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SECTION 1. IDENTIFICATION

1.1. Product identifier

Product name: CLAROFAST

Cat. No. 40100053, 40100054, 40100055

Container size: 1; 7.5; 25 kg

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

<u>Application:</u> For embedding of materialographic specimens

<u>Uses advised against:</u> No specific uses advised against are identified.

1.3. Details of the supplier

Supplier: Struers ApS, Singapore Branch

627A Aljunied Road #07-08 BizTech Centre 389842 Singapore Tel:+65 6299 2268

Responsible for safety data Responsible for safety data sheet authoring: DHI

sheet authoring: Any questions to the contents of this safety data sheet should be sent to:

struers@struers.dk

1.4. Emergency telephone number

National Poison Management and Control Center: +63 2 8524 1078

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

<u>DAO 2015-09:</u> Based on available data the classification criteria are not met.

2.2. Label elements

The substance/mixture does not meet the criteria for classification and labelling.

2.3. Other hazards

Contains Dibenzoyl peroxide and Methyl methacrylate May produce an allergic reaction.

Fine particles may form explosive vapour/air mixtures. May irritate eyes and skin. Inhalation of dust may irritate the respiratory system.

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

The product contains: acrylic resin.

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DAO 2015-09:

<u>%: CAS-No.: EC No.: Reg. No.: Chemical name: Hazard classification: Notes:</u>

60-100 9011-14-7 - Methacrylate polymer -

0.1-<1 80-62-6 201-297-1 - Methyl methacrylate Flammable Liquid

Category 2

Skin Irritant Category 2 Skin Sensitizer Category 1 Category 3 Target organ toxicant, Single Exposure (respiratory tract irritation)

0.1-<1 94-36-0 202-327-6 - Dibenzoyl peroxide Organic Peroxide Type B

Eye irritant Category 2 Skin Sensitizer Category 1

SECTION 4. FIRST-AID MEASURES

4.1. Description of first aid measures

<u>Inhalation:</u> Move into fresh air and keep at rest.

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 bring

these instructions.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. Remove any

contact lenses and open eyes wide apart.

<u>Ingestion:</u> Immediately rinse mouth and drink plenty of water. Keep person under

observation. If uncomfortable: Seek hospital and bring along these instructions.

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

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

4.3. Indication of any immediate medical attention and special treatment needed

Medical attention/treatments: Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

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

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this

will spread the fire.

5.2. Specific hazards arising from the chemical

<u>Specific hazards:</u> In case of fire, toxic and irritating gases may be formed.

5.3. Special protective actions for firefighters

Protective equipment for fire-

fighters:

Selection of respiratory protection for fire fighting: follow the general fire

precautions indicated in the workplace.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

<u>For non-emergency</u> Avoid inhalation of dust and contact with skin and eyes. For personal protection,

personnel: see section 8.

<u>For emergency responders:</u> For personal protection, see section 8. No specific recommendations.

6.2. Environmental precautions

Environmental Avoid discharge into drains, water courses or onto the ground.

precautions:

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Moisten spillage with water. Collect spillage with shovel, broom or the like.

6.4. Reference to other sections

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

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Safe handling advice: Observe good chemical hygiene practices. Avoid inhalation of dust and contact

with skin and eyes.

<u>Technical measures:</u> Avoid spreading dust.

<u>Technical precautions:</u> Local exhaust is recommended.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures for safe No special precautions.

storage:

<u>Storage conditions:</u> Store in tightly closed original container.

7.3. Specific end use(s)

Specific use(s): No information available.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits:

CAS-No.:	Chemical name:		Exposure limits:		Type:	Notes:	References:
80-62-6	Methyl methacrylate	-	100 ppm	410 mg/m3	TWA	-	PH-OSH
94-36-0	Benzoyl peroxide	-		5 mg/m3	TWA	-	PH-OSH
-	Inert or Nuisance particulates, Total dust	-		50 mppcf	TWA	See Table 8a	PH-OSH
-	Inert or Nuisance particulates, Respirable fraction	-		15 mppcf	TWA	See Table 8a	PH-OSH

8.2. Exposure controls

Engineering measures: Provide adequate ventilation. Observe Occupational Exposure Limits and

minimise the risk of inhalation of dust. Local exhaust is recommended.

