

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/19/2014

Reviewed on 01/31/2014

1 Identification

- **Product identifier**
- **Trade name:** Calcium Hydroxide, Laboratory Grade Powder
- **Article number:** 030-0123
- **CAS Number:**
1305-62-0
- **EC number:**
215-137-3
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Aqua Solutions, Inc.
6913 Highway 225
DEER PARK, TX 77536
USA
800-256-2586
- **Information department:**
Technical Coordinator
Sherman Nelson sherman@aquasolutions.org
Product safety department
- **Emergency telephone number:**
Chemtec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.

- **Label elements**
- **GHS label elements**
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard statements**
Causes serious eye damage.
- **Precautionary statements**
Wear eye protection / face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 0
Reactivity = 0

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· HMIS-ratings (scale 0 - 4)

| | | |
|------------|---|----------------|
| HEALTH | 3 | Health = 3 |
| FIRE | 0 | Fire = 0 |
| 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: Substances**
- **CAS No. Description**
1305-62-0 Calcium Hydroxide, Reagent ACS Grade
- **Identification number(s)**
- **EC number: 215-137-3**

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** 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:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **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

- **Precautions for safe handling** Prevent formation of dust.
- **Information about protection against explosions and fires:** No special measures required.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **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:**

1305-62-0 Calcium Hydroxide, Reagent ACS Grade

PEL Long-term value: 15* 5** mg/m³
*total dust **respirable fraction

REL Long-term value: 5 mg/m³

TLV Long-term value: 5 mg/m³

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

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

- **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.
- **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:**



Tightly sealed goggles

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Trade name: Calcium Hydroxide, Laboratory Grade Powder

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9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

| | |
|------------------|-----------------|
| Form: | Powder |
| Color: | White |
| Odor: | Light |
| Odour threshold: | Not determined. |

· pH-value: Not applicable.

· Change in condition

| | |
|------------------------------|--------------------------------------|
| Melting point/Melting range: | 580 °C (1076 °F) (-H ₂ O) |
| Boiling point/Boiling range: | Undetermined. |

· Flash point: Not applicable.

· Flammability (solid, gaseous): Product is not flammable.

· Ignition temperature:

Decomposition temperature: Not determined.

· Auto igniting: Not determined.

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

· Explosion limits:

| | |
|--------|-----------------|
| Lower: | Not determined. |
| Upper: | Not determined. |

· Vapor pressure at 20 °C (68 °F): 0 hPa

· Density at 20 °C (68 °F): 2.24 g/cm³ (18.693 lbs/gal)

| | |
|--------------------------------|-----------------------|
| Bulk density at 20 °C (68 °F): | 400 kg/m ³ |
| Relative density | Not determined. |
| Vapour density | Not applicable. |
| Evaporation rate | Not applicable. |

· Solubility in / Miscibility with
Water at 20 °C (68 °F): 1.7 g/l

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

· Viscosity:

| | |
|------------|-----------------|
| Dynamic: | Not applicable. |
| Kinematic: | Not applicable. |

· Other information: No further relevant information available.

10 Stability and reactivity

· Reactivity

· Chemical stability

- 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.

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11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

| | |
|--|-----------------------|
| · LD/LC50 values that are relevant for classification: | |
| Oral | LD50 7340 mg/kg (rat) |

- Primary irritant effect:

- on the skin: No irritant effect.

- on the eye: Strong irritant with the danger of severe eye injury.

- Sensitization: No sensitizing effects known.

- Additional toxicological information:

- Carcinogenic categories

- IARC (International Agency for Research on Cancer) Substance is not listed.

- NTP (National Toxicology Program) Substance is not listed.

- OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

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.

- Additional ecological information:

- General notes:

Water hazard class 1 (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- 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 | |
| · DOT, ADN, IMDG, IATA | Not regulated |
| · UN proper shipping name | |
| · DOT, ADN, IMDG, IATA | Not regulated |
| · Transport hazard class(es) | |
| · DOT, ADN, IMDG, IATA | |
| · Class | Not regulated |

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| | |
|--|-----------------|
| · Packing group | |
| · DOT, IMDG, IATA | Not regulated |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Segregation groups | Alkalis |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · DOT | |
| · Remarks: | Not regulated |
| · IMDG | |
| · Remarks: | Not regulated |
| · IATA | |
| · Remarks: | Not regulated |
| · UN "Model Regulation": | Not regulated |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements**
- **The substance is classified and labeled according to the Globally Harmonized System (GHS).**
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard statements**
- **Causes serious eye damage.**
- **Precautionary statements**
- **Wear eye protection / face protection.**
- **If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**
- **Immediately call a poison center/doctor.**

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· **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.

· **Department issuing SDS:** Environment protection department.

· **Contact:** Mr. Nelson

· **Date of preparation / last revision**

Creation date for SDS 10-06-2014. STN

11/19/2014 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

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Safety Data Sheet

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Reviewed on 08/06/2014

1 Identification

- **Product identifier**
- **Trade name: Phenyl Salicylate (Salol), Laboratory Grade**
- **Article number: 161-6031**
- **CAS Number:**
118-55-8
- **EC number:**
204-259-2
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Aqua Solutions, Inc.
6913 Highway 225
DEER PARK, TX 77536
USA
800-256-2586
- **Information department:**
Technical Coordinator
Sherman Nelson sherman@aquasolutions.org
Product safety department
- **Emergency telephone number:**
Chemtec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard statements**
Causes skin irritation.
May cause respiratory irritation.
- **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
Specific treatment (see on this label).
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a poison center/doctor if you feel unwell.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.

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Trade name: Phenyl Salicylate (Salol), Laboratory Grade

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Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 1
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 2
Fire = 1
Reactivity = 0

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

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
118-55-8 Phenyl Salicylate (Salol)
- **Identification number(s)**
- **EC number: 204-259-2**

4 First-aid measures

- **Description of first aid measures**
- **After inhalation: Supply fresh air; consult doctor in case of complaints.**
- **After skin contact: Generally the product does not irritate the skin.**
- **After eye contact: Rinse opened eye for several minutes under running water.**
- **After swallowing: 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.**
- **Special hazards arising from the substance or mixture No further relevant information available.**
- **Advice for firefighters**
- **Protective equipment: No special measures required.**

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures Not required.**
- **Environmental precautions: Do not allow to enter sewers/ surface or ground water.**
- **Methods and material for containment and cleaning up: Pick up mechanically.**

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- **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

- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **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:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **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
- **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.
- **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:** Not required.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
- **Form:** Crystalline
- **Color:** White
- **Odor:** Odorless
- **Odour threshold:** Not determined.

