

**Material Safety Data Sheet**  
**RUCOLASE HCH**

Rev No. : 01

01-04-2013

**1. Identification of the substance/preparation and of the company/undertaking****Product details**

- Trade name : **RUCOLASE HCH**
- Application of the substance / the preparation Textile Auxiliary Chemical
- Manufacturer/Supplier :
  - Rudolf Atul Chemicals Limited
  - Post : Atul, District : Valsad – 396 020
  - Gujarat, India
  - Telephone : (+912632) 230000
  - Email : racl@atul.co.in Website : www.atul.co.in

**2. Composition/information on ingredients**

- Chemical characterization :
- Description : Preparation of Amylase
- Additional information : For the wording of the listed risk phrases refer to section 16.

**3. Hazards identification**

- Hazard description : Not applicable.
- Information concerning particular hazards for human and environment :
  - When sprayed the respiratory tracts may be irritated by aerosol drops.

**4. First-aid measures**

- General information :
  - Immediately remove any clothing soiled by the product and dispose off safely.
  - By continuous complaints consult a physician.
- After inhalation : Supply fresh air; consult doctor in case of complaints.
- After skin contact : Immediately wash with water and soap and rinse thoroughly.
- After eye contact : Rinse opened eye for several minutes under running water.
- After swallowing :
  - Seek medical treatment.
  - Do not induce vomiting.
  - Never give anything by mouth to an unconscious person.

**5. Fire-fighting measures**

- Suitable extinguishing agents :
  - CO<sub>2</sub>, Dry powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Material Safety Data Sheet**  
**RUCOLASE HCH**

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- **For safety reasons unsuitable extinguishing agents :** Water with full jet
- **Special hazards caused by the substance, its products of combustion or resulting gases :**  
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment :** Wear self-contained respiratory protective device.
- **Additional information :**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

**6. Accidental release measures**

- **Person-related safety precautions :**  
Keep people at a distance and stay on the windward side.  
Refer to protective measures listed in sections 7 and 8.
- **Measures for environmental protection :** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting :**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Avoid high-pressure water jet and spraying (danger of aerosol formation) Ensure sufficient ventilation.

**7. Handling and storage**

- **Handling :**
- **Information for safe handling :** Keep receptacles tightly sealed.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage :**
- **Requirements to be met by storerooms and receptacles :** Use polyolefine receptacles.
- **Information about storage in one common storage facility :** Store away from oxidizing agents.
- **Further information about storage conditions :** Protect from frost.
- **Recommended storage temperature :** 5-30°C
- **Storage class :**
- **Storage stability :** Storage period up to 12 months at 65 % RH & 20°C in closed packed condition

**8. Exposure controls/personal protection**

- **Additional information about design of technical facilities :** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace :**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information :** The lists valid during the making were used as basis.
- **Personal protective equipment :**
- **General protective and hygienic measures :**  
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection :**

**Material Safety Data Sheet**  
**RUCOLASE HCH**

Rev No. : 01

01-04-2013

Use suitable respiratory protective device only when aerosol or mist is formed.

· **Recommended filter device for short term use** : P2

· **Protection of hands** :

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the Degradation



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Eye protection** : Wear Goggles / Safety Goggles



Safety glasses

· **Body protection** : Protective work clothing

**9. Physical and chemical properties**

· **General Information**

**Form** : Fluid  
**Colour** : Clear Yellow  
**Odour** : Characteristic

· **Change in condition**

**Melting point/Melting range** : ~ - 2°C  
**Boiling point/Boiling range** : 100°C

· **Flash point** : Not applicable.

· **Self-igniting** : Product is not selfigniting

· **Danger of explosion** : Product does not present an explosion hazard

· **Vapour pressure at 20°C** : 23 hPa

· **Density at 20°C** : 1.1 g/cm<sup>3</sup>

· **Solubility in / Miscibility with water** : Fully miscible

· **pH-value at 20°C** : 7

**10. Stability and reactivity**

· **Thermal decomposition / conditions to be avoided** :

No decomposition if used according to specifications.

· **Dangerous reactions** : No dangerous reactions known.

· **Dangerous decomposition products** : No dangerous decomposition products known.

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**Material Safety Data Sheet**  
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**11. Toxicological information**

- **Acute toxicity :**
- **LD/LC50 values relevant for classification :**
  - Oral LD-50 > 10 000 mg/kg (Rat)
- **Primary irritant effect :**
- **on the skin :** Due to the product composition slight irritations of the skin cannot be excluded.
- **on the eye :** Due to the product composition slight irritations of the eyes cannot be excluded.
- **Sensitization :**
  - Avoid formation of dust by drying-up of the product by all means; risk of sensitization due to enzyme dust!
- **Additional toxicological information :**
  - When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
  - The product has not been tested. The information is derived from the properties of the individual components.
  - When sprayed in inadequately ventilated places, the aerosol drops may seriously irritate the respiratory tract! Therefore it is absolutely necessary to strictly observe the instructions of chapter (para) 8.

**12. Ecological information**

- **Information about elimination (persistence and degradability) :**
- **Method** OECD 302 B
- **Analysing method** DOC decrease
- **Degree of elimination :** > 90 %
- **Classification :** Readily eliminable from water
- **Other information :** The product is easily biodegradable.
- **Ecotoxic effects :**
- **Aquatic toxicity :**
  - LC-50 > 80 mg/l (Vertebrata)
- **Behaviour in sewage processing plants :**
  - EC-50 > 700 mg/l (activated sludge)
  - Elimination > 90 % (OECD 302 B)
- **Additional ecological information :**
- **COD-value :** 50 mg/g
- **BOD5-value :** 20 mg/g
- **AOX-indication :**
  - Product does not contain any organic bound Halogens which could lead to AOX-values.
  - The product does not contain heavy metals in waste water relevant concentrations.
- **General notes :**
  - The ecotoxic effect of the product has not been tested. The information on this was derived from products of similar structure or composition.

**Material Safety Data Sheet**  
**RUCOLASE HCH**

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**13. Disposal considerations**

- **Recommendation :**  
After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.
- **Uncleaned packaging :**
- **Recommendation :** Disposal must be made according to official regulations.
- **Recommended cleansing agents :** Water, if necessary together with cleansing agents.

**14. Transport information**

- **Land transport ADR/RID (cross-border) :** must be in accordance with National / State / Local regulations.
- **ADR/RID class : -**
- **Air transport ICAO-TI and IATA-DGR :**
- **ICAO/IATA Class : -**
- **Transport/Additional information :** Not dangerous according to the above specifications.

**15. Regulatory information**

- **Labeling :**  
Observe the general safety regulations when handling chemicals.  
The product is not subject to identification of regulations in accordance with National / State regulations on Hazardous Materials.
- **Special labeling of certain preparations:**  
Contains Amylase, alpha-. May produce an allergic reaction.

**16. Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.