<u>Personal protection:</u> Personal protection equipment should be chosen according to the relevant

standards and in discussion with the supplier of the personal protective

equipment.

Respiratory equipment: In case of inadequate ventilation use suitable respirator. Use respiratory

equipment with particle filter, type P3.

Hand protection: Risk of contact: Wear protective gloves. Nitrile gloves are recommended. The

most suitable glove must be chosen in collaboration with the gloves supplier,

who can inform about the breakthrough time of the glove material.

Eye protection: Risk of contact: Wear goggles/face shield.

Skin protection: No special precautions.

Environmental Exposure

Controls:

Not available.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Form: Solid.

Colour: White.

Odour: Characteristic.
Odour threshold: Not available.

pH: Not available.

Melting point: 150-230°C / 302-446°F

Boiling point:

Flash point:

Not available.

Evaporation rate:

Not available.

Flammability (solid, gas):

Not available.

Explosive limits

Not available.

Vapour pressure:

Vapour density:

Not applicable.

Relative density: 1,18

Solubility: insoluble in water

Partition coefficient (n- Not applicable.

octanol/water):

Auto-ignitionNot available.DecompositionNot available.Viscosity:Not available.

<u>Explosive properties:</u> Fine particles may form explosive vapour/air mixtures.

Oxidising properties: Not applicable.

9.2. Other information

Other data: Volatile Organic Compound (VOC): <10 g/l (calculated)

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SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity: None under normal conditions.

10.2. Chemical stability

<u>Stability:</u> Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions

<u>Hazardous reactions:</u> No data available.

10.4. Conditions to avoid

<u>Conditions/materials to avoid:</u> Heating. Avoid dust formation.

10.5. Incompatible materials

Incompatible materials: No data available.

10.6. Hazardous decomposition products

<u>Hazardous decomposition</u> When heated and in case of fire, irritating vapours/gases may be formed.

products:

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute Toxicity (Oral):

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.

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

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

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

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

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

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

sensitisation:

Aspiration hazard:

Germ cell mutagenicity:

Carcinogenicity:

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

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

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

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

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

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

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

<u>Inhalation:</u> Dust may irritate throat and respiratory system and cause coughing.

Skin contact: Prolonged contact may cause redness and irritation.

<u>Eye contact:</u> Dust in the eyes will cause irritation.

<u>Ingestion:</u> May irritate and cause malaise.

Specific effects: The product contains a small amount of sensitising substance which may

provoke an allergic reaction among sensitive individuals.

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

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SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity: The environmental hazard of the product is considered to be limited.

12.2. Persistence and degradability

<u>Degradability:</u> The product is not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: Bioaccumulation: Is not expected to be bioaccumulable.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

<u>PBT/vPvB:</u> This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

Other adverse effects: No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

<u>Waste from residues:</u> Dispose of waste and residues in accordance with local authority requirements.

Note that fully cured material is not considered as hazardous waste.

<u>Contaminated packaging:</u> Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION

The product is not covered by international regulation on the transport of dangerous goods (IMDG, ICAO/IATA).

14.1. UN number

UN-No:

14.2. UN proper shipping name

Proper Shipping Name: -

14.3. Transport hazard class(es)

<u>Class:</u> -

14.4. Packing group

PG: -

14.5. Environmental hazards

Marine pollutant: -

Environmentally Hazardous

Substance:

14.6. Special precautions for user

Special precautions: None known.

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

<u>Transport in bulk:</u> Not relevant.

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SECTION 15: REGULATORY INFORMATION

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

National regulation: DENR Department Administrative Order 2015-09. Rules and Procedures for the

Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) in Preparation of Safety Data Sheet (SDS) and

Labelling Requirements of Toxic Chemical Substances".

EMB Memorandum Circular No. 2015-011 - Guidance Manual for DAO 2015-09. Occupational Safety and Health Standards (As Amended, 1989). Rule 1070 -

Occupational Health and Environmental Control.

SECTION 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: -

The (*) indicates the changes made with respect to the previous version.

Approved by DHI.

Abbreviations and acronyms PBT = Persistent, Bioaccumulative and Toxic.

Allan Vorus

<u>used in the safety data sheet:</u> vPvB = very Persistent and very Bioaccumulative.

<u>Additional information:</u> Classification according to DAO 2015-09:

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.

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