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Trade name: *Phenyl Salicylate (Salol), Laboratory Grade*

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| | |
|---|--|
| · pH-value: | <i>Not applicable.</i> |
| · Change in condition | |
| Melting point/Melting range: | <i>41.5 °C (107 °F)</i> |
| Boiling point/Boiling range: | <i>173 °C (343 °F)</i> |
| · Flash point: | <i>113 °C (235 °F)</i> |
| · Flammability (solid, gaseous): | <i>Product is not flammable.</i> |
| · Ignition temperature: | |
| Decomposition temperature: | <i>Not determined.</i> |
| · Auto igniting: | <i>Not determined.</i> |
| · Danger of explosion: | <i>Product does not present an explosion hazard.</i> |
| · Explosion limits: | |
| Lower: | <i>Not determined.</i> |
| Upper: | <i>Not determined.</i> |
| · Vapor pressure: | <i>Not applicable.</i> |
| · Density at 20 °C (68 °F): | <i>1.25 g/cm³ (10.431 lbs/gal)</i> |
| · Relative density | <i>Not determined.</i> |
| · Vapour density | <i>Not applicable.</i> |
| · Evaporation rate | <i>Not applicable.</i> |
| · Solubility in / Miscibility with Water: | <i>Not determined.</i> |
| · Partition coefficient (n-octanol/water): | <i>Not determined.</i> |
| · Viscosity: | |
| Dynamic: | <i>Not applicable.</i> |
| Kinematic: | <i>Not applicable.</i> |
| · Other information | <i>No further relevant information available.</i> |

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **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:**

| | | |
|------|------|------------------|
| Oral | LD50 | 3000 mg/kg (rat) |
|------|------|------------------|

- **Primary irritant effect:**
- **on the skin:** *No irritant effect.*

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- *on the eye: No irritating effect.*
- *Sensitization: No sensitizing effects known.*
- *Additional toxicological information:*
- *Carcinogenic categories*
- *IARC (International Agency for Research on Cancer) Substance is not listed.*
- *NTP (National Toxicology Program) Substance is not listed.*
- *OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.*

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.*
- *Additional ecological information:*
- *General notes:*
- Water hazard class 2 (Self-assessment): hazardous for water*
- Do not allow product to reach ground water, water course or sewage system.*
- Danger to drinking water if even 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

- | | |
|--|----------------------|
| <ul style="list-style-type: none"> · <i>UN-Number</i> · <i>DOT, ADN, IMDG, IATA</i> | <i>Not regulated</i> |
| <ul style="list-style-type: none"> · <i>UN proper shipping name</i> · <i>DOT, ADN, IMDG, IATA</i> | <i>Not regulated</i> |
| <ul style="list-style-type: none"> · <i>Transport hazard class(es)</i> · <i>DOT, ADN, IMDG, IATA</i> · <i>Class</i> | <i>Not regulated</i> |
| <ul style="list-style-type: none"> · <i>Packing group</i> · <i>DOT, IMDG, IATA</i> | <i>Not regulated</i> |
| <ul style="list-style-type: none"> · <i>Environmental hazards:</i> · <i>Marine pollutant:</i> | <i>No</i> |

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Trade name: Phenyl Salicylate (Salol), Laboratory Grade

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- | | |
|--|------------------------|
| <i>• Special precautions for user</i> | <i>Not applicable.</i> |
| <i>• Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</i> | <i>Not applicable.</i> |
| <i>• Transport/Additional information:</i> | |
| <i>• DOT</i> | |
| <i>• Remarks:</i> | <i>Not regulated</i> |
| <i>• IMDG</i> | |
| <i>• Remarks:</i> | <i>Not regulated</i> |
| <i>• IATA</i> | |
| <i>• Remarks:</i> | <i>Not regulated</i> |
| <i>• UN "Model Regulation":</i> | <i>Not regulated</i> |

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture*
- Sara*
- Section 355 (extremely hazardous substances): Substance is not listed.*
- Section 313 (Specific toxic chemical listings): Substance is not listed.*
- TSCA (Toxic Substances Control Act): Substance is listed.*
- Proposition 65*
- Chemicals known to cause cancer: Substance is not listed.*
- Chemicals known to cause reproductive toxicity for females: Substance is not listed.*
- Chemicals known to cause reproductive toxicity for males: Substance is not listed.*
- Chemicals known to cause developmental toxicity: Substance is not listed.*
- Carcinogenic categories*
- EPA (Environmental Protection Agency) Substance is not listed.*
- TLV (Threshold Limit Value established by ACGIH) Substance is not listed.*
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.*
- GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).*
- Hazard pictograms*



GHS07

- Signal word Warning*
- Hazard statements*
 - Causes skin irritation.*
 - May cause respiratory irritation.*
- Precautionary statements*
 - Avoid breathing dust/fume/gas/mist/vapors/spray*
 - Wear protective gloves.*
 - Specific treatment (see on this label).*
 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.*
 - Call a poison center/doctor if you feel unwell.*
 - Store locked up.*
 - Store in a well-ventilated place. Keep container tightly closed.*

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Dispose of contents/container in accordance with local/regional/national/international regulations.
 • **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.

• **Department issuing SDS:** Environment protection department.

• **Contact:** Mr. Nelson

• **Date of preparation / last revision**

Creation date for SDS 08-06-2014. STN

11/17/2014 / -

• **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

USA



A **NewellRubbermaid** Company

MATERIAL SAFETY DATA SHEET

MSDS # 061108

Section One: Identification

Sanford, L.P.
2707 Butterfield Road
Oak Brook, IL 60523 USA
800-323-0749 or 630-481-2000

EMERGENCY MEDICAL NUMBER:
888-786-0972

Product Name: Vis-à-Vis Wet-Erase Transparency Marker
Colors: Black, Red, Blue, Green, Yellow, Orange, Brown, Purple

Sanford is a member of The Art and Creative Materials Institute, Inc. This product is certified by the Institute to be labeled in accordance with the voluntary chronic hazard labeling standard ASTM D-4236 and is labeled with the AP Non Toxic Seal. Products bearing the AP Approved Product Seal of The Art and Creative Materials Institute, Inc. are certified in a program of toxicological evaluation by a medical expert, subject to review by the Institute Toxicology Advisory Board, to contain no materials in sufficient quantities to be toxic or injurious to humans, or to cause acute toxicity or chronic health problems.

Section Two: Hazard Identification

This product is considered safe under normal use conditions.

Section Three: Composition

Water, propylene glycol (57-55-6), dyes, resins, additives

Section Four: First Aid Measures

Inhalation: This product is considered safe under normal use conditions.
Skin Contact: This product is considered safe under normal use conditions.
Eye Contact: This product is considered safe under normal use conditions.
Ingestion: This product is considered safe under normal use conditions.

Section Five: Fire Fighting Measures

Flash Point: Not flammable
Flammability Limits (% by volume): Lower: Not explosive Upper: Not explosive
Extinguishing Media: As appropriate for surrounding area.
Special Fire Fighting Measures: None
Unusual Fire and Explosion Hazards: None

Section Six: Accidental Release Measures

In Case of Spill or Accidental Release: Wipe up with absorbent material.

Section Seven: Handling and Storage

Handling: Do not shake pen.
Storage: Keep cap on pen when not in use.

Section Eight: Exposure Controls and Personal Protection

Eye Protection: None under normal conditions.
Clothing: None under normal conditions.
Respirator: None under normal conditions.
Ventilation: None under normal conditions.



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Section Nine: Physical and Chemical Properties

For Ink unless otherwise specified:

- Boiling Point: Approximately 212F
- Specific Gravity: -1
- Vapor Pressure: Not determined
- Solubility in Water: Soluble
- Evaporation Rate: Not determined
- Appearance/Odor: Colored liquid; essentially odorless

Section Ten: Stability and Reactivity

- Stability: Stable
- Conditions to Avoid: None known
- Chemical Incompatibility: None known
- Hazardous Decomposition: None known
- Hazardous Polymerization: Will not occur

Section Eleven: Toxicological Information

See Section Two: Hazard Identification for any hazards

Section Twelve: Ecological Information

Not available

Section Thirteen: Disposal Considerations

Dispose in accordance with Federal, State, and Local Regulations

Section Fourteen: Transport Information

- DOT: Not regulated as a hazardous material by DOT, IMO, or IATA
- IATA:
- IMO:

Section Fifteen: Regulatory Information

TSCA: The product listed on this Material Safety Data Sheet is not listed on the Toxic Substances Control Act Inventory. All ingredients used to manufacture this product are listed on the TSCA Inventory

Section Sixteen: Other Information

| HMIS Code | |
|---------------------|-----|
| Health | N/A |
| Flammability | N/A |
| Reactivity | N/A |
| Personal Protection | N/A |

0=Minimal / 4 = Severe

Sanford has been advised by Counsel that the OSHA Hazard Communication Standard does not apply to the Sanford Product described in this Material Safety Data Sheet. The reason for the exemption is contained in 29 CFR 1910.1200(b)(6)(ix) as amended July 1, 2006 per the Code of Federal Regulations. The information contained in this MSDS is forwarded to you for your information, but is not meant to imply that the product is covered by the Hazard Communication Standard nor is this MSDS meant to comply with all requirements of the Hazard Communication Standard.

