1 Identification

· Product identifier

· Trade name: KS145 - H - TH4 - CH3 - Hardness HR Titrant / 0.05M EDTA / (N)R22

· Catalogue number:
  56Z014598, 56L014530, 56U014565, 56U014530, 56L014565, 56L014572, 460-R22.71, 56U014530-0, 56L014530-0,
  56L014597, 56U014597, 56L014598, 56U014598, 56L014599, 56U014599, AS-K20145-KW, AS-K20145-ZI, AS-K24531-KW,

· Application of the substance / the mixture: Reagent for water analysis

· Manufacturer/Supplier:
  Tintometer Inc.
  6456 Parkland Drive
  Sarasota, FL 34243
  USA
  phone: (941) 756-6410
  fax: (941) 727-9654
  www.lovibond.us
  Made in Germany

· Emergency telephone number: + 1 866 928 0789 (English, French, Spanish)

2 Hazard(s) identification

· Classification of the substance or mixture The product is not classified as hazardous.

· Label elements
  · GHS label elements none
  · Hazard pictograms none
  · Signal word none
  · Hazard statements none

· Other hazards No further relevant information available.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Description: aqueous solution

· Composition and information on Ingredients: Percent ranges are used due to the confidential product information.

4 First-aid measures

· Description of first aid measures
  · General information: Immediately remove any clothing soiled by the product.
  · After inhalation: Supply fresh air.
  · After skin contact: Immediately wash with water and soap and rinse thoroughly.
  · After eye contact:
    Rinse opened eye for several minutes (at least 15 min) under running water. If symptoms persist, consult a doctor.
  · After swallowing:
    Rinse out mouth and then drink 1-2 glasses of water.
    If symptoms persist consult doctor.

· Most important symptoms and effects, both acute and delayed No further relevant information available.

· Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Fire-fighting measures

· Extinguishing media

· Suitable extinguishing agents: Use fire fighting measures that suit the environment.
6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  - **Advice for non-emergency personnel:** Wear protective equipment. Keep unprotected persons away.
  - **Environmental precautions:** Do not allow product to reach sewage system or any water course.
- **Methods and material for containment and cleaning up:**
  - Ensure adequate ventilation.
  - Absorb with liquid-binding material (sand, diatomite, universal binders).
  - Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
  - **Precautions for safe handling**
  - **Advice on safe handling:** No special precautions are necessary if used correctly.
  - **Hygiene measures:**
    - The usual precautionary measures for handling chemicals should be followed.
    - Wash hands before breaks and at the end of work.
    - Do not eat, drink or smoke when using this product.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
  - **Requirements to be met by storerooms and receptacles:** Store in a cool location.
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:**
    - Protect from heat and direct sunlight.
    - Protect from exposure to the light.
    - Protect from humidity and water.
  - **Recommended storage temperature:** 20°C ± 5°C (approx. 68°F)
  - **Specific end use(s):** No further relevant information available.

8 Exposure controls/personal protection

- **Control parameters**
  - **Components 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 that were valid during the creation were used as basis.
- **Engineering measures:**
  - Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
  - See item 7.
  - **Personal protective equipment:**
  - **Breathing equipment:** Use respiratory protective device against the effects of fumes/dust/aerosol.
  - **Recommended filter device for short term use:** Filter B
Protection of hands:
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.

Material of gloves
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm

Penetration time of glove material
Value for the permeation: Level ≤ 1 (10 min)
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:
Safety glasses
use against the effects of fumes / dust

Body protection: Protective work clothing

Limitation and supervision of exposure into the environment:
Do not allow product to reach sewage system or any water course.

9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance:
Form / Physical state: Fluid
Color: Colorless

Odor:
Odor: Odorless
Odor threshold: Not applicable.

pH-value at 20 °C (68 °F):
Value: 4.5

Melting point/freezing point:
Value: Not determined.

Initial boiling point and boiling range:
Value: Not determined.

Flash point:
Value: Not applicable.

Flammability (solid, gas):
Value: Not applicable.

Ignition temperature:
Value: Not applicable.

Decomposition temperature:
Value: Not determined.

Auto-ignition temperature:
Value: Product is not self-igniting.

Danger of explosion:
Product does not present an explosion hazard.

Flammability or explosive limits:
Lower: Not applicable.
Upper: Not applicable.

Oxidizing properties:
Value: none

Vapor Pressure:
Value: Not determined.

Density at 20 °C (68 °F):
Value: 1 g/cm³ (8.35 lbs/gal)

Relative density:
Value: Not determined.

Vapor density:
Value: Not determined.

Evaporation rate:
Value: Not determined.

Solubility(ies)
Water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water):
Value: Not determined.

Viscosity:
Value: Not determined.

