage to the nervous system, including the brain.

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12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity: Harmful to aquatic life with long lasting effects. (*)

Persistence and degradability

Degradability: The product is readily biodegradable.

Bioaccumulative potential

Bioaccumulative potential: Bioaccumulation: Is not expected to be bio-accumulable. (*)

Mobility in soil

Mobility: Not considered mobile. (*)

Results of PBT and vPvB assessment

PBT/vPvB: This product does not contain any PBT or vPvB substances. (*)

Other adverse effects

Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Contaminated packaging: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

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14. TRANSPORT INFORMATION

UN number

UN-No: 1866

UN proper shipping name

Proper Shipping Name: RESIN SOLUTION, flammable (Isobutyl methacrylate)

Additional IMDG information:

EmS: F-E, S-E

MFAG: 1

Transport hazard class(es)

Class: 3

Packing group

PG: III

Environmental hazards

Marine pollutant: Yes.

Environmentally Hazardous substance: Yes.

Special precautions for user

Special precautions: None known.

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

Transport in bulk: Not relevant

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific to the product

Special provisions: This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

DSL: All chemicals included in the product are DSL listed or exempt.

National regulation: Hazardous Products Regulations, with amendments.
Canadian Environmental Protection Act, Reporting for the Domestic Substances List (DSL), with amendments.
British Columbia: Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, with amendments (2015).
Quebec: Regulation respecting the quality of the work environment, with amendments (2013-12-13).
Alberta: Occupational Health and Safety Code 2009.
U.S. Department of health and human services: 2011 - Report on Carcinogens - 12th Edition.
International Agency for Research on Cancer (IARC): IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Lyon: IARC, World Health Organization.

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16. OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

The following sections contain revisions or new statements: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12.
The (*) indicates the changes made with respect to the previous version.

Approved by DHI.

Allan Vorup

Abbreviations and acronyms used in the safety data sheet: PBT = Persistent, Bioaccumulative and Toxic.
vPvB = very Persistent and very Bioaccumulative.

Additional information: Classification according to WHMIS 2015:
Calculation method.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

Made by DHI - Environment and Toxicology, Agern Allé 5, DK-2970 Hørsholm, Denmark.
www.dhigroup.com.