Hazard Communication Compliance Declaration

Newell-Rubbermaid (NWL) writing instruments comply with U.S. OSHA GHS Hazard Communication Standard of 29 CFR section 1910.1200 (OSHA HazCom 2012) by virtue of exemption as 'articles' and as 'consumer products' per 29 CFR section 1910.1200(b)(6)(v) and (ix). Therefore, GHS Safety Data Sheets are not required for our writing instruments.

An 'article' is defined in Section 1910.1200(c) "as a manufactured item other than a fluid or particle:

- Which is formed to a specific shape or design during manufacture;
- Which has end use function(s) dependent in whole or in part on its shape or design during end use; and
- Which, under normal conditions of use, does not release other than very small (minute or trace) amounts of a hazardous chemical and does not pose a physical hazard or health risk to employees."

The 'consumer product' exemption in 29 C.F.R. section 1910.1200(b)(6)(ix) states that:

- Any consumer product or hazardous substance, as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively, where the employer can show that it is used in the workplace for the purpose intended by the chemical manufacturer or importer of the product, and the use results in a duration and frequency of exposure which is not greater than the range of exposures that could reasonably be experienced by consumers when used for the purpose intended.

OSHA has consistently taken the position, in various rulemaking documents and interpretation letters, "most office products (such as pens, pencils, adhesive tape) to be exempt under the provisions of the rule, either as articles or as consumer products." Markers also fall into these exempted categories. This position is cited currently on [OSHA's website](#) in a letter from OSHA Assistant Secretary John A. Pendergrass to U.S. Congressman Jim Bunning. These examples are cited again in OSHA's FAQs on the [Hazard Communication Standard](#) which further reinforces that Newell-Rubbermaid writing products are exempt from Hazard Communication requirements, specifically GHS Safety Data Sheet documentation.

A non-exhaustive list is provided below of Newell-Rubbermaid writing instruments that qualify as 'articles' and 'consumer products' that are exempt from GHS Safety Data Sheet requirements:

- Prismacolor Premier Colored Pencils and Sharpeners
- Prismacolor Nupastels and Art Stix and Erasers
- Sharpie Permanent Markers
- Sharpie Pens
- Sharpie Highlighters (Clearview, Accent, etc)
- Paper Mate Pens (InkJoy, FlexGrip, Replay, etc)
- Paper Mate Mechanical Pencils
- Paper Mate Flair Pens
- Paper Mate Pearl Erasers
- Paper Mate Replay Premium Erasable Pens
- Expo Dry Erase Markers
- Expo Whiteboard Cleaner Wipes
- Expo Learning Boards
- Liquid Paper Correction Pens
- Liquid Paper Dryline Correction Tape
- Parker Fountain Pens
- Waterman Fountain Pens
- Rotring Tikky Ballpoint Pens
- Woodcase Pencils (Mongol, Mirado, etc)
- uni-ball pens

3500 Lacey Road | Downers Grove, IL | Phone +1 (630)-829-2500 | www.newellrubbermaid.com



IRWIN





Date Prepared: 04-Nov-2013
 Revised: New Issue
 No. 6 Tile_GHS_001

| HMIS Ratings | |
|--------------------------|---|
| Health Hazard | 1 |
| Fire Hazard | 0 |
| Reactivity Hazard | 0 |
| Max. Personal Protection | E |



SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product trade name(s): No. 6 Tile
Common Name(s): Kaolin, China Clay, Hydrous Aluminum Silicate
Chemical Formula: $Al_2Si_2O_5(OH)_4$
CAS Number: 1332-58-7
Physical Form: Light gray to white solid

Recommended Uses: Non-exhaustive list: Ceramics, ceramic glazes, refractories, fiberglass compositions, industrial filler, extender, for paper, rubber, plastics, caulks/adhesives, pesticides, sorbents, catalyst supports

Restrictions on Use: Food ingredient, cosmetic ingredient

Manufacturer's Name & Address: Kentucky-Tennessee Clay Company
 100 Mansell Court East
 Suite 300
 Roswell, GA 30076

Telephone: 770-594-0660
Fax: 770-645-3460
Customer Service: 800-814-4538

Emergency Telephone: For Chemical Emergency Call CHEMTREC (24 hours): 1-800-424-9300
 (US, Canada, Puerto Rico, Virgin Islands)
 1-703-527-3887 (Outside Above Area) collect calls accepted

SECTION 2: HAZARDS IDENTIFICATION

Contains Crystalline Silica - <1% Respirable

Classification:

| | |
|--|--------------------------|
| Eye Damage/Irritation | Category 2 |
| Skin Corrosion/Irritation | Category 2 |
| Specific Target Organ Toxicity - Single Exposure | Category 3 - Respiratory |
| Specific Target Organ Toxicity - Repeated Exposure | Category 1 - Respiratory |
| Carcinogenicity | Category 1a |

Label Elements:



Signal Word:
WARNING

Hazard Statements: H373: May cause damage to lung through prolonged or repeated inhalation.

Precautionary Statements: P260: Do not breathe dust.
 P285: In case of inadequate ventilation wear respiratory protection.
 P501: Dispose of contents/containers in accordance with local regulation.

SAFETY DATA SHEETProduct Name: No. 6 Tile
SDS ID: No. 6 Tile_GHS_001**SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

| Ingredient | Weight % (Approx.) | CAS N° | EINECS N° |
|-----------------------------|--------------------|------------|-----------|
| Kaolin | 60% - 100% | 1332-58-7 | 310-194-1 |
| Quartz - Crystalline Silica | 0.1% - 2% | 14808-60-7 | 238-878-4 |
| Titanium Dioxide | 1% - 5% | 13463-67-7 | 136-675-5 |
| Water | 1% - 20% | 7732-18-5 | 215-185-5 |

SECTION 4: FIRST AID MEASURES**Inhalation**

If adverse effects occur, get immediate medical attention. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial

Skin

Wash immediately with soap and water. Get medical attention if irritation develops or persists.

Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion

DO NOT induce vomiting. If swallowed, drink plenty of water, do NOT induce vomiting. Never make an unconscious person vomit or drink fluids. Get medical attention.

Symptoms: Immediate

eye irritation, skin irritation, respiratory tract irritation

Symptoms: Delayed

gastrointestinal effects

SECTION 5: FIREFIGHTING MEASURES**Flammable Properties**

Product is non-flammable.

Use extinguishing agents appropriate for surrounding fire.

Unsuitable Extinguishing Media

None known.

Protective Equipment and Precautions for Firefighters

No hazard is expected from the normal use of this product.

