

# SAFETY DATA SHEET

Issue Date 08-Jun-2015

Revision Date 28-Oct-2015

Version 1

| 1. IDENTIFICATION                 |                              |  |
|-----------------------------------|------------------------------|--|
|                                   |                              |  |
| Product identifier                |                              |  |
| Product Name                      | Tuffbond 3661A               |  |
| Other means of identification     |                              |  |
| Product Code                      | MS-3661A                     |  |
| UN/ID no.                         | None                         |  |
| Synonyms                          | None                         |  |
| Recommended use of the chem       | ical and restrictions on use |  |
| Recommended Use                   