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Document No.:	M0170	SDS-ID:	CA-EN/14.0

1. IDENTIFICATION

Product identifier

Product name: CALDOFIX-2 RESIN
Cat. No. 40200085, 40200084

Container size: 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)

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2. HAZARDS IDENTIFICATION

Classification of the hazardous product

WHMIS 2015: Skin Irritation — Category 2
Serious Eye Damage — Category 1
Skin Sensitizer — Category 1
Germ Cell Mutagenicity — Category 2
Aquatic Chronic Toxicity — Category 2

Label elements



Danger

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H341	Suspected of causing genetic defects.
H411	Toxic to aquatic life with long lasting effects.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection
P302 + P352	IF ON SKIN: Wash with plenty of water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing gas, fume, vapours or spray.
P264	Wash contaminated skin thoroughly after handling.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P272	Contaminated work clothing should not be allowed out of the workplace.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

Other hazards

PBT/vPvB: No information available.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

The product contains: epoxy resin .

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>
60-100	25068-38-6	500-033-5	-	Reaction product: bisphenol-A-(epichlorhydrin), epoxy resin (number average molecular weight <= 700)	Eye Irritation Category 2 Skin Irritation Category 2 Skin Sensitizer Category 1 Aquatic Chronic Toxicity Category 2	
15-35	26761-45-5	247-979-2	-	Neodecanoic acid oxiranylmethylester	Skin Sensitizer Category 1 Germ Cell Mutagenicity Category 2 Aquatic Chronic Toxicity Category 2	
1-5	13048-33-4	235-921-9	-	Hexamethylene diacrylate	Eye Irritation Category 2 Skin Irritation Category 2 Skin Sensitizer Category 1	D
1.5-2.5	3524-68-3	222-540-8	-	Pentaerythritol triacrylate	Acute (Oral) Toxicity Category 4 Skin Irritation Category 2 Serious Eye Damage Category 1 Skin Sensitizer Category 1 Aquatic Chronic Toxicity Category 2	
1.5-2.5	4986-89-4	225-644-1	-	Pentaerythritol tetraacrylate	Acute (Oral) Toxicity Category 4 Skin Irritation Category 2 Serious Eye Damage Category 1 Skin Sensitizer Category 1 Aquatic Chronic Toxicity Category 2	

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4. FIRST-AID MEASURES

Description of first-aid measures

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. Remove any contact lenses and open eyes wide apart. Call an ambulance and continue flushing during transportation to hospital taking along these instructions.

Ingestion: Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable seek hospital and bring these instructions. Do not induce vomiting.

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, dry powder or water fog. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

Specific hazards arising from the hazardous product

Specific hazards: During fire, health hazardous gases may be formed.

Advice for fire-fighters

Protective equipment for fire-fighters: Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Avoid 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: Avoid discharge into drains, water courses or onto the ground.

Methods and material for containment and cleaning up

Spill Cleanup Methods: Absorb spillage with suitable absorbent material.

Reference to other items

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

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7. HANDLING AND STORAGE

Precautions for safe handling

Safe handling advice: Avoid contact with skin and eyes. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site. Observe good chemical hygiene practices.

Technical measures: Work practice should minimize contact. Technical aids: Use disposable equipment (rags, brushes, spatulas, putty knives, etc.), if possible.

Technical precautions: Local exhaust is recommended. First-aid equipment, including eye wash bottle, must be available at the work site.

Conditions for safe storage, including any incompatibilities

Technical measures for safe storage: No special precautions.

Storage conditions: Store in closed original container in a dry place.

Specific end-use(s)

Specific use(s): No information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No occupational exposure limit assigned.

Exposure controls

Engineering measures: Local exhaust is recommended. Mix and prepare in a place with efficient exhaust ventilation. An eye wash bottle must be available at the work site. Provide access to washing facilities including soap, skin cleanser and fatty cream.

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 and work of brief duration, use suitable respiratory equipment. It is recommended to use respiratory equipment with combination filter, type ABEK

Hand protection: Wear protective gloves. Butyl rubber gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Eye protection: Wear goggles/face shield.

Skin protection: Wear apron or protective clothing in case of splashes.

Hygiene measures: Remove contaminated clothing and wash the skin thoroughly with soap and water after work. When using do not eat, drink or smoke.

Environmental Exposure Controls: Not available.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance: clear yellowish liquid
Odour: slight odour
Odour threshold: Not available.
pH: Not available.
Melting point: Not available.
Boiling point: Not available.
Flash point: 110 °C
Evaporation rate: Not available.
Flammability (solid, gas): Not available.
Explosion limits: Not available.
Vapour pressure: Not available.
Vapour density: Not available.
Relative density: 1,13
Solubility: insoluble in water
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature (°C): Not available.
Decomposition temperature (°C): Not available.
Viscosity: Not available.
Explosive properties: Not available.
Oxidising properties: Not available.
Other information
Other data: Volatile Organic Compound (VOC): 0 g/l

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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: No data available.

Conditions to avoid

Conditions/materials to avoid: Strong oxidising substances and strong bases.

Incompatible materials

Incompatible materials: No information available.

Hazardous decomposition products

Hazardous decomposition products: None under normal conditions.

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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: Causes serious eye damage.

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

Germ cell mutagenicity: Suspected of causing genetic defects.

Carcinogenicity: Based on available data, the classification criteria are not met.
National Toxicology Program (NTP): No.
IARC Not Listed.

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

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

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: Not relevant at normal room temperatures. When heated, irritating vapors may be formed.

Ingestion: Irritating. May cause nausea, stomach pain and vomiting.

Toxicological data: Reaction product: bisphenol-A-(epichlorhydrin), epoxy resin (number average molecular weight \leq 700):
Acute Toxicity (Oral LD50): 11400 mg/kg (Rat)
Acute Toxicity (Dermal LD50): 2000 mg/kg (Rat)

Neodecanoic acid oxiranylmethylester:
Acute Toxicity (Oral LD50): 9600 mg/kg (Rat)
Acute Toxicity (Dermal LD50): 3800 mg/kg (Rat)

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12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity: Toxic to aquatic life with long lasting effects.

Reaction product: bisphenol-A-(epichlorhydrin), epoxy resin (number average molecular weight <= 700): 1.3 (LC50 96 hours, fish, mg/l) (*)

Neodecanoic acid oxiranylmethylester: 9.6 (LC50 96 hours, fish, mg/l) (*)

Persistence and degradability

Degradability: This product is expected to be heavily biodegradable.

Bioaccumulative potential

Bioaccumulative potential: May accumulate in soil and water systems.

Mobility in soil

Mobility: No data available.

Results of PBT and vPvB assessment

PBT/vPvB: No information available.

Other adverse effects

Other adverse effects: No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Note that fully cured material is not considered as hazardous waste.

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: 3082

UN proper shipping name

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)

Additional IMDG information:
EmS: F-A , S-F
MFAG:1

Transport hazard class(es)

Class: 9

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.

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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.

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.