Fire Fighting Measures

No hazard expected

NFPA 704M Hazard Classification: Health: 1 Flammable: 0 Reactivity: 0

SECTION 6: ACCIDENTAL RELEASE MEASURES**Personal Precautions**

Keep unnecessary people away, isolate hazard area and deny entry. Wet material is slippery under foot.

Wear personal protective clothing and equipment, see Section 8

Environmental Precautions

Avoid release to the environment.

Cleanup Methods

Collect spilled material in appropriate container for reuse or disposal.

SECTION 7: HANDLING AND STORAGE**Precautions for Safe Handling**

Avoid dust generation and accumulation. Do not use in poorly ventilated or confined spaces. Do not taste or swallow.

Avoid inhalation or contact. Wash thoroughly after handling.

Conditions for Safe Storage

Store in a cool, dry place. Store in a well-ventilated area.

SAFETY DATA SHEET

Product Name: **No. 6 Tile**
 SDS ID: **No. 6 Tile GHS 001**

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

Follow standard occupational hygiene control methods and procedures. Use an approved respirator if exposure limits are exceeded or if irritation develops or persists.

Component Exposure Limits:

| Hazardous Ingredient | Weight % (Approx.) | CAS N° | OSHA PEL* | ACGIH TLV* |
|--|--------------------|------------|--|---|
| Kaolin | 60% - 100% | 1332-58-7 | 15 mg/m ³ (Total Dust) 5 mg/m ³ (Respirable Fraction) | 2 mg/m ³ (Respirable Fraction) |
| Quartz - Crystalline Silica (Respirable Fraction < 1%) | 0.1% - 2% | 14808-60-7 | 0.1 mg/m ³ (Respirable Fraction) | 0.025 mg/m ³ (Respirable Fraction) |
| Titanium Dioxide (Naturally Occurring) | 1% - 5% | 13463-67-7 | 15 mg/m ³ (Total Dust) | 10 mg/m ³ (Total Dust) |

* Unless otherwise noted, all PEL and TLV are reported as 8 hour time weighted average (TWA).

Component Analysis

There are no biological limit values for any of this product's components.

Engineering Controls

Ventilation: Use exhaust ventilation, if required, to maintain dust concentration below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Where there is potential for airborne exposure, use of a MSHA/NIOSH or OSHA/NIOSH approved respirator is recommended.

Eyes/Face: Wear side shield safety glasses or chemical resistant safety goggles.

Glove Recommendation: Rubber gloves are recommended for prolonged exposure.

Protective Clothing: Wear appropriate chemical resistant clothing. Contaminated clothing should be removed and laundered before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|---|
| Physical State: Solid | Appearance: white to gray solid |
| Color: white to gray | Physical Form: powder to lump |
| Odor: earthy odor | Odor Threshold: Not applicable |
| pH: 4-6 (aqueous solution) | Melting Point: > 1500°C |
| Boiling Point: Not applicable | Flash Point: Will not ignite |
| Decomposition: loses crystalline water at > 500°C (930°F) | Evaporation Rate: Not applicable |
| LEL: Not applicable | UEL: Not applicable |
| Vapor Pressure: Not applicable | Vapor Density (air = 1): Not applicable |
| Density: Not applicable | Specific Gravity (water = 1): ~2.6 gm/cc |
| Water Solubility: None | Coeff> Water/Oil Dist: Not applicable |
| Auto Ignition: Will not ignite | Viscosity: Not applicable |
| Flow Point: Not applicable | Sublimation Point: Not applicable |
| VOC: None | |

SAFETY DATA SHEETProduct Name: No. 6 Tile
SDS ID: No. 6 Tile GHS 001**SECTION 10: STABILITY AND REACTIVITY****Reactivity:**

No reactive hazard is expected.

Chemical Stability:

Stable at normal temperatures and pressure

Possibility of Hazardous Reactions:

Will not oxidize or polymerize.

Conditions to avoid:

None known.

Materials to Avoid (Incompatibilities):

None known.

Decomposition Products:

When exposed to high temperatures, free quartz can change crystal structure to form tridymite (above 870°C) or cristobalite (above 1470°C) which have greater health hazards than quartz. (Tridymite and cristobalite (TWA-TLV) = 0.025 mg/m³.)

SECTION 11: TOXICOLOGICAL INFORMATION**Primary Route of Exposure:** Skin, Eye Contact, Inhalation and ingestion**Acute Health Hazards:**

Eye contact may cause mechanical irritation.

Skin contact may aggravate existing dermatitis.

Inhalation from prolonged and continuous exposure to excessive quantities of dust may aggravate existing asthmatic or respiratory conditions.

Acute and Chronic Toxicity

May cause eye irritation, skin irritation, respiratory tract irritation, and gastrointestinal tract irritation. May cause damage to respiratory tract through prolonged or repeated exposure.

Occupationally inhaled kaolin produced pulmonary fibrosis with sites of action being the lung, the lymph nodes and the hilus. Kaolin when taken orally over a long period of time can cause granulomas of the stomach.

Exposure to quartz (the most stable and common form of crystalline silica) is responsible for the majority of clinically diagnosed silicosis. Silicosis is a fibronodular lung disease that occurs after occupational exposure to crystalline silica for 5 years or longer. Inhalation of quartz dusts may cause shortness of breath, limitation of chest expansion, dry cough, and a lessened capacity for work. Individuals with a pre-existing disease in, or a history of ailments involving the skin or respiratory tract, are at greater risk for developing adverse health effects when exposed to this material.

In humans, chronic intermittent exposure to quartz caused pulmonary fibrosis, cough, and difficulty breathing. Overexposure to crystalline silica may cause silicosis, a form of disabling, progressive, and sometimes fatal pulmonary fibrosis characterized by the presence of typical nodulation in the lungs. Tuberculosis frequently complicates silicosis and the risk for tuberculosis is also increased in workers exposed to silica who have no radiographic evidence of silicosis. Crystalline silica can cause silicotic lesions in such organs as the liver, spleen and bone marrow. In humans, a causal relationship exists between exposure to crystalline silica and the development of autoimmune diseases. In multi-dose studies with animals, long term inhalation of quartz affected the lungs, endocrine system, immune system and blood.

This product contains quartz (respirable) as an impurity. Prolonged and/or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica. In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated. (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibers, 1997, Vol. 68, IARC, Lyon, France.)

SAFETY DATA SHEETProduct Name: **No. 6 Tile**
SDS ID: No. 6 Tile GHS_001**Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Quartz - Crystalline Silica (14808-60-7)
Oral LD50 Rat 500 mg/kg

Titanium dioxide (13463-67-7)
Oral LD50 >10000 mg/kg

Water (7732-18-5)
Oral LD50 Rat >90 mL/kg

Irritation/Corrosivity Data

May cause eye irritation, skin irritation, respiratory tract irritation, and gastrointestinal tract irritation.

Respiratory Sensitizer

No test data available

Dermal Sensitizer

No test data available

Carcinogenicity**Component Carcinogenicity**

Kaolin - CAS N° 1332-58-7
ACGIH: A4 - Not Classifiable as a Human Carcinogen

Quartz - Crystalline Silica - CAS N° 14808-60-7
ACGIH: A2 - Suspected Human Carcinogen
IARC: Group 1 - Carcinogenic to humans

Titanium dioxide - CAS N° 13463-67-7
ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Group 2B - Possibly carcinogenic to humans

Mutagenic Data

No information available

Reproductive Effects Data

No information available

Specific Organ Toxicity - Single Exposure

Target organs include ears, skin, respiratory system, and gastrointestinal tract.

