1 Identification

· Product identifier
· Trade name: ISO FUNCTIONAL (Sticks)

· Relevant identified uses of the substance or mixture and uses advised against
  Dental material
  The product is intended for professional use.
  To avoid risks for humans and environment obtain instructions.

· Application of the substance / the mixture
  Dental impression material

· Details of the supplier of the safety data sheet
· Manufacturer/Supplier:
  GC America Inc.
  3737 W. 127th Street
  Alsip, IL 60803
  USA
  sds@gcamerica.com

· Information department: Regulatory Affairs

· Emergency telephone number:
  During normal opening times (Mon.-Fri. 8:00 AM-5:00 PM CST): +1 (708) 597-0900
  Transportation (CHEMTREC®) Emergency Telephone No. +1 (800) 424-9300

2 Hazard(s) identification

· Classification of the substance or mixture
  Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  Acute Tox. 4 H302 Harmful if swallowed.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC
  Harmful
  Harmful if swallowed. May cause sensitization by inhalation.

· Classification system:
  The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· Additional information:
  The information provided is in regards to the toxicity and hazard rating(s) of the individual component(s) in the formulation. The associated risk(s) depends on the route(s) of exposure. The hazard rating system is based entirely on the existence of the risk(s) and does not take into account the likelihood of reduced risk(s) through proper usage and handling.

· Label elements
· Labelling according to EU guidelines:
  The product has been classified and marked in accordance with directives on hazardous materials.

· Code letter and hazard designation of product:

  Harmful

(Contd. on page 2)
Trade name: ISO FUNCTIONAL (Sticks)

- Hazard-determining components of labeling:
  4-tert-butylbenzoic acid

- Risk phrases:
  Harmful if swallowed.
  May cause sensitization by inhalation.

- Safety phrases:
  Keep away from heat.
  Do not breathe dust.
  Take precautionary measures against static discharges.
  Wear suitable protective clothing.
  In case of accident or if you feel unwell, seek medical advice immediately.
  This material and its container must be disposed of as hazardous waste.

- Hazard description:
  WHMIS-symbols:
  D1B - Toxic material causing immediate and serious toxic effects
  D2A - Very toxic material causing other toxic effects

- Classification system:
  NFPA ratings (scale 0 - 4)
  Health = 2
  Fire = 1
  Reactivity = 0

- HMIS-ratings (scale 0 - 4)
  HEALTH 2 Health = 2
  FIRE 1 Fire = 1
  REACTIVITY 0 Reactivity = 0

- Other hazards
  Results of PBT and vPvB assessment
  PBT: Not applicable.
  vPvB: Not applicable.

### 3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:
<table>
<thead>
<tr>
<th>Chemical Formula</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>98-73-7 4-tert-butylbenzoic acid</td>
<td>30-60%</td>
</tr>
<tr>
<td>14807-96-6 talc (Mg3H2(SiO3)4)</td>
<td>30-60%</td>
</tr>
<tr>
<td>1309-37-1 iron(III) oxide</td>
<td>≤ 1%</td>
</tr>
</tbody>
</table>
Trade name: ISO FUNCTIONAL (Sticks)

4 First-aid measures

- Description of first aid measures
- General information:
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  If symptoms persist consult doctor.
- After inhalation:
  Supply fresh air; consult doctor in case of complaints.
  In case of unconsciousness place patient stably in side position for transportation.
  Do not use mouth to mouth or mouth to nose resuscitation.
- After skin contact:
  Rinse with warm water.
  If symptoms persist consult doctor.
- After eye contact:
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing:
  Do not induce vomiting; immediately call for medical help.
  Rinse out mouth and then drink plenty of water.
- Information for doctor:
  Most important symptoms and effects, both acute and delayed: Allergic reactions
  Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
  CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  Use fire fighting measures that suit the environment.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture
  Formation of toxic gases is possible during heating or in case of fire.
- Advice for firefighters
- 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

- Personal precautions, protective equipment and emergency procedures
  Remove persons from danger area.
  Avoid formation of dust.
  Wear protective clothing.

(Contd. on page 4)
Trade name: ISO FUNCTIONAL (Sticks)

- Environmental precautions:
  Do not allow product to reach sewage system or any water course.
  Inform respective authorities in case of seepage into water course or sewage system.
  Do not allow to penetrate the ground/soil.
  In case of seepage into the ground inform responsible authorities.

