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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name: POLYFAST

Cat. No. 40100036, 40100037

Container size: 1 kg, 7,5 kg

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.

Details of the supplier of the safety data sheet

Supplier: Struers ApS

Pederstrupvej 84 DK-2750 Ballerup Tel:+45 44 600 800

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

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

struers@struers.dk

Emergency telephone number

National Capital Poison Center: 1-800-222-1222

Infotrac:

1-800-535-5053 Struers US: 1-440-871-0071

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA 2012: Combustible Dust (*)

Label elements

(*)

Warning

May form combustible dust concentrations in air.

Other hazards

Contains Methenamine. May produce an allergic reaction. Fine particles may form explosive vapor/air mixtures. Inhalation of dust may irritate the respiratory system. Prolonged skin contact may cause redness and irritation. Dust in the eyes will cause irritation.

PBT/vPvB: No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

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The product contains: resin.

OSHA 2012:

<u>%:</u>	CAS-No.:	EC No.:	REACH Reg. No:	Chemical name:	Hazard classification:	Notes:
10-<15	7782-42-5	231-955-3	-	Grafite	-	
1-<5	100-97-0	202-905-8	-	Methenamine	Flammable Solid Category 2 Skin Sensitizer Category 1	
<1	108-95-2	203-632-7	-	Phenol	Category 2 mutagen Acute Inhalation Toxicity Category 3 Acute Dermal Toxicity Category 3 Acute Oral Toxicity Category 3 Category 2 Target organ toxicant, Repeated Exposure Skin Corrosive Category 1B	

SECTION 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 bring these instructions.

Skin contact: Remove contaminated clothing immediately and wash skin with soap and water.

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

contact lenses and open eyelids widely. If irritation persists: Continue flushing

during transport to hospital. Bring along these instructions.

Immediately rinse mouth and drink plenty of water. Keep person under

observation. If person becomes uncomfortable seek hospital and bring these

instructions.

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.

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SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: No specific precautions.

Special hazards arising from the substance or mixture

<u>Specific hazards:</u> When heated and in case of fire, toxic vapors/gases may be formed.

Advice for firefighters

Protective equipment for fire- Selection of respiratory protection for fire fighting: follow the general fire

<u>fighters:</u> precautions indicated in the workplace.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency Avoid inhalation of dust. Avoid inhalation of vapors and contact with skin and

personnel: eyes. For personal protection, see section 8.

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

Environmental precautions

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

precautions:

Methods and material for containment and cleaning up

Spill Cleanup Methods: Collect spillage with shovel, broom or the like. Dispose of collected dust

according to agreement with local authorities.

Reference to other sections

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

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

<u>Safe handling advice:</u> Avoid inhalation of dust. Avoid contact with skin and eyes. Observe good

chemical hygiene practices.

<u>Technical measures:</u> Work practice should minimize contact. Use work methods which minimize dust

production.

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

Conditions for safe storage, including any incompatibilities

<u>Technical measures for safe</u> No special precautions.

storage:

Storage conditions: Store in tightly closed original container. Store at room temperature.

Specific end use(s)

Specific use(s): No information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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Occupational exposure limits:

