



**German metal Surface treatment Chemicals Co.
Research and Development Department.
Detergent and disinfectants Division.**

MATERIAL SAFETY DATA SHEET

Biostar Hygitec

Surfaces Disinfectant

MANUFACTURER:

German metal surface treatment (SUGEST)

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1. Product and Company Identification

NAME Biostar Hygitec
USE Surfaces Disinfectant
LABEL Biostar Hygitec
Company German metal surfaces treatment chemicals co.

2. Product Description

Biostar Hygitec is a highly effective synergetic blend of alcohol and antibacterial agent for general purpose surfaces disinfection.

3. Hazards Identification

Emergency Overview

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects

HMIS: Health 2 Flammability 3 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Abnormal entry route
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

Physical

Substance highly flammable liquid and vapor.





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4. Chemical Composition

Ingredient	CAS No	Percent %
Isopropyl Alcohol	67 – 63 - 0	65 – 75
Benzalkonium chloride	8001 – 54 - 5	1.0 – 3.0
Demineralized water	7732 – 18 - 5	To 100

5. Physical and Chemical Properties

Appearance	Clear liquid
Color	Colorless
Odor	Alcohol
pH at 20 °C	6 - 8

6. First Aid Measures

Inhalation:

Remove person to fresh air. If breathing is difficult, give oxygen and get medical attention.

Skin contact:

If irritation is experienced, flush with water. If irritation persists, get medical attention.

Eye contact:

In case of contact with the eyes, remove contact lenses if easy to do, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion:

Seek medical advice. DO NOT induce vomiting unless directed to do so by medical personnel. Give one to two glasses of water or milk. Never give anything by mouth to a victim who is unconscious or is having convulsions.

7. Fire Fighting Measures

Fire: Flammable Liquid IB.

Explosion: unusual fire and explosion hazards: if heated, vapor may be flammable. can react vigorously with oxidizing materials

Fire Extinguishing Media: Use methods appropriate for the surrounding fire. Consider water spray or fog, carbon dioxide, dry chemical powder, or alcohol resistant foam.

Hazardous combustion products:



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Upon decomposition this product may emit carbon dioxide, carbon monoxide and/or low molecular weight hydrocarbons.

Special information:

NFPA Rating: Health: 2 Fire: 3 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Flash Point: CLOSED CUP: 24 °C (75 deg. F).

Lower Flammable Limit: 3.3 (Volume % in air)

Upper Flammable Limit: 19.0 (Volume % in air)

Auto Ignition: The lowest known value is 399°C (750.2°F) (Isopropyl alcohol).

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

8. Accidental Release Measures

Use personal protection recommended in Section 10 , isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools.

Environmental precautions:

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

Clean-up methods:

Absorb spilled liquid in suitable non-flammable inert material such as clay, vermiculite or diatomaceous earth. Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with detergent and water. Seal the container. Dispose of collected material as soon as possible.

9. Handling and Storage

Handling:

Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear low static or properly grounded shoes. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation.

Storage:

Storage Conditions: Store in a cool, dry and good ventilated place. Keep container tightly closed after opening. Prevent direct sun light or ignition sources.

Temperature Limit: max 35 °C.

Maximum Storage Period: 24 Months under standard storage conditions.

Container Type Packaging must comply with requirements of Hazardous Substances (Packaging) Regulations 2001.

For information on product shelf life, please review labels on container.

10. Exposure Controls/Personal Protection

1- Propan-2-ol

TWA: 983 STEL: 1230 (mg/m³) [Australia] TWA: 200 STEL: 400 (ppm) from ACGIH (TLV) [United States] [1999]
TWA: 980 STEL: 1225 (mg/m³) from NIOSH TWA: 400 STEL: 500 (ppm) from NIOSH TWA: 400 STEL: 500 (ppm) from [United Kingdom (UK)]
TWA: 999 STEL: 1259 (mg/m³) [United Kingdom (UK)] TWA: 400 STEL: 500 (ppm) from



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OSHA (PEL) [United States] TWA: 980 STEL: 1225 (mg/m³) from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

Engineering controls:

Ventilation Requirements provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product. Supply sufficient replacement air to make up for air removed by exhaust systems.

Emergency shower and eyewash should be in close proximity.

Respiratory protection: None required.

Eye/face protection: None required.

Skin protection: No chemical protective gloves are required.

11. Stability and Reactivity

Stability

Stable under normal use conditions.

Conditions to Avoid: keep away from open flame, hot sources and ignition sources

Incompatibilities

Do not mix with strong acids, oxidizable materials.

Reactivity Data

May develop static charge when poured and ignite vapors.

Hazardous decomposition products:

Products may include oxides of carbon

Hazardous Polymerization

Will not occur

12. Toxicological information

Toxicity

1- Propan-2-ol

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.
Acute oral toxicity (LD50): 3600 mg/kg [Mouse]. Acute dermal toxicity (LD50): 12800 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 16000 8 hours [Rat].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC.

DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Development toxin [POSSIBLE].
May cause damage to the following organs: kidneys, liver, skin, central nervous system (CNS).

2- Benzalkonium Chloride

Routes of Entry

Absorbed through skin. Eye contact.

Toxicity to Animals

Acute Dermal LD50 Rat: 1420 mg/kg
Acute Inhalation LC50 Rat: 53 mg/m³ 4 hours
Acute Oral LD50 Mouse: 150 mg/kg
Acute Oral LD50 Rat: 240 mg/kg

Carcinogenicity

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Ecotoxicity:

1- Benzalkonium chloride

LC50 Bluegill (*Lepomis macrochirus*): 0.223 - 0.46 mg/l 96 hours

2- Propan-2-ol

Ecotoxicity in water (LC50): 100000 mg/l 96 hours [Fathead Minnow]. 64000 mg/l 96 hours [Fathead Minnow].

Products of Biodegradation:

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

13. Disposal Considerations

Disposal method:

Dispose of in accordance with federal, state, and local regulations.

US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

14. Transport information

Shipping Name: Biostar Hygitec

UN Number: UN1987

Hazard Class: Class 3

Packing Group: III

15. Other Information

Safety, Health And Environmental Regulations/Legislation Specific For The Substance Or Mixture Authorizations or Restrictions (Regulation [EC] No 1907/2006, Title VII Respectively Title VIII): Not applicable
Ingredients according to EC Detergents Regulation 648/2004

Disinfectants

Chemical safety assessment: A chemical safety assessment has not been carried out on the mixture

Full text of the R, H and EUH H225 Highly flammable liquid and vapour.

phrases mentioned in section 3: H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H319 Causes serious eye irritation

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

16. Packing

Packaging type: HDPE containers and sealed cap.

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