Specific Organ Toxicity - Repeated Exposure

Causes damage to eyes, skin, respiratory system, and gastrointestinal tract through prolonged or repeated exposure.

Aspiration Hazard

No data available

Medical Conditions Aggravated by Exposure

Individuals with pre-existing eye disorders, skin disorders, respiratory disorders and/or gastrointestinal disorders may have increased

SAFETY DATA SHEET

Product Name: **No. 6 Tile**
SDS ID: **No. 6 Tile_GHS_001**

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

No information available for the product

Component Analysis - Aquatic Toxicity

No LOEL ecotoxicity data are available for this product's components

No information available for the product

Bioaccumulation

No information available for the product

Bioconcentration

This material is not believed to bioconcentrate

Biodegradation

This product is made from a naturally occurring, abundant, innocuous mineral

Persistence

This product is made from a naturally occurring, abundant, innocuous mineral

Mobility in Soil:

This product is insoluble in water

Results of PBT and vPvB Assessment

Not relevant

Other Toxicity

May affect turbidity if discharged in large quantities to lakes, streams or sewers.

SECTION 13: DISPOSAL CONSIDERATIONS

Non-hazardous waste - RCRA (40 CFR 261)

Dispose of waste materials in accordance with all local, state, and Federal requirements.

This product may not be disposed of in waterways or sewers.

SECTION 14: TRANSPORT INFORMATION

EPA Waste Number: Not regulated.

DOT Classification: Not regulated.

IMO Classification: Not regulated.

Internal UN: Not regulated.

IMDG Code: This product is not considered to be a marine pollutant.

SAFETY DATA SHEETProduct Name: **No. 6 Tile**
SDS ID: **No. 6 Tile GHS 001****SECTION 15: REGULATORY INFORMATION**

SARA Title III Section 302 Extremely Hazardous Substances: This product does not contain extremely hazardous subject to the reporting requirements of Section 302 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 355.

SARA Title III Section 311 and 312 Health and Physical Hazard Categories per 40 CFR 370.2:

| Immediate | Delayed | Fire | Pressure | Reactivity |
|-----------|---------|------|----------|------------|
| Yes | Yes | No | No | No |

SARA Section 313 Notification: This product does not contain toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

TSCA: Product is listed in Initial Inventory, Vol. 1, Appendix A, CAS No. 1332-58-7

FDA: Kaolin is generally recognized as safe (GRAS) under the FDA in accordance with 21 CFR 186.1256. Additionally, kaolin is established as a component of the uncoated or coated food contact surface of paper and paperboard in accordance with 21 CFR 176.170 (aqueous and fatty foods) and CFR 176.180 (dry foods).

CERCLA: Kaolin is not a CERCLA listed hazardous substance.

California Proposition 65: WARNING: This product may also contain extremely small amounts of one or more naturally-occurring materials known to the State of California to cause cancer, birth defects, or other reproductive harm.

NJ Special Health Hazardous Substances List [4]: RTK Hazardous Substance List; Substance number 4016.

PA Special Hazardous Substances List: Regulated under PA Code Chapter 323.

Stockholm Convention: This product is not subject to the Stockholm Convention.

Montreal Protocol: This product is not subject to the Montreal Protocol.

Rotterdam Convention: This product is not subject to the Rotterdam Convention.

National Inventories:

DSL (Canada): Listed
NDSL (Canada): Not Listed
PICCS (Philippines): Listed
KECL (Korea): Listed
ENCS (MITI) (Japan): Listed
AICS (Australia): Listed
IECSC (China): Listed
EINECS (Europe): Listed

REACH Status: Exempt (Annex v.7). Product is a naturally occurring mineral.

SAFETY DATA SHEETProduct Name: **No. 6 Tile**
SDS ID: **No. 6 Tile GHS 001****SECTION 16: OTHER INFORMATION****Training**

Workers must be informed of the presence of crystalline silica and trained in the proper use and handling of this product as required under applicable regulations.

Summary of Changes

New SDS 04-Nov-2013

Key / Legend

| | |
|----------|---|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| AICS | Australian Inventory of Chemical Substances |
| CAS | Chemical Abstract Service |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| CFR | Code of Federal Regulations |
| CHEMTREC | Chemical Transportation Emergency Center |
| DOT | Department of Transportation |
| DSL | Canadian Domestic Substances List |
| EINECS | European Inventory of New and Existing Chemical Substances |
| ENCS | Existing and New Substances Inventory |
| EPA | Environmental Protection Agency |
| FDA | Food and Drug Administration |
| HMIS | Hazardous Materials Identification System |
| IARC | International Agency for Research on Cancer |
| IECSC | Inventory of Existing Chemical Substances Produced or Imported in China |
| IMDG | International Maritime Dangerous Goods Code |
| IMO | International Maritime Organization |
| KECI | Korean Existing Chemicals Inventory |
| LEL | Lower Explosive Limit |
| LOLI | List Of Lists |
| MITI | Japanese Ministry of International Trade and Industry |
| MSHA | Mine Safety and Health Administration |
| NDSL | Canadian Non-Domestic Substance List |
| NIOSH | National Institute of Occupational Safety and Health |
| NFPA | National Fire Protection Agency |
| OSHA | Occupational Health and Safety Administration |
| PBT | Persistent Bioaccumulative Toxic Chemical |
| PEL | Permissible Exposure Limit |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances |
| RCRA | Resource Conservation and Recovery Act |
| REACH | Registration, Evaluation, Authorization and Restriction of Chemicals |
| RTK | Right to Know |
| SARA | Superfund Amendments and Reauthorization Act |
| SDS | Safety Data Sheet |
| STOT | Specific Target Organ Toxicity |
| TLV | Threshold Limit Value |
| TSCA | Toxic Substances Control Act |
| TWA | Time Weighted Average |
| UEL | Upper Explosive Limit |
| UN | United Nations |
| VOC | Volatile Organic Content |
| vPvB | Very Powerful Very Bioaccumulative |

SAFETY DATA SHEET

Product Name: **No. 6 Tile**
SDS ID: **No. 6 Tile_GHS_001**

Disclaimer

Such information is to the best of IMERY'S knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. IMERY'S NORTH AMERICA CERAMICS MAKES NO WARRANTY WITH RESPECT HERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

IMERY'S is a business name that includes Imerys North America Ceramics of which Kentucky-Tennessee Clay Company is a member. Registered in the USA. Registered office: 100 Mansell Court East, Suite 300, Roswell, GA 30076

Prepared By: Imerys North America Ceramics Technical Group.