Solvent content:
Organic solvents: 0.0 %
Water: < 99 %
Solids content: > 1 %

Other information
Value: No further relevant information available.
10 Stability and reactivity

- Reactivity: see section "Possibility of hazardous reactions"
- Chemical stability: Stable at ambient temperature (room temperature).
- Possibility of hazardous reactions: No further relevant information available.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: see section 5

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity: Based on available data, the classification criteria are not met.
  - Primary irritant effect:
    - on the skin: Based on available data, the classification criteria are not met.
    - on the eye: Based on available data, the classification criteria are not met.
  - Sensitization: Based on available data, the classification criteria are not met.
- Carcinogenic categories
  - IARC (International Agency for Research on Cancer): None of the ingredients is listed.
  - NTP (National Toxicology Program): None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration): None of the ingredients is listed.
  - Other information: see section 8 / 15
- Synergistic Products: None
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction): The following statements refer to the mixture:
  - Germ cell mutagenicity: Based on available data, the classification criteria are not met.
  - Carcinogenicity: Based on available data, the classification criteria are not met.
  - Reproductive toxicity: Based on available data, the classification criteria are not met.
  - STOT (specific target organ toxicity) -single exposure: Based on available data, the classification criteria are not met.
  - STOT (specific target organ toxicity) -repeated exposure: Based on available data, the classification criteria are not met.
  - Aspiration hazard: Based on available data, the classification criteria are not met.
- Additional toxicological information:
  - When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
  - Other adverse effects: Avoid transfer into the environment.

13 Disposal considerations

- Waste treatment methods
- Recommendation:
  - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
  - Disposal must be made according to official regulations.
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··· Uncleaned packagings:
··· Recommendation: Disposal must be made according to official regulations.

*14 Transport information

| · UN-Number | none |
| · UN proper shipping name | none |
| · Transport hazard class(es) | none |
| · Packing group | none |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |

*15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
  · Sara
  · Section 355 (Extremely hazardous substances):
    None of the ingredients is listed.
  · Section 313 (Specific toxic chemical listings):
    None of the ingredients is listed.
  · TSCA (Toxic Substances Control Act):
    All ingredients are listed.
  · Proposition 65
    · Chemicals known to cause cancer:
      None of the ingredients is listed.
    · Chemicals known to cause reproductive toxicity for females:
      None of the ingredients is listed.
    · Chemicals known to cause reproductive toxicity for males:
      None of the ingredients is listed.
    · Chemicals known to cause developmental toxicity:
      None of the ingredients is listed.
  · New Jersey Right-to-Know List:
    None of the ingredients is listed.
  · New Jersey Special Hazardous Substance List:
    None of the ingredients is listed.
  · Pennsylvania Right-to-Know List:
    None of the ingredients is listed.
  · Pennsylvania Special Hazardous Substance List:
    None of the ingredients is listed.
  · EPA (Environmental Protection Agency)
    None of the ingredients is listed.
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- NIOSH-Ca (National Institute for Occupational Safety and Health)
  None of the ingredients is listed.

- Information about limitation of use: Not required.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.

- Date of preparation / last revision 01/05/2018 / 4

- Abbreviations and acronyms:
  STOT: specific target organ toxicity
  SE: single exposure
  RE: repeated exposure
  EC50: half maximal effective concentration
  IC50: half maximal inhibitory concentration
  NOEL or NOEC: No Observed Effect Level or Concentration
  ACGIH®: American Conference of Governmental Industrial Hygienists
  • A1 - Confirmed human carcinogen
  • A2 - Suspected human carcinogen
  • A3 - Confirmed animal carcinogen with unknown relevance to humans
  • A4 - Not classifiable as a human carcinogen
  • A5 - Not suspected as a human carcinogen
  AARC: International Agency for Research on Cancer
  • Group 1 - Carcinogenic to humans
  • Group 2A - Probably carcinogenic to humans
  • Group 2B - Possibly carcinogenic to humans
  • Group 3 - Not classifiable as to carcinogenicity to humans
  • Group 4 - Not known to be Human Carcinogens
  • Group K - Known to be Human Carcinogens
  • Group R - Reasonably Anticipated to be Human Carcinogens
  NTP - National Toxicology Program, U.S. Department of Health and Human Services
  • Group K - Known to be Human Carcinogens
  • Group R - Reasonably Anticipated to be Human Carcinogens
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NIOSH: National Institute for Occupational Safety
  OSHA: Occupational Safety & Health
  TLV: Threshold Limit Value
  PEL: Permissible Exposure Limit
  REL: Recommended Exposure Limit

- Sources Data arise from safety data sheets, reference works and literature.
- * Data compared to the previous version altered.