- Methods and material for containment and cleaning up:
  Ensure adequate ventilation.
  Pick up mechanically.
  Prevent formation of dust.
  Dispose of the collected material according to regulations.

- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling
    Observe instructions for use.
    Ensure good ventilation/exhaustion at the workplace.
    Prevent formation of dust.
    Do not inhale dust / smoke / mist.
    Any deposit of dust which cannot be avoided must be regularly removed.

- Information about protection against explosions and fires:
  Protect from heat.
  Protect against electrostatic charges.
  Dust can combine with air to form an explosive mixture.

- Storage:
  - Requirements to be met by storerooms and receptacles:
    Store only in unopened original receptacles.
  - Information about storage in one common storage facility:
    Store away from foodstuffs.
  - Further information about storage conditions:
    Observe instructions for use / storage.
  - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- Control parameters
  - Components with limit values that require monitoring at the workplace:
    14807-96-6 talc (Mg3H2(SiO3)4)
    - EL Long-term value: 2 mg/m³ respirable
    - EV Long-term value: 2* mg/m³, 2 f/cc ppm *respirable

(Contd. on page 5)
Trade name: ISO FUNCTIONAL (Sticks)

1309-37-1 iron(III) oxide

EL Short-term value: 10** mg/m³
Long-term value: 5* 10*** 3**** mg/m³
*dust & fume**fume; Rouge: ***total dust****resp.

EV Long-term value: 5* 10** mg/m³
*respirable, including Rouge;**total dust

· Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls
· Personal protective equipment:
· General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Do not inhale dust / smoke / mist.
Wash hands before breaks and at the end of work.
Keep away from foodstuffs, beverages and feed.
· Breathing equipment: Suitable respiratory protective device recommended.
· Protection of hands: Protective gloves
· Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
· Penetration time of glove material
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

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:
  · Form: Solid
  · Color: Red
· Odor: Odorless
· Odor threshold: Not determined.

· pH-value: Not applicable.
· Change in condition
  · Melting point/Melting range: Undetermined.
  · Boiling point/Boiling range: Undetermined.

· Flash point: Not applicable.
· Flammability (solid, gaseous): Not determined.
· Ignition temperature: Undetermined.
· Decomposition temperature: Not determined.
· Auto igniting: Product is not selfigniting.
· Danger of explosion: Product does not present an explosion hazard.
Trade name: ISO FUNCTIONAL (Sticks)

- Explosion limits:
  - Lower: Not determined.
  - Upper: Not determined.

- Vapor pressure: Not applicable.

- Density:
  - Not determined.

- Relative density: Not determined.

- Vapour density: Not applicable.

- Evaporation rate: Not applicable.

- Solubility in / Miscibility with Water: Insoluble.

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

- Viscosity:
  - Dynamic: Not applicable.
  - Kinematic: Not applicable.

- Solvent content:
  - Organic solvents: 0.0 %

- Solids content: 100.0 %

- Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity: No further relevant information available.

- Chemical stability: Stable at ambient temperature.

- Thermal decomposition / conditions to be avoided:
  - No decomposition if used according to specifications.

- Possibility of hazardous reactions: No dangerous reactions known.

- Conditions to avoid: No further relevant information available.

- Incompatible materials: No further relevant information available.

- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects

- Acute toxicity:

  - LD/LC50 values that are relevant for classification:

    | Route   | LD50/LC50 |
    |---------|-----------|
    | Oral    | 568 mg/kg (mouse) |
    | Dermal  | 300 mg/kg (rat (f+m)) |
    | Inhalative | 1802 mg/l (rat (f+m)) |

- Primary irritant effect:
  - on the skin: No irritant effect.
  - on the eye: No irritating effect.

