

SAFETY DATA SHEET
SDS 0276/MIP: Mercury Indicator Powder

Prepared in accordance with Annex II of the REACH Regulation (EC) 1907/2006, Regulation (EC) 1272/2008

1. Identification of the Substance/Preparation and Company/Undertaking

1.1 Product Identifier

Preparation Commercial Name: Mercury Indicator Powder

1.2 Relevant identified uses and uses advised against

Detection of mercury spill residues

1.3 Details of the supplier of the safety data sheet

Darcy Products, details as above

1.4 Emergency contact

Emergency telephone: 01732 762338
Emergency email: enqs@darcy.co.uk

2. Hazards Identification:

2.1 Classification of the substance or mixture in compliance with Regulation (EC) 1272/2008 (CLP Regulations)

Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 4), H332
Eye irritation (Category 2), H319
Skin irritation (Category 2), H315
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

2.2 Label Elements (In compliance with Regulation (EC) 1272/2008 (CLP Regulations))



Hazard Pictograms:

Signal Word: Warning; Danger

Hazard Statements:

H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H335	May cause respiratory irritation
H410	Very toxic to aquatic life with long lasting effects

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Precautionary Statements:	P280	Wear protective gloves/eye protection/face protection
	P301)	If swallowed, call a poison centre/doctor if feeling unwell. Rinse
	P312)	mouth.
	P330)	
	P305)	
	P351)	If in eyes: rinse cautiously with water for several minutes. Remove
	P338)	contact lenses, if present and easy to do. Continue rinsing.
	P310)	Immediately call a poison centre/doctor.
Hazardous substances:		Cuprous Iodide, Sulphur

3. Composition/Information on Ingredients

3.1 Substances

See below

3.2 Mixtures

Ingredient	CAS No.	Percentage	Hazardous
Cuprous Iodide	7861-65-4	1-50%	Yes
Sulphur	7704-34-9	1-50%	Yes
Starch	9005-25-8	1-50%	No
Amorphous silica	7631-86-9	1-50%	No (contains no crystalline silica)

4. First Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

4.2 Most important symptoms and effects, both acute and delayed

See sec. 2

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. **Fire-Fighting Measures**

5.1 Extinguishing media

Suitable extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6. **Accidental Release Measures:**

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. **Handling and Storage:**

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Air and moisture sensitive.

Storage class (TRGS 510): Non-Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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8. **Exposure Control and Personal Protection:**

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value Form of exposure	Control parameters	Basis
Dicopper oxide	1317-39-1	TWA (Dusts and mists)	1 mg/m ³	UK. EH40 WEL - Workplace Exposure Limits
Silica-Amorphous, precipitated	7631-86-9	TWA (Dusts and mists)	6 mg/m ³	UK. EH40 WEL - Workplace Exposure Limits
Starch	9005-25-8	TWA inhalable (Dusts and mists)	10 mg/m ³	UK. EH40 WEL - Workplace Exposure Limits

8.2 Exposure Controls

The following applies to Cuprous iodide, the most hazardous ingredient. Normal use in small quantities should not lead to the release of significant quantities of dust into the atmosphere.

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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9. Physical and Chemical Properties

Physical Form:	White to yellow solid
Odour:	n/a
pH of Aqueous Sol'n	n/a – negligible solubility
Viscosity:	n/a
Boiling Point:	n/a
Melting Point:	n/a
Flash Point:	n/a
Flammability:	n/a
Autoflammability:	n/a
Explosive Properties:	n/a
Oxidising Properties:	n/a
Vapour Pressure:	n/a
Specific Gravity:	n/a
Bulk Density:	n/a

10. Stability and Reactivity

Stability: Highly stable under normal conditions of use and storage.

Thermal Decomposition: burning may release hydrogen iodide, iodine vapour, carbon oxides and Sulphur oxides.

Hazardous Reactions: none known

Incompatible Materials:

For Sulphur: oxidizing agents, halogens, carbides, zinc, tin, alkali metals, phosphorus, ammonia.