END OF SHEET

No. 6 Tile_GHS_001

SAFETY DATA SHEET – JUNE 10, 2015



Section 1 – Identification

| | |
|---------------------------|---|
| Product Identifier: | Silica Sand |
| Trade Names: | Holliston Sand Products, Slater Farms Products |
| Product Uses: | Filtration Media, Foundry Sand, Industrial Fillers, Bio-retention and Agricultural Sand, Sports Turf, Recreational Products, Commercial Products, Traction Sand Not recommended for sand-blasting. |
| Manufacturer's Name: | Holliston Sand Company, Inc. |
| Manufacturer's Address | PO Box 1168, Slatersville, RI 02876 |
| Manufacturer's Telephone | 401.766.5010, Monday – Friday, 7:00am to 5:00pm |
| Manufacturer's Facsimile: | 401.762.4976 |
| Emergency Telephone | 401.766.5010, Monday – Friday, 7:00am to 5:00pm |

Section 2 – Hazards Identification

GHS – US Classification and Label Elements:

Health:

| | | |
|---|--|--|
| Category 1A – Carcinogen | | |
| Category 1 - Specific Target Organ Toxicity (STOT) following repeated exposures | | |
| Category 2B - Eye Irritation | | |
| Signal Word (GHS-US) - DANGER | | |
| GHS-US Labeling / Hazard Pictograms |  GHS08 |  GHS07 |

Hazard Statements (GHS-US)

| | |
|------|---|
| H335 | May cause eye and respiratory irritation |
| H350 | May cause cancer by inhalation |
| H372 | Causes damage to organs through prolonged or repeated exposure by inhalation. |

Precautionary Statements (GHS-US)

| | |
|---|--|
| P202 – SDS - Read all safety precautions prior to handling. | P264 – Wash thoroughly after handling. |
| P308 / P313/P314/P304 – Call for medical attention if not well or uncomfortable. If inhaled, provide fresh air. | |
| P260 / P280 – Never breathe dust. Wear PPE prior to use. | P271 – Use in a well ventilated area. |
| P403 – Store properly. Closed container. | P501 – Dispose of according to local / regional regulations. |

Section 3 – Composition

| Name | Product Identifier | Percentage (%) | GHS-US Classification |
|--------|--------------------|----------------|--|
| Quartz | CAS #: 14808-60-7 | 85 – 99.9 | Carc. 1A, H350. STOT SE 3, H335, STOT RE 1, H372 |

Section 4 – First Aid Measures

ANY SERIOUS INJURY OR UNCONSCIOUSNESS OBSERVATION SHOULD BE AN AUTOMATIC EMERGENCY CALL TO 911.

Inhalation – Move person to a clear area, provide fresh air. Provide medical or emergency attention.

Eye – Flush eye / eyes with water as needed. Provide medical attention as necessary.

Skin – Simple abrasions should be cleansed with mild soap and water. Provide medical attention as necessary.

Ingestion – Discomfort should be followed up with medical attention.

Signs and Symptoms of Exposure – Symptoms of silicosis may first appear 15 to 20 years after someone’s exposure to crystalline silica. As the disease progresses, symptoms may include:

| | | |
|---|---------------------|---------------------|
| <i>Shortness of breath</i> | <i>Severe Cough</i> | <i>Weakness</i> |
| If you have silica in your lungs, your body may not be able to fight infections well. This can lead to other illnesses that can cause | | |
| <i>Chest Pains</i> | <i>Weight Loss</i> | <i>Night Sweats</i> |
| <i>Respiratory Failure</i> | <i>Fever</i> | |

As the disease progresses over time, these symptoms can become worse. The symptoms of acute silicosis which can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as six months, are the same as those associated with chronic silicosis. The symptoms of scleroderma, an autoimmune disease, include thickening and stiffness of the skin, particularly in the fingers, shortness of breath, difficulty swallowing and joint problems.

Section 5 – Fire Fighting Measures

| | |
|------------------------------------|--|
| Extinguishing Media: | Compatible with all media. Use appropriate media for surrounding fire. |
| Unusual Fire and Explosion Habits: | None known. |
| Special Fire Fighting Procedure: | None known. Not flammable. Use normal fire fighting equipment. |
| Hazardous Combustion Products: | None known. |



Section 6 – Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures
 - General measures.
 - Do not breathe dust. Avoid generation of dust during clean-up of spills. Recover the product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up. Use water to wet down clean up area to minimize particulate.
 - For non-emergency / emergency personnel.
 - Wear suitable protective clothing, gloves, eye and face protection. Use recommended respiratory protection. Collect as any solid.
- Environmental Precautions – no additional information available
- Methods and Material for Containment and Clean-up
 - Avoid generation of dust during clean-up of spills. Recover the product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up. Use water to wet down clean up area to minimize particulate.

Section 7 – Handling and Storage

- This product is not to be used for abrasive blasting without proper equipment and training. Do not breathe dust, which may be created during handling of this product.
- Engineering measures and good housekeeping are essential to preventing accumulation of silica dust in the workplace. Use adequate ventilation and dust collection systems.
- Testing can ensure engineering measures are sufficient. PPE is a solution until verification is established. Refer to Section 8 – Exposure Controls / Personal Protection for further information.
- Silica dust is not always visible in a form of a cloud. Use PPE.
- In accordance with OSHA's Hazard Communication Standard (29CFR 1910.12, 1915.99, 1917.28, 1918.90, 1926.59, 1928.21), state, and / or local right to know laws and regulations, familiarize your employees with this SDS and the information contained herein.
- Warn your employees, your customers and other third parties (in case of resale or distribution to others) of the potential health risks associated with the use of this product and train them in the appropriate use of PPE and engineering controls, which will reduce their risks of exposure.
- See ASTM International standard practice E1132-06, "Standard Practice for Health Requirements Relating to Occupational Exposure to Respirable Crystalline Silica."
- Store in a dry, cool place. Keep container tightly closed.

Section 8: Exposure Controls / Personal Protection

Control Parameters

| Quartz (14808-60-7) – Occupational exposure limits (respirable fraction) in air for dust containing crystalline silica. | | |
|---|---|--|
| USA ACGIH | ACGIH TWA (mg/m ³) (8 hour weighted average) | 0.025 mg/m ³ |
| USA IDLH | US IDLH (mg/m ³) | 50 mg/m ³ |
| USA NIOSH | NIOSH REL (TWA) (mg/m ³) (10 hour weighted average) | 0.05 mg/m ³ |
| USA MSHA/OSHA | MSHA/OSHA PEL (TWA) (mg/m ³) (8 hour weighted average) (Mineral Dust) | (30)/(%SiO ₂ +2) mg/m ³ – total dust (10)/(% SiO ₂ +2) mg/m ³ – respirable fraction |

| Occupational exposure limits in air for inert / nuisance dust. | | | |
|--|---|---------------------|----------------------|
| USA ACGIH | ACGIH TLV | 3 mg/m ³ | 10mg/m ³ |
| USA MSHA/OSHA | MSHA/OSHA PEL (As Inert or Nuisance Dust) | 5 mg/m ³ | 15 mg/m ³ |

Exposure Controls

| | |
|---|--|
| Engineering controls | Ensure adequate ventilation, especially in confined areas. Avoid dust production. |
| Personal protection equipment (PPE) | Use dust suits, protective goggles and respiratory protection in dusty areas. Self contained breathing apparatus is also a good option during dust production. Get training on the use of all PPE equipment. Respirator fit testing is mandatory. Contact NIOSH at 800.35 NIOSH, WWW.CDC.GOV/NIOSH |
| | Use impermeable gloves for hand protection. |
| | Use protective goggles for eye protection |
| | Use NIOSH approved respirators in areas containing airborne dust. |
| Hygiene | Always wash your hands after handling |
| Do not breathe dust. Use PPE. Research and engineer a solution for each application. | |