  Sensitization: Sensitization possible through inhalation.
Trade name: ISO FUNCTIONAL (Sticks)

- Additional toxicological information:
  - Carcinogenic categories
    - IARC (International Agency for Research on Cancer)
      - talc (Mg3H2(SiO3)4) 2B
      - iron(III) oxide 3
    - NTP (National Toxicology Program)
      - None of the ingredients is listed.
    - OSHA-Ca (Occupational Safety & Health Administration)
      - None of the ingredients is listed.
    - Carcinogenic categories' legend:
      - IARC Group 1: The agent is carcinogenic to humans.
      - IARC Group 2A: The agent is probably carcinogenic to humans.
      - IARC Group 2B: The agent is possibly carcinogenic to humans.
      - IARC Group 3: The agent is not classifiable as to its carcinogenicity to humans.
      - IARC Group 4: The agent is probably not carcinogenic to humans.
      - NTP K: Known to be human carcinogen.
      - NTP R: Reasonably anticipated to be human carcinogen.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
    - Water hazard class 3 (Self-assessment): extremely hazardous for water
    - Do not allow product to reach ground water, water course or sewage system, even in small quantities.
    - Danger to drinking water if even extremely small quantities leak into the ground.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
  - Other adverse effects: No further relevant information available.

13 Disposal considerations

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

|UN-Number| Void|
|DOT, TDG, ADN, IMDG, IATA| Void|
|UN proper shipping name| Void|
|DOT, TDG, ADN, IMDG, IATA| Void|
|Transport hazard class(es)| Void|
|DOT, TDG, ADN, IMDG, IATA| Void|
|Class| Void|
|Packing group| Void|
|DOT, TDG, IMDG, IATA| Void|
|Environmental hazards:| No|
|Marine pollutant:| No|
|Special precautions for user| Not applicable.|
|Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code| Not applicable.|
|UN "Model Regulation":| -|

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- SARA (Superfund Amendments and Reauthorization Act)
  - Section 355 (extremely hazardous substances): None of the ingredient is listed.
  - Section 313 (Specific toxic chemical listings): None of the ingredients is listed.
  - TSCA (Toxic Substances Control Act): All ingredients are listed.

- Carcinogenic categories
  - EPA (Environmental Protection Agency) None of the ingredients is listed.
  - TLV (Threshold Limit Value established by ACGIH) | A4
talc (Mg$_3$H$_2$(SiO$_3$)$_4$) | A4
iron(III) oxide

- NIOSH-Ca (National Institute for Occupational Safety and Health) None of the ingredients is listed.

- Canadian substance listings:
  - Canadian Domestic Substances List (DSL) All ingredients are listed.
  - Canadian Ingredient Disclosure list (limit 0.1%) 4-tert-butylbenzoic acid

(Contd. on page 9)
Trade name: ISO FUNCTIONAL (Sticks)

- Canadian Ingredient Disclosure list (limit 1%)
  - stearic acid
  - iron(III) oxide

- Product related hazard informations:
The product has been classified and marked in accordance with directives on hazardous materials.

- Hazard symbols:
  - Harmful

- Hazard-determining components of labeling:
  - 4-tert-butylbenzoic acid

- Risk phrases:
  - Harmful if swallowed.
  - May cause sensitization by inhalation.

- Safety phrases:
  - Keep away from heat.
  - Do not breathe dust.
  - Take precautionary measures against static discharges.
  - Wear suitable protective clothing.
  - In case of accident or if you feel unwell, seek medical advice immediately.
  - This material and its container must be disposed of as hazardous waste.

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### 16 Other information

- Department issuing SDS: Regulatory Affairs
- Contact:
  - Regulatory Affairs
  - Telephone No. +1 (708) 597-0900
  - sds@gcamerica.com
- Date of preparation / last revision 04/24/2015 / -
- Abbreviations and acronyms:
  - GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  - HCS: Hazard Communication Standard (USA)
  - MSDS: Material Safety Data Sheet
  - SDS: Safety Data Sheet
  - ADN: Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways)
  - ECHA: European Chemicals Agency
  - OSHA: Occupational Safety and Health Administration (USA)
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
  - WHMIS: Workplace Hazardous Materials Information System (Canada)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
40.1.1 vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity, Hazard Category 4
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

· Sources
  - Manufacturers’ MSDSs/SDSs
  - TOXNET (http://toxnet.nlm.nih.gov/)
  - ECHA (http://echa.europa.eu/)
  - EnviChem (www.echemportal.org)

· Notes:
  CAS Registry Number is a Registered Trademark of the American Chemical Society.
  CHEMTREC® is a registered service mark of the American Chemistry Council, Inc.

· * Data compared to the previous version altered. This version replaces all previous versions.

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