

SAFETY DATA SHEET

MULTIFAST BLACK



Section 1. Identification

Product identifier : MULTIFAST BLACK
Cat. No. : 40100064, 40100065, 40100066, 40100067
Container size : 2.5 kg, 7.5 kg, 25 kg, 75 kg
Other means of identification : Not available.
Product type : Powder.

Recommended use of the chemical and restrictions on use

Product use : For embedding of metallographic specimens.
Area of application : Professional applications.

Supplier's details : Struers ApS
Pederstrupvej 84
DK-2750 Ballerup

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Emergency telephone number (with hours of operation) : +45 44 600 800 (Only during office hours)

Section 2. Hazards identification

Classification of the substance or mixture : H316 SKIN IRRITATION - Category 3
H334 RESPIRATORY SENSITISATION - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H316 - Causes mild skin irritation.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements

Prevention : P284 - Wear respiratory protection: Recommended: (as filter combination A2/P2).
P261 - Avoid breathing dust or mist.



Section 2. Hazards identification

- Response** : P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P316 - If experiencing respiratory symptoms: Get emergency medical help immediately.
P332 + P317 - If skin irritation occurs: Get medical help.
- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : May form explosible dust-air mixture if dispersed.

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

Ingredient name	%	Identifiers
methenamine	≥5 - ≤10	CAS: 100-97-0
phenol	<1	CAS: 108-95-2

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if adverse health effects persist or are severe. Wash clothing before reuse. Clean shoes thoroughly before reuse.



Section 4. First aid measures

- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
- Inhalation** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes mild skin irritation.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
wheezing and breathing difficulties
asthma
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)



Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical powder.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : May form explosible dust-air mixture if dispersed.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
formaldehyde

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Small spill : Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Absorb spill with inert material (e.g. dry sand or earth) and place in a chemical waste container.



Section 6. Accidental release measures

- Large spill** : Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
methenamine phenol	ACGIH TLV (United States, 1/2025) A4. Skin sensitizer. TWA 8 hours: 1 mg/m³. Form: Inhalable fraction and vapor. ACGIH TLV (United States, 1/2025) A4. Absorbed through skin. TWA 8 hours: 5 ppm. TWA 8 hours: 19 mg/m³.



Section 8. Exposure controls/personal protection

Biological exposure indices

No exposure indices known.

- Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. If operating conditions cause high dust concentrations to be produced, use dust goggles.

Skin protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Recommended: Nitrile gloves.

Breakthrough time: 480 minutes

thickness: 0.4 mm

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: (as filter combination A2/P2)



Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Solid. [Powder.]

Colour : Black.

Odour : Phenolic.

Odour threshold : Not available.

pH : Not available.

Melting point/freezing point : Not available.

Boiling point or initial boiling point and boiling range : Not available.

Flash point : Not applicable.

Evaporation rate : Not available.

Flammability : Non-flammable.

Lower and upper explosion limit/flammability limit : Not applicable.

Vapour pressure : Not available.

Relative vapour density : Not applicable.

Relative density : Not available.

Solubility(ies)	Media	Result
	water	Not soluble

Miscible with water : No.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not available.

Viscosity : Dynamic (room temperature): Not applicable.
Kinematic (room temperature): Not applicable.
Kinematic (40°C (104°F)): Not applicable.

Flow time (ISO 2431) : Not available.

Particle characteristics

Median particle size : Not available.

Other information

Physical/chemical properties comments : VOC content: <10 g/l (calculated)



Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
Conditions to avoid	: Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Prevent dust accumulation.
Incompatible materials	: Reactive or incompatible with the following materials: oxidising materials acids
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	
methenamine	Rat - Male, Female - Dermal - LD50 >2000 mg/kg	OECD 402 [Acute Dermal Toxicity]
	Rat - Oral - LD50 >20000 mg/kg	
phenol	Rat - Oral - LD50 317 mg/kg	<u>Toxic effects:</u> Behavioral - Convulsions or effect on seizure threshold
	Rat - Dermal - LD50 669 mg/kg	<u>Toxic effects:</u> Behavioral - Tremor Kidney, Ureter, and Bladder - Hematuria Skin After topical exposure - Cutaneous sensitization (experimental)
	Rabbit - Dermal - LD50 630 mg/kg	

Conclusion/Summary[Product] : Not available.