For cuprous iodide: explodes when mixed with potassium or nitromethane. May promote decomposition of hydrazine, sodium hypobromite. May form explosive acetylides.

For amorphous silica: silica, hydrogen fluoride, xenon hexafluoride, oxygen difluoride, chlorine trifluoride. May explode when heated with magnesium.

Conditions to Avoid: Heat, flame, ignition sources

11. Toxicological Information

It must be born in mind that the quantities of this product typically used will be very small and users will be already aware of the hazards of contact with mercury. The statements below refer to the individual ingredients when present alone.

Cuprous Iodide:

Acute toxicity

LD50 Oral - Rat - female - 300 - 2,000 mg/kg

(OECD Test Guideline 420)

LD50 Dermal - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

No data available

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Serious eye damage/eye irritation

Eyes - Rabbit

Result: Risk of serious damage to eyes.

(OECD Test Guideline 405)

Respiratory or skin sensitisation

Maximisation Test - Guinea pig

Result: May cause sensitisation by skin contact.

(OECD Test Guideline 406)

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

Symptoms of systemic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has led to hemolytic anemia and accelerates arteriosclerosis., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence

Sulphur:

Acute toxicity

LDLO Oral - Rabbit - 175 mg/kg

LD50 Oral - Rat - > 2,000 mg/kg

LC50 Inhalation - Rat - 4 h - > 9.23 mg/l

LD50 Dermal - Rabbit - > 2,000 mg/kg

LDLO Intravenous - Rat - 8 mg/kg

LDLO Intravenous - Rabbit - 5 mg/kg

LDLO Intraperitoneal - Guinea pig - 55 mg/kg

LDLO Intravenous - Dog - 10 mg/kg

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Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: WS4250000

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting., Dermatitis

Silica Gel:

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Silica-Amorphous,

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precipitated)

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

RTECS: VV7315000

Amorphous silica is not classifiable as to its carcinogenicity to humans (Group 3); however, crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1, IARC). Therefore, amorphous silica should be handled as if possessing the same hazards as the crystalline form., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Starch:

Acute toxicity

No data available

LD50 Intraperitoneal - Mouse - 6,600 mg/kg

Skin corrosion/irritation

Skin - Human

Result: Mild skin irritation - 3 h

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

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Aspiration hazard

No data available

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological Information

It must be born in mind that the quantities of this product typically used will be very small and users will be already aware of the hazards posed by mercury. The statements below refer to the individual ingredients when present alone.

Cuprous Iodide:

Toxicity

Toxicity to fish LC50 - Cyprinodon variegatus (sheepshead minnow) - > 0.17 mg/l - 96.0 h

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 0.5 mg/l - 48 h

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects

Very toxic to aquatic life with long lasting effects.

Avoid release to the environment.

Sulphur:

Toxicity

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - > 180 mg/l - 96 h

LC50 - other fish - 866 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - > 5,000 mg/l - 48 h

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

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Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects

No data available

Silica Gel:

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

no data available

Starch:

Toxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects

No data available

13. Disposal Considerations

Dispose of surplus product as hazardous waste in accordance with appropriate legislation/regulations.

NOTE: If contaminated with mercury, observe disposal and safety considerations appropriate to the pollutant itself.

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Brook House, Larkfield Trading Estate
New Hythe Lane
Larkfield, Kent
ME20 6GN

+44 (0)1732 762338

www.thedarcygroup.co.uk



14. Transport Information

The mixture is not classified as hazardous for transportation

15. Regulatory Information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

16. Other Information

No effective change in hazard/risk parameters has occurred in this or any previous revision of this Data Sheet.

Disclaimer: every effort has been made to ensure the accuracy of the above information. However, neither Darcy Products Limited nor any person acting on behalf of Darcy Products Limited can be held responsible for the use which might be made of the above information, or for any omission therein. Users are responsible for carrying out their own risk assessments and taking appropriate precautions.

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