| |
|--|
| California Inhalation Reference Exposure Limit (REL) as of 12/08: Crystalline silica (quartz, cristobalite, tridymite) is 3 ug/m ³ . |
| Canadian OEL: |
| <ul style="list-style-type: none"> Canada Labour Code: 0.025 mg/m³ (respirable) Alberta, British Columbia: 0.025 mg/m³ (respirable quartz and cristobalite) Saskatchewan: 2 mg/m³ (respirable, amorphous: silica fume); 0.1 mg/m³ (respirable, amorphous: silica fused); 0.05 mg/m³ (respirable, cristobalite); 0.05 mg/m³ (respirable tridymite); 0.1 mg/m³ (respirable, quartz); 0.1 mg/m³ (respirable, tripoli) Manitoba, Newfoundland, Prince Edward Island: 0.025 mg/m³ (respirable) Ontario: 0.05 mg/m³ (respirable cristobalite, tridymite); 0.1 mg/m³ (quartz, tripoli); 0.1 mg/m³ (silica fused); 2 mg/m³ (silica fume) Quebec: 0.05 mg/m³ (respirable, cristobalite, tridymite); 0.1 mg/m³ (quartz, tripoli) New Brunswick: 0.1 mg/m³ (quartz); 0.05 mg/m³ (cristobalite) Nova Scotia: 0.025 mg/m³ (quartz, cristobalite) Yukon: 2 mg/m³ (respirable, amorphous); 300 particles/ml measured with a konimeter (quartz, and tripoli); 150 particles/ML measured with a konimeter (cristobalite and tridymite) Northwest Territories, Nunavut: 2 mg/m³ (respirable, amorphous); 0.05 mg/m³ (respirable, cristobalite, tridymite, silica flour); 0.1 mg/m³ (respirable, fused silica, quartz, tripoli) |
| Austria OEL - Maximum concentration 0.15 mg/m ³ |
| Japan OEL - Japan Society of Occupational Health Respirable crystalline silica 0.03 mg/m ³ |
| Poland OEL TWA -2 mg/m ³ (total inhalable dust, containing >50% free crystalline silica); |
| <ul style="list-style-type: none"> 0.3 mg/mg/m³ m³ (respirable dust, containing >50% free crystalline silica); 4.0 mg/m³ (total inhalable dust, containing 2% to 50% free crystalline silica); 1.0 mg/m³ (respirable dust, containing 2% to 50% free crystalline silica) |
| United Kingdom OEL – 0.1 mg/m ³ |
| Mexico – 0.1 mg/m ³ (quartz, inhalable) |
| <ul style="list-style-type: none"> 0.05 mg/m³ (cristobalite, inhalable) 0.05 mg/m³ (tridymite, inhalable) 0.1 mg/m³ (tripoli containing respirable quartz powder, inhalable) (Also refer to ACGIH) |
| Argentina – 0.05 mg/m ³ (quartz, respirable) |
| <ul style="list-style-type: none"> 0.05 mg/m³ (cristobalite, respirable) 0.05 mg/m³ (tridymite, respirable) 0.1 mg/m³ (tripoli, respirable) |

Section 9: Physical and chemical properties

| | |
|-----------------------------|---------------------|
| Physical State / Appearance | Solid / Crystalline |
| Odor | None |
| Odor Threshold | No data available |
| Color | Natural |
| pH | No data available |
| Evaporation rate | No data available |
| Melting point | 1710°C (3110°F) |
| Freezing point | No data available |
| Boiling point | 2230°C (4046°F) |
| Flash point | No data available |
| Self ignition temperature | No data available |



| | |
|----------------------------------|------------------------|
| Decomposition temperature | No data available |
| Flammability (solid, gas) | Non-combustible solid |
| Vapour pressure | No data available |
| Relative vapour density at 20 °C | No data available |
| Relative density | No data available |
| Density | 2.65 (approx.) |
| Solubility | Practically insoluble. |
| Log Pow | No data available |
| Log Kow | No data available |
| Viscosity | No data available |
| Explosive Limits | None known. |
| Oxidizing properties | None known. |
| Explosive limits | No data available |

Section 10: Stability and Reactivity

| | |
|------------------------------|---|
| Reactivity | None under normal conditions. Reactive with strong oxidizing agents. |
| Chemical / Thermal Stability | Chemically stable under normal temperature and pressure. Thermal instability occurs under high temperatures above 870°C (1598°F). It can change to crystalline silica such as tridymite and cristobalite. |
| Incompatible Materials | Avoid strong oxidizers such as fluorine, chlorine tri-fluoride, hydrogen fluoride, oxygen di-fluoride, hydrogen peroxide, acetylene, ammonia. |
| Hazardous Decomposition | Quartz (silica) will dissolve in hydrofluoric acid producing a corrosive gas, silicon tetra-fluoride. |
| Hazardous Polymerization | Not known to polymerize. |

Section 11: Toxicological Information

| | | |
|--|--|--|
| Acute toxicity | Not classified | |
| Aspiration hazard | Not classified | |
| Skin Irritation | Not classified | |
| Eye Irritation | Not classified | |
| Respiratory or skin sensitization | Not classified | |
| Reproductive toxicity | Not classified | |
| Specific target organ toxicity (single exposure) | Not classified | |
| Specific target organ toxicity (repeated exposure) | Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (inhalation) | |
| Germ cell mutagenicity | Not classified | |
| Carcinogenicity | May cause cancer - inhalation | |
| Quartz (14808-60-7) | IARC Group – Group 1 | National Toxicity Program (NTP) Status: Known Human Carcinogen |
| Silica – All grades (14808-60-7) | Repeated or prolonged exposure to respirable crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss. Acute silicosis can be fatal. | |



Section 12: Ecological Information

Crystalline silica is not known to be eco toxic, not readily biodegradable and not expected to bio-accumulate.

Section 13: Disposal Considerations

AS SOLD, our crystalline silica (quartz) products are not considered hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR 261 et seq. Dispose according to applicable local, state and federal regulations.

Section 14: Transport Information

Crystalline silica (quartz) is not a hazardous material for purposes of transportation under the U. S. Department of Transportation Table of Hazardous Materials, 49 CFR §172.101, and Transportation of Dangerous Goods Regulations in the European Union, Canada, Argentina, Republic of Uzbekistan and Japan. Consult applicable international, national, state, provincial or local laws. In accordance with DOT / TDG / ADR / RID / ADNR / IMDG / ACAO / IATA, crystalline silica is not a dangerous product in the sense of transport regulations.

Section 15: Regulatory Information

| | | | |
|---|-------------------------------|---|---|
| US Federal Regulations | Silica / Quartz 14808-60-7 | immediate health hazard - acute Delayed health hazard – chronic. | On US TSCA (Toxic Substances Control Act) inventory listing. |
| Canada Regulations | | WHMIS Classification. Class D Division 2 Subdivision A – Very toxic material causing other toxic effects. | |
| International Info | | IARC (International Agency for Research on Cancer) listing. | NTP (National Toxicology Program) specifies as a carcinogen. |
| U State Regulations | | See below. | |
| <p>U.S. - California - Proposition 65 - Carcinogens List . This product contains Quartz, a substance known to the state of California to cause cancer. U.S. - Hawaii - Occupational Exposure Limits - TWAs U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs) U.S. - Idaho - Occupational Exposure Limits - Mineral Dusts U.S. - Illinois - Toxic Air Contaminant Carcinogens U.S. - Maine - Chemicals of High Concern U.S. - Massachusetts - Right To Know List U.S. - Michigan - Occupational Exposure Limits - TWAs U.S. - Minnesota - Chemicals of High Concern U.S. - Minnesota - Hazardous Substance List U.S. - Minnesota - Permissible Exposure Limits - TWAs U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - New Jersey - Special Health Hazards Substances List U.S. - Oregon - Permissible Exposure Limits - Mineral Dusts U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Tennessee - Occupational Exposure Limits - TWAs U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term U.S. - Vermont - Permissible Exposure Limits - TWAs U.S. - Washington - Permissible Exposure Limits - STELs U.S. - Washington - Permissible Exposure Limits - TWAs</p> | | | |



Section 16 – Other Information

NFPA

| | | |
|---------------|--|--|
| Health Hazard | 2 – intense or continued exposure could cause temporary or incapacitation or possible residual injury unless prompt medical attention is given | |
| Fire Hazard | 0 – materials that will not burn | |
| Reactivity | 0 – normally stable, even under fire exposure conditions, are not reactive with water | |

HMIS III Rating

| | |
|---------------------|---|
| Health | 2 - moderate hazard, temporary injury may occur |
| Flammability | 0 – minimal hazard |
| Physical | 0 – minimal hazard |
| Personal Protection | All equipment required plus engineering measures. |

Definitions

| | |
|-----------|---|
| Carc. 1A | Carcinogenicity Category 1A |
| STOT RE 1 | Specific target organ toxicity (repeated exposure) Category 1 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |

User's Responsibility: The OSHA Hazard Communication Standard 29 CFR 1910.1200 requires that this SDS be made available to your employees who handle or may be exposed to this product. Educate and train your employees regarding applicable precautions. Instruct your employees to handle this product properly.