Skin corrosion/irritation

Product/ingredient name	Result
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Section 11. Toxicological information

 phenol

Rabbit - Skin - Mild irritant

Amount/concentration applied: 100 mg

Rabbit - Skin - Severe irritant

Amount/concentration applied: 535 mg

Conclusion/Summary[Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name

 phenol

Result

Rabbit - Eyes - Mild irritant

Duration of treatment/exposure: 0.5 minutes

Amount/concentration applied: 5 mg

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 5 mg

Conclusion/Summary[Product] : Not available.

Respiratory corrosion/irritation

Conclusion/Summary[Product] : Not available.

Respiratory or skin sensitization

Product/ingredient name

 MULTIFAST BLACK

Result

Guinea pig - skin

Result: Not sensitizing

Skin

Conclusion/Summary[Product] : Not classified as dangerous

Respiratory

Conclusion/Summary[Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary[Product] : Not available.

Carcinogenicity

Conclusion/Summary[Product] : Not available.

Reproductive toxicity

Conclusion/Summary[Product] : Not available.



Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Product/ingredient name

phenol

Result
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE
- Category 1

Specific target organ toxicity (repeated exposure)

Product/ingredient name

phenol

Result
SPECIFIC TARGET ORGAN TOXICITY - REPEATED
EXPOSURE (kidneys, liver, nervous system) - Category 2

Aspiration hazard

Not available.

Information on likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

- Eye contact** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
- Inhalation** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes mild skin irritation.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
wheezing and breathing difficulties
asthma
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure


Section 11. Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Result
methenamine	Chronic - Rat - Oral - NOAEL 100 mg/kg [90 days]

Conclusion/Summary[Product] : Not available.

General : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
MULTIFAST BLACK	N/A	25000	N/A	N/A	N/A
methenamine	N/A	2500	N/A	N/A	N/A
phenol	100	630	N/A	3	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Effect
methenamine	Acute - EC50 - Fresh water Daphnia - Water flea - <i>Daphnia magna</i> Age: 1 to 3 days 36 g/l [48 hours]	Intoxication
	Acute - LC50 - Marine water Fish - Sheepshead minnow - <i>Cyprinodon variegatus</i> 49 g/l [96 hours]	Mortality
phenol	Acute - LC50 - Fresh water Fish - Carp, hawk fish - <i>Cirrhinus mrigala</i> - Larvae Age: 2 days; Size: 4.5 mm; Weight:	Mortality



Section 12. Ecological information

51 mg
1555 µg/l [96 hours]
Acute - LC50 - Fresh water Effect: Mortality
Crustaceans - Water flea - *Ceriodaphnia dubia*
Age: <24 hours
3000 µg/l [48 hours]
Acute - EC50 - Marine water Effect: Physiology
Algae - Giant kelp - *Macrocystis pyrifera* - Young
10 ppm [4 days]
Chronic - NOEC - Marine water Effect: Population
Algae - Red algae - *Gracilaria tenuistipitata*
11 mg/l [4 days]
Chronic - NOEC - Fresh water Effect: Reproduction
Daphnia - Water flea - *Daphnia magna*
Age: <24 hours
1.5 mg/l [21 days]
Chronic - NOEC - Fresh water Effect: Mortality
Fish - Fathead minnow - *Pimephales promelas* - Embryo
Age: <24 hours
20.2 mg/l [32 days]

Conclusion/Summary[Product] : Not available.

Persistence and degradability

Product/ingredient name	Result	
 methenamine	Aerobic 35% [28 days] - Not readily	OECD 301D [Ready Biodegradability - Closed Bottle Test]
phenol	Aerobic 62% [4.16667 days] - Readily	OECD 301C [Ready Biodegradability - Modified MITI Test (I)]

Conclusion/Summary[Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
 methenamine	-	-	Not readily
phenol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
 methenamine	-2.18	-	Low
phenol	1.47	647 [OECD 305 E]	High

Mobility in soil

Soil/water partition coefficient : Not available.



Section 12. Ecological information

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.



Section 15. Regulatory information

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

History

Date of issue/Date of revision	: 2026/03/20
Date of previous issue	: 2025/01/13
Version	: 2.03
Prepared by	: Sphera Solutions
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods IMO = International Maritime Organization LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group UN = United Nations

Procedure used to derive the classification

Classification	Justification
SKIN IRRITATION - Category 3	Calculation method
RESPIRATORY SENSITISATION - Category 1	Calculation method

References : GHS - Globally Harmonised System of Classification and Labelling of Chemicals - Version : 9.
International transport regulations

Indicates information that has changed from previously issued version.

Notice to reader



Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