Chemical name:	As:	Exposure	limits:	Type:	Notes:	References:
Phenol	-	5 ppm	19 mg/m3	TWA	Skin	OSHA
Graphite, natural, respirable dust	-		15 mppcf	TWA	-	OSHA
Graphite, synthetic, total dust	-		15 mg/m3	TWA	-	OSHA
Graphite, synthetic, respirable fraction	-		5 mg/m3	TWA	-	OSHA
Particulates not otherwise regulated (PNOR), total dust	-		15 mg/m3	TWA	-	OSHA
Particulates not otherwise regulated (PNOR), respirable fraction	-		5 mg/m3	TWA	-	OSHA
Phenol	-	5 ppm		TWA	Skin; A4; BEI	ACGIH
Graphite (all forms except graphite fibers), respirable particulate matter	-		2 mg/m3	TWA	-	ACGIH
Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles	-		3 mg/m3	TWA	-	ACGIH
Particles (Insoluble or Poorly Soluble), not Otherwise Specified, inhalable particles	-		10 mg/m3	TWA	-	ACGIH
	Phenol Graphite, natural, respirable dust Graphite, synthetic, total dust Graphite, synthetic, respirable fraction Particulates not otherwise regulated (PNOR), total dust Particulates not otherwise regulated (PNOR), respirable fraction Phenol Graphite (all forms except graphite fibers), respirable particulate matter Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles	Phenol - Graphite, natural, respirable dust Graphite, synthetic, total dust Graphite, synthetic, respirable fraction Particulates not otherwise regulated (PNOR), total dust Particulates not otherwise regulated (PNOR), respirable fraction Phenol - Graphite (all forms except graphite fibers), respirable particulate matter Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles Particles (Insoluble or Poorly Soluble), not Otherwise Specified, inhalable particles	Phenol - 5 ppm Graphite, natural, respirable dust Graphite, synthetic, total dust Graphite, synthetic, respirable fraction Particulates not otherwise regulated (PNOR), total dust Particulates not otherwise regulated (PNOR), respirable fraction Phenol - 5 ppm Graphite (all forms except graphite fibers), respirable particulate matter Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles Particles (Insoluble or Poorly Soluble), not Otherwise Specified, inhalable particles	Phenol - 5 ppm 19 mg/m3 Graphite, natural, respirable dust Graphite, synthetic, total dust Graphite, synthetic, respirable fraction Particulates not otherwise regulated (PNOR), total dust Particulates not otherwise regulated (PNOR), respirable fraction Phenol - 5 ppm Graphite (all forms except graphite fibers), respirable particulate matter Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles Particles (Insoluble or Poorly Soluble), not Otherwise Specified, inhalable particles	Phenol - 5 ppm 19 mg/m3 TWA Graphite, natural, respirable dust Graphite, synthetic, total dust Graphite, synthetic, respirable fraction Particulates not otherwise regulated (PNOR), total dust Particulates not otherwise regulated (PNOR), respirable fraction Phenol - 5 ppm TWA Graphite (all forms except graphite fibers), respirable particulate matter Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles Particles (Insoluble or Poorly Soluble), not Otherwise Specified,	Phenol - 5 ppm 19 mg/m3 TWA Skin Graphite, natural, respirable dust Graphite, synthetic, total dust Graphite, synthetic, respirable fraction Particulates not otherwise regulated (PNOR), total dust Particulates not offeraction Phenol - 5 ppm TWA - otherwise regulated (PNOR), respirable fraction Phenol - 5 ppm TWA Skin; A4; BEI Graphite (all forms except graphite fibers), respirable particulate matter Particles (Insoluble or Poorly Soluble), not Otherwise Specified, respirable particles Particles (Insoluble or Poorly Soluble), not Otherwise Specified, inhalable particles

Notes: A4: Not Classifiable as a Human Carcinogen.

BEI: Biological Exposure Index.

Biological Limit Values:

CAS-No.:	<u>Chemical</u> name:	As:	Exposure limits:	Sampling time:	Notes:	References:
108-95-2	Phenol	Phenol in urine	250 mg/g	End of shift	B; Ns	-

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Exposure controls

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

minimize the risk of inhalation. Local exhaust is recommended.

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

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. Use respiratory equipment with combination filter, type

A2/P2.

Hand protection: Risk of contact: Wear protective gloves. Nitrile 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.

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

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

<u>Hygiene measures:</u> Wash hands after handling.

Environmental Exposure

Controls:

Not available.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form: Solid.

<u>Color:</u> Various colors
Odor: Phenolic.

Odor threshold: Not available.

pH: Not available.

Melting point: Not available.

Boiling point: Not available.

Flash point: Not available.

<u>Evaporation rate:</u> Not available.

Flammability (solid, gas): Not available.

Explosion limits: Not available.

<u>Vapor pressure:</u> Not available.

<u>Vapor density:</u> Not available.

Relative density: Not available.

Solubility: Not available.