Disclaimer: The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for one's own particular use. Since the actual use of the product described herein is beyond our control, Holliston Sand company, Inc., assumes no liability arising out of the use of the product by others. Appropriate warnings and safe handling procedures should be provided to handlers and users.

More information on the effects of crystalline silica exposure may be obtained from OSHA website: <http://www.osha.gov> or from NIOSH website: <http://www.cdc.gov/niosh>.



Safety Data Sheet

acc. to OSHA HCS

Printing date 11/19/2014

Reviewed on 08/11/2014

1 Identification

- **Product identifier**
- **Trade name: Hydrochloric Acid
3 Molar Aqueous**
- **Article number: 010-4861**
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Aqua Solutions, Inc.
6913 Highway 225
DEER PARK, TX 77536
USA
800-256-2586
- **Information department:**
Technical Coordinator
Sherman Nelson sherman@aquasolutions.org
Product safety department
- **Emergency telephone number:**
Chemtec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS07

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05



GHS07

- **Signal word Danger**
- **Hazard-determining components of labeling:**
Hydrochloric Acid 36-38%
- **Hazard statements**
Causes severe skin burns and eye damage.
May cause respiratory irritation.
- **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not breathe dusts or mists.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see on this label).
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



HEALTH 3 Health = 3
FIRE 0 Fire = 0
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:**

| | | |
|----------------|--------------------------|---------|
| CAS: 7647-01-0 | Hydrochloric Acid 36-38% | 27.711% |
|----------------|--------------------------|---------|

· **Table of Nonhazardous Ingredients**

| | | |
|----------------|--------------------------------|---------|
| CAS: 7732-18-5 | Water, Deionized, ASTM Type II | 72.289% |
|----------------|--------------------------------|---------|

4 First-aid measures

· **Description of first aid measures**

· **General information: Immediately remove any clothing soiled by the product.**

· **After inhalation: In case of unconsciousness place patient stably in side position for transportation.**

· **After skin contact: Immediately wash with water and soap and rinse thoroughly.**

· **After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.**

· **After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a 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:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Special hazards arising from the substance or mixture No further relevant information available.**

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- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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

- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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:**

| 7647-01-0 Hydrochloric Acid 36-38% | |
|------------------------------------|---|
| PEL | Ceiling limit value: 7 mg/m ³ , 5 ppm |
| REL | Ceiling limit value: 7 mg/m ³ , 5 ppm |
| TLV | Ceiling limit value: 2.98 mg/m ³ , 2 ppm |

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

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- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**



Protective gloves

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

- **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 can not 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:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Liquid
Color: Colorless

- **Odor:** Pungent

- **Odour threshold:** Not determined.

- **pH-values:** Not determined.

- **Change in condition**

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 100 °C (212 °F)

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:**

Decomposition temperature: Not determined.

- **Auto igniting:** Product is not selfigniting.

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

- **Explosion limits:**

Lower: Not determined.
Upper: Not determined.

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| | |
|---|--|
| · Vapor pressure at 20 °C (68 °F): | 23 hPa (17 mm Hg) |
| · Density at 20 °C (68 °F): | 1 g/cm ³ (8.345 lbs/gal) |
| · Relative density | Not determined. |
| · Vapour density | Not determined. |
| · Evaporation rate | Not determined. |
| · Solubility in / Miscibility with Water: | Fully miscible. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| · Dynamic: | Not determined. |
| · Kinematic: | Not determined. |
| · Solvent content: | |
| · Organic solvents: | 0.0 % |
| · Water: | 72.3 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **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:**

7647-01-0 Hydrochloric Acid 36-38%

| | | |
|------|------|--------------------|
| Oral | LD50 | 900 mg/kg (rabbit) |
|------|------|--------------------|

- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

| | | |
|-----------|--------------------------|---|
| 7647-01-0 | Hydrochloric Acid 36-38% | 3 |
|-----------|--------------------------|---|

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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- **OSHA-Ca (Occupational Safety & Health Administration)**
- *None of the ingredients is listed.*


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.*
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
- **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.*
- **Recommended cleansing agent:** *Water, if necessary with cleansing agents.*

14 Transport information

- **UN-Number**
- **DOT, IMDG, IATA** UNI789
- **UN proper shipping name**
- **DOT** *Hydrochloric acid, solution*
- **IMDG, IATA** *HYDROCHLORIC ACID, solution*
- **Transport hazard class(es)**
- **DOT**
- 
- **Class** 8 Corrosive substances
- **Label** 8

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• **IMDG, IATA**



• **Class** 8 Corrosive substances
• **Label** 8

• **Packing group**
• **DOT, IMDG, IATA** II

• **Environmental hazards:**
• **Marine pollutant:** No

• **Special precautions for user** Warning: Corrosive substances
• **Danger code (Kemler):** 80
• **EMS Number:** F-A,S-B
• **Segregation groups** Acids

• **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

• **Transport/Additional information:**

• **DOT**
• **Quantity limitations** On passenger aircraft/rail: 1 L
On cargo aircraft only: 30 L

• **IMDG**
• **Limited quantities (LQ)** 1L
• **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

• **UN "Model Regulation":** UN1789, Hydrochloric acid, solution, 8, II

15 Regulatory information

• **Safety, health and environmental regulations/legislation specific for the substance or mixture**
• **Sara**

• **Section 355 (extremely hazardous substances):**

7647-01-0 Hydrochloric Acid 36-38%

• **Section 313 (Specific toxic chemical listings):**

7647-01-0 Hydrochloric Acid 36-38%

• **TSCA (Toxic Substances Control Act):**

7647-01-0 Hydrochloric Acid 36-38%

• **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.

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• **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

• **Carcinogenic categories**

• **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

• **TLV (Threshold Limit Value established by ACGIH)**

7647-01-0 Hydrochloric Acid 36-38%

A4

• **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

• **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

• **Hazard pictograms**



GHS05 GHS07

• **Signal word Danger**

• **Hazard-determining components of labeling:**

Hydrochloric Acid 36-38%

• **Hazard statements**

Causes severe skin burns and eye damage.

May cause respiratory irritation.

• **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Do not breathe dusts or mists.

Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment (see on this label).

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

• **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.

• **Department issuing SDS:** Environment protection department.

• **Contact:** Mr. Nelson

• **Date of preparation / last revision**

Creation date for SDS 09/09/2014 LS

11/19/2014 / -

• **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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USA

Safety Data Sheet
acc. to OSHA HCS

Printing date 11/19/2014

Reviewed on 08/11/2014

Trade name: Hydrochloric Acid
3 Molar Aqueous

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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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

USA