SAFETY DATA SHEET

1. Identification

Product identifier LATICRETE Multiflex Adhesive
Other means of identification None.
Recommended use of the chemical and restrictions on use
  Recommended use Adhesive.
  Restrictions on use Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

Details of manufacturer or importer

Manufacturer
  Company name LATICRETE International
  Address 1 Laticrete Park, N
           Bethany, CT 06524
  Telephone (203)-393-0010
  Contact person Steve Fine
  Website www.laticrete.com
  Emergency phone number Call CHEMTREC day or night
                             USA/Canada - 1.800.424.9300
                             Mexico - 1.800.681.9531
                             Outside USA/Canada
                             1.703.527.3887

Supplier
  Company name LATICRETE Australia
  Address P.O. Box 508
            Virginia Business Mail Centre
            29 Telford Street
            VIRGINIA QLD 4014
            Australia
  Telephone (61) (7) 3865-1599
  Website www.laticrete.com
  Emergency phone number 1.703.527.3887

2. Hazard(s) identification

Classification of the hazardous chemical
  Physical hazards Not classified.
  Health hazards
    Skin corrosion/irritation Category 2
    Serious eye damage/eye irritation Category 1
    Sensitization, skin Category 1
    Carcinogenicity Category 1A
    Specific target organ toxicity following single exposure Category 3 respiratory tract irritation
    Specific target organ toxicity following repeated exposure Category 2 (lung)
  Environmental hazards Not classified.

Label elements, including precautionary statements
Hazard symbol(s)

Corrosion Health Exclamation mark

Signal word Danger

Hazard Statement(s) Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. May cause respiratory irritation. May cause damage to organs (lung) through prolonged or repeated exposure.

Precautionary Statement(s)

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing must not be allowed out of the workplace.

Response IF exposed or concerned: Get medical advice/attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. 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.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up.

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

Other hazards which do not result in classification Not classified.

Supplemental information None.

3. Composition/information on ingredients

Mixture

<table>
<thead>
<tr>
<th>Identity of chemical ingredients</th>
<th>CAS number and other unique identifiers</th>
<th>Concentration of ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica Sand</td>
<td>14808-60-7</td>
<td>45 - 50</td>
</tr>
<tr>
<td>Portland Cement</td>
<td>65997-15-1</td>
<td>35 - 45</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>1 - 3</td>
</tr>
</tbody>
</table>

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Description of necessary first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eye contact Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control centre immediately.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Personal protection for first-aid responders Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

Symptoms caused by exposure Rash. Coughing. Irritant effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Prolonged exposure may cause chronic effects.

Medical attention and special treatment Provide general supportive measures and treat symptomatically. Symptoms may be delayed.
5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
- Water fog
- Foam
- Dry chemical powder
- Carbon dioxide (CO2)

Unsuitable extinguishing media
- None known

Specific hazards arising from the chemical
- During fire, gases hazardous to health may be formed

Special protective equipment and precautions for fire fighters
- Self-contained breathing apparatus and full protective clothing must be worn in case of fire

Fire fighting equipment/instructions
- In case of fire and/or explosion do not breathe fumes

Hazchem Code
- None

General fire hazards
- No unusual fire or explosion hazards noted

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
- Keep unnecessary personnel away
- Keep upwind
- Avoid formation of dust
- Wear appropriate protective equipment and clothing during clean-up
- Ensure adequate ventilation

For emergency responders
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing

Environmental precautions
- Avoid discharge into drains, water courses or onto the ground

Methods and materials for containment and cleaning up
- Stop the flow of material, if this is without risk
- Sweep or shovel up material and place in a clearly labeled container for waste
- Collect dust using a vacuum cleaner
- Following product recovery, flush area with water

7. Handling and storage

Precautions for safe handling
- Do not handle until all safety precautions have been read and understood
- Minimise dust generation and accumulation
- Wear appropriate personal protective equipment
- Do not breathe dust
- Avoid contact with eyes, skin, and clothing
- Provide adequate ventilation
- Observe good industrial hygiene practices

Conditions for safe storage, including any incompatibilities
- Keep container tightly closed
- Store in a cool, dry place out of direct sunlight

8. Exposure controls and personal protection

Control parameters
- Follow standard monitoring procedures

Occupational exposure limits

Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>TWA</td>
<td>3 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Portland Cement (CAS 65997-15-1)</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Inspirable dust</td>
</tr>
<tr>
<td>Silica Sand (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>Respirable dust</td>
</tr>
</tbody>
</table>

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

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<td>TWA</td>
<td>0.1 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>
US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>TWA</td>
<td>3.5 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Portland Cement (CAS 65997-15-1)</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Silica Sand (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.025 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>

UK. EH40 Workplace Exposure Limits (WELs)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>STEL</td>
<td>7 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Portland Cement (CAS 65997-15-1)</td>
<td>TWA</td>
<td>3.5 mg/m³</td>
<td>Respirable dust.</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>4 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Silica Sand (CAS 14808-60-7)</td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>Respirable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m³</td>
<td>Inhalable dust.</td>
</tr>
</tbody>
</table>

Biological limit values
No biological exposure limits noted for the ingredient(s).