Partition coefficient (n- Not available.

octanol/water):

<u>Auto-ignition</u> Not available.

temperature (°F):

<u>Decomposition</u> Not available.

temperature (°F):

<u>Viscosity:</u> Not available. <u>Explosive properties:</u> Not available. <u>Oxidizing properties:</u> Not available.

Other information

Other data: Volatile Organic Compound (VOC): 0 g/l (calculated)

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SECTION 10: STABILITY AND REACTIVITY

Reactivity

Reactivity: None under normal conditions.

Chemical stability

Stability: Stable under normal temperature conditions.

Possibility of hazardous reactions

<u>Hazardous Reactions:</u> None under normal conditions.

Conditions to avoid

<u>Conditions/materials to avoid:</u> Avoid dust close to ignition sources.

Incompatible materials

<u>Incompatible materials:</u> Avoid contact with acids and oxidizing substances.

Hazardous decomposition products

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

products:

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity (Oral):

Acute Toxicity (Dermal):

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.

Serious eye damage/irritation:

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

Respiratory or skin Test has determined that the product is not sensitizing by skin contact.

sensitization: Buehler test: Not sensitizing.

Guinea pig maximization test (GPMT): Not sensitizing.

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

<u>Carcinogenicity:</u> Based on available data, the classification criteria are not met.

National Toxicology Program (NTP): No. IARC Cancer Review: Group 3 for Phenol. (*)

OSHA: No.

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: Dust may irritate throat and respiratory system and cause coughing. Vapors

liberated during curing of the product may in high concentrations irritate the

throat and respiratory system and cause coughing.

Skin contact: Prolonged contact may cause redness and irritation.

Eye contact: Dust in the eyes will cause irritation.

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

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SECTION 12: ECOLOGICAL INFORMATION

Toxicity

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

Persistence and degradability

<u>Degradability:</u> The degradability of the product has not been stated.

Bioaccumulative potential

Bioaccumulative potential: No data available on bioaccumulation.

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.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues: Dispose of waste and residues in accordance with local authority requirements.

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

RCRA: Waste number: U188 (Phenol)

Contaminated packaging: Dispose of waste and residues in accordance with local authority requirements.

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SECTION 14: TRANSPORT INFORMATION

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

UN number

<u>UN-No:</u>

UN proper shipping name

Proper Shipping Name: -

Transport hazard class(es)

<u>Class:</u> -

Packing group

<u>PG:</u> -

Environmental hazards

Marine pollutant: -

Environmentally Hazardous

substance:

Special precautions for user

<u>Special precautions:</u> None known.

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

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

<u>Special provisions:</u> State and local regulation may apply.

TSCA: Listed or exempted.

NFPA Rating: Health:1 Fire:1 Reactivity:0 Other:-

SARA Section 302: Yes. (Phenol) SARA Section 304: Yes. (Phenol) SARA Section 313: Yes. (Phenol) SARA (311/312) Hazard categories: No.

National regulation: The following lists have been checked:

Threshold Limit Values (2019), ACGIH, by the American Conference on

Governmental Industrial Hygienists.

The Code of Federal Regulation, Title 29, part 1910. Occupational Safety and

Health Standards, Hazard Communication, with amendments.

The Code of Federal Regulation, Title 29, part 1910. Occupational Safety and

Health Standards, Air contaminants (OSHA), with amendments.

NIOSH Pocket Guide to Chemical Hazards.

The Code of Federal Regulation, Title 40, part 261.33. Identification and listing of

hazardous waste.

The Code of Federal Regulation. Title 40, part 372.65. Toxic Chemical Release

Reporting: Community Right to Know.

The Code of Federal Regulation. Title 40, part 355.50. Emergency Planning and

Notification.

The Code of Federal Regulation. Title 40, part 302.4. Designation, Reportable

Quantities, and Notification.

The Code of Federal Regulation. Title 40, part 68.130. Chemical Accident

Prevention Provisions.

U.S. Department of health and human services: 2016 - Report on Carcinogens -

14th 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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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: 2.

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

Approved by DHI.

Allan Vorup

<u>Additional information:</u> Classification according to HCS 2012:

On basis of test data.

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.