



SAFETY DATA SHEET

Product: CATALYST S-23 Page: 1 / 6

SDS No.: SP808-01 Version:4.0 Effective Date: 2021-07-12

1. PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: Matrix (Guangzhou) Metamaterials Co.,Ltd

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Product Name : S-23
Product Synonym (S)

Chemical Family : Inorganic salt
Chemical Formula : Sb_2O_3
Chemical Name: Antimony Trioxide
EPA Reg Num :
Product Use :

2. COMPOSITION/INFORMATION ON INGREDIENTS

Product CAS reg. Nr.	Composition WGT%	MAC (8h. TWA).	MAC (15min.TWA)
1309-64-4	Sb_2O_3	> 99.50	

3. HAZARDS IDENTIFICATION

Skin contact: Cause irritation, redness, pain.
Eye contact: Cause irritation, redness, pain.
Inhalation: Cause irritation to respiratory tract. Cough. Headache. Nausea. Sore throat.
Vomiting.
Ingestion: Abdominal pain. Diarrhoea. Sore throat. Vomiting. Burning sensation in
the stomach.
Remarks:



SAFETY DATA SHEET

Product: CATALYST S-23 Page: 2 / 6

SDS No.: SP808-01 Version:4.0 Effective Date: 2021-07-12

4. FIRST AID MEASURE

Skin: Remove contaminated clothing. Rinse and wash skin with soap and plenty of water. Refer for medical attention.

Eyes: Immediately rinse eyes with plenty of water for at least 15 minutes.(Remove contact lenses if easily possible), then take to a doctor.

Inhalation: Remove to fresh air area. Rest. If serious, use oxygen aid and refer for medical attention.

Ingestion: Rinse mouth. Rest. Try to vomit as soon as possible and refer for medical attention.

5. FIRE FIGHTING MEASURES

Flash point (°C): N/A Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.

Minimum ignition energy (m Joule):

Minimum ignition temp.(°C):

Decomposition temperature(°C):

Decomposition products:

Extinguishing media: In case of fire in the surroundings: Use water spray, carbon dioxide, foam or dry chemical.

Lower expl.limit(Vol % in Air): N/A

Upper expl.limit(Vol % in Air): N/A

Special remarks for fire: Solid material does not burn or burn with difficulty. Powder or vapor may be an explosion hazard, especially when heated.

Personal protection: Safety goggles, or eye protection in combination with breathing protection.

6. ACCIDENTAL RELEASE MEASURES

General: Sweep spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment.

Personal protection: P2 filter respirator for harmful particles.

Environmental protection: The substance is very toxic to aquatic organisms. Bioaccumulation of this chemical may occur in crustacea. It is strongly advised that this substance does not enter the environment.



SAFETY DATA SHEET

Product: CATALYST S-23 Page: 3 / 6

SDS No.: SP808-01 Version:4.0 Effective Date: 2021-07-12

7. HANDLING AND STORAGE

Handling: Avoid dusting and breathing dust. Avoid contacting with skin and eyes. Safety goggles, uniform, rubber gloves are recommended when handling.

Storage: Separated from food and feedstuffs. Keep container tightly closed. Store in secure area. Store in cool, dry, well-ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Skin protection: Wear suitable protective clothing, gloves.

Eye and face protection: Safety goggles, or eye protection in combination with breathing protection if powder.
Use glasses & face protection gear.

Inhalation protection: Local exhaust or breathing protection.

Ingestion protection: Wear respirator. Do not eat, drink, or smoke during work.

Engineering controls:

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Crystalline Powder

Color: White

Odor: Non

Odor threshold (mg/m³):

Molecular weight(g/mol): 291.5

Molecular formula: Sb₂O₃

Specific gravity (kg/m³): 5200-5800

Boiling point(°C): 1550

Melting point (°C): 656

Vapor pressure (625 °C)(mm Hg): 5

Volatiles(%): 0



SAFETY DATA SHEET

Product: CATALYST S-23 Page: 4 / 6

SDS No.: SP808-01 Version:4.0 Effective Date: 2021-07-12

Hygroscopic: Non
Reactive with water: Non
Oxidator/reductor : Non
Solubility in water (30 °C) : 0.0014 (none) g/100ml
Soluble in : Soluble in HCL, tartaric acid
pH-value: 6

10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility(materials to avoid): Insoluble in organic solvents

11. TOXICOLOGICAL INFORMATION

Occupational Exposure Limits:
TLV: Antimony Trioxide (production)
A2 (ACGIH 2001)
MAK: 2 (DFG 2000)

Routes of exposure: The substance can be absorbed into the body by inhalation, eye contact, skin contact.

Inhalation Risk: A harmful concentration of airborne particles can be reached quickly when dispersed.

Effects of Short-term Exposure: The substance is irritating to the eyes, skin and respiratory tract.

Effects of Long-term or repeated Exposure: Repeated or prolonged contact with skin may cause dermatitis. Lungs may be affected by repeated or prolonged exposure to the dust of this substance. Tumours have been detected in experimental animals but may not be relevant to humans. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

Antimony oxide is listed as a possible carcinogens by IARC.



SAFETY DATA SHEET

Product:

CATALYST S-23

Page: 5 / 6

SDS No.: SP808-01

Version:4.0

Effective Date: 2021-07-12

12. ECOLOGICAL INFORMATION

Ecotoxicity: There are very low concentrations in the water due to its minimal solubility. Volatilization from the water is not likely. The soil usually contains 0.1 to 10MG/KG Dry weight. So far no data show effects of antimony trioxide on the short-term and Long-term basis to plants and animals.

13 . DISPOSAL CONSIDERATIONS

Steps to be taken in the event of a spill or discharges:
Wear self-contained breathing apparatus and full protective clothing.
With clean shovel, carefully place material into clean, dry container and cover; Remove from area.Flush spill area with water.

Disposal procedure:
Dispose in accordance with all applicable federal, state and local environment regulations.

14. TRANSPORT INFORMATION

Transport emergency card: TEC (R)-61GT5-III
UN number: 1549

15 . REGULATORY INFORMATION

National regulations: NIOSH

16 . OTHER INFORMATION

Additional information: Hazardous materials identification system:
HEALTH - 1 Slight
FLAMMABILITY - 0 None
REACTIVITY - 0 None
Hazard ratings are from 0 to 4
(0=No Hazard; 1=Slight; 2=Moderate; 3=High/Serious; 4=Extreme Hazard).



SAFETY DATA SHEET

Product:

CATALYST S-23

Page: 6 / 6

SDS No.: SP808-01

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Key

NE=Not Established NA= Not Applicable ®=Registered Trademark

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