Exposure guidelines
Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, for example personal protective equipment (PPE)

- **Eye/face protection**: Wear safety glasses with side shields (or goggles).
- **Skin protection**
  - **Hand protection**: Wear chemical-resistant, impervious gloves.
  - **Other**: Wear appropriate chemical resistant clothing.
- **Respiratory protection**: Wear a dust mask if dust is generated above exposure limits.
- **Thermal hazards**: Wear appropriate thermal protective clothing, when necessary.

Hygiene measures
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

**Appearance**
- **Physical state**: Solid.
- **Form**: Powder.
- **Colour**: Off-white to gray.
- **Odour**: Not available.
- **Odour threshold**: Not available.
- **pH**: Not available.
- **Melting point/freezing point**: Not available.
- **Initial boiling point and boiling range**: Not available.
- **Flash point**: Not available.
- **Evaporation rate**: Not available.
- **Flammability (solid, gas)**: Not available.
- **Upper/lower flammability or explosive limits**
  - **Flammability limit - lower (%)**: Not available.

LATICRETE Multiflex Adhesive

933236     Version #: 01     Revision date: -     Issue date: 13-April-2016
Flammability limit - upper (\%)
Not available.

Vapour pressure
Not available.

Vapour density
Not available.

Relative density
Not available.

Solubility(ies)
Solubility (water)
Insoluble.

Partition coefficient (n-octanol/water)
Not available.

Auto-ignition temperature
Not available.

Decomposition temperature
Not available.

Viscosity
Not available.

10. Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to avoid
Contact with incompatible materials.

Incompatible materials
Strong oxidising agents.

Hazardous decomposition products
No hazardous decomposition products are known.

11. Toxicological information

Information on possible routes of exposure

Inhalation
Dust irritates the respiratory system, and may cause coughing and difficulties in breathing.

Skin contact
Causes skin irritation. May cause an allergic skin reaction. Prolonged contact with wet cement/mixture may cause burns.

Eye contact
Causes serious eye damage. Prolonged contact with wet cement/mixture may cause burns.

Ingestion
Swallowing may cause gastrointestinal irritation.

Symptoms related to exposure
Rash. Coughing. Irritant effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Prolonged exposure may cause chronic effects.

Acute toxicity
May cause respiratory irritation.

Components | Species | Test results |
--- | --- | --- |
Carbon black (CAS 1333-86-4) | | |
Acute | | |
Dermal | Rabbit | > 3000 mg/kg |
Oral | Rat | > 8000 mg/kg |
Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/irritation
Causes serious eye damage.

Respiratory or skin sensitisation

Respiratory sensitisation
No data available.

Skin sensitisation
May cause an allergic skin reaction.

Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1\% are mutagenic or genotoxic.
Carcinogenicity

May cause cancer. 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 in making the overall evaluation, IARC noted that “carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.” (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. “There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk...” (SCOEL SUM Doc 94-final, June 2003)

ACGIH Carcinogens

Carbon black (CAS 1333-86-4) A3 Confirmed animal carcinogen with unknown relevance to humans.
Silica Sand (CAS 14808-60-7) A2 Suspected human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Carbon black (CAS 1333-86-4) 2B Possibly carcinogenic to humans.
Silica Sand (CAS 14808-60-7) 1 Carcinogenic to humans.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

May cause damage to organs (lung) through prolonged or repeated exposure.

Aspiration hazard

Due to the physical form of the product it is not an aspiration hazard.

Chronic effects

Prolonged or repeated exposure may cause lung injury, including silicosis.

Other information

Inhalation of high concentrations of quartz dust can lead to the lung disease known as silicosis, with cough and shortness of breath.

12. Ecological information

Ecotoxicity

Not expected to be harmful to aquatic organisms.

Components Species Test results

Carbon black (CAS 1333-86-4)
Aquatic
Acute Fish LC50 Leuciscus idus >= 1000 mg/l, 96 Hours
Persistency and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

No data available for this product.

Mobility in soil

The product is insoluble in water and will sediment in water systems.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal methods

Dispose of contents/container in accordance with local/regional/national/international regulations. Do not contaminate ponds, waterways or ditches with chemical or used container.

Residual waste

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

ADG

Not regulated as dangerous goods.
15. Regulatory information

Safety, health and environmental regulations

This Material Safety Data Sheet was prepared in accordance with the Australia National Code of Practice for the Preparation of Material Safety Data Sheets (NOHSC: 2011.)

National regulations

High Volume Industrial Chemicals (HVIC)

Carbon black (CAS 1333-86-4) 10000 - 99999 TONNES See the regulation for additional information.
Portland Cement (CAS 65997-15-1) > 1000000 TONNES See the regulation for additional information.
Silica Sand (CAS 14808-60-7) 100000 - 999999 TONNES See the regulation for additional information.

Importation of Ozone Deleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10)
Not listed.

National Pollutant Inventory (NPI) substance reporting list
Not listed.

Prohibited Carcinogenic Substances
Not regulated.

Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)
Not listed.

Restricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)
Not listed.

Restricted Carcinogenic Substances
Not regulated.

International regulations

Stockholm Convention
Not applicable.

Rotterdam Convention
Not applicable.

Kyoto protocol
Not applicable.

Montreal Protocol
Not applicable.

Basel Convention
Not applicable.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Country(s) or region</td>
<td>Inventory name</td>
<td>On inventory (yes/no)*</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date                          | 13-April-2016
Revision date                       | -
References                          | HSDB® - Hazardous Substances Data Bank
                                      | Registry of Toxic Effects of Chemical Substances (RTECS)
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