



MATERIAL SAFETY DATA SHEET

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MSDS Ref. No. : HFC/MSDS/-MH/01

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1. Identification of the substance/preparation and of the company/undertaking:

Product name : Metformin Hydrochloride
Product code : MH
Company Information : Supplier: Harman Finochem Limited.
107 A, Vinay Bhavya Complex,
159 A, CST Road,
Kalina, Santacruz (East)
Mumbai - 400 098, India.
Tel. No.: ++ 91 22 -2652 8080/67330100
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Email Id.: gurpreet@harmanfinochem.com

2. Composition/Information on Ingredients:

Composition:

Name	CAS	% by Weight
Metformin Hydrochloride	1115-70-4	100

Toxicological Data on Ingredients: Metformin Hydrochloride: ORAL (LD50): Acute: 1000 mg/kg [Rat]. 1450 mg/kg [Mouse].350 mg/kg [Rabbit].

3. Hazard identification

Potential Acute Health Effects: Slightly hazardous in case of in contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, liver, cardiovascular system, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

4. First - Aid measures:

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

5. Fire - Fighting Measures:

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...).

Fire Hazards in Presence of Various Substances:

Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:

Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: As with most organic solids, fire is possible at elevated temperatures

Special Remarks on Explosion Hazards:

Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

6. Accidental release Measures:

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

7. Handling and Storage:

Precautions:

Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. Exposure controls/personal protection:



Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

9. Physical and Chemical properties:

Physical state and appearance: Solid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 165.6 g/mole

Color: Not available.

pH (1% soln/water): Not available.

Boiling Point: Not available.

Melting Point: 223°C (433.4°F) - 226 C

Critical Temperature: Not available.

Specific Gravity: Not available.

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.



Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Not available.

10. Stability and Reactivity:

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, dust generation, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not available.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

11. Toxicological Information:

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 350 mg/kg [Rabbit].

Chronic Effects on Humans: May cause damage to the following organs: blood, liver, cardiovascular system, central nervous system (CNS).

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:

May cause adverse reproductive effects based on animal test data. May affect genetic material (mutagenic)

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Causes eye irritation.

Inhalation: May cause respiratory tract irritation. Ingestion: May be harmful if swallowed. May cause diarrhea, and hypermotility. May affect behavior/central nervous system(hallucinations, convulsions), liver (jaundice), blood (changes in serum compositon (e.g. TP, bilirubin, cholesterol)), respiration.

12. Ecological Information:

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.



13. Disposal Considerations:

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport Information:

DOT Classification: Not a DOT controlled material (United States).

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Identification: Not applicable.

Special Provisions for Transport: Not applicable.

15. Regulatory Information:

Federal and State Regulations: No products were found.

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

R22- Harmful if swallowed. S24/25- Avoid contact with skin and eyes. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28- After contact with skin, wash immediately with plenty of water. S36- Wear suitable protective clothing.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

16. Other Information:

Biological activity- No biological activity has been defined for Metformin Hydrochloride
The information contained herein is based on the present state of knowledge and is intended to describe our product from point of view of safety requirements it should not,



therefore, be constructed as guaranteeing specific properties. This manufacturer makes no warranties, express or implied as to the accuracy or adequacy of the information contained herein the manufacturer shall not be liable to the vendor, the vendor's employees or anyone for any direct, special or consequential damage arisen out of or in connection with the accuracy, adequacy or furnishing of such information. The manufacturer assures no legal responsibilities for the use or liable upon this data.

Reference /Source : Sigma-Aldrich

Prepared by :
Date : 24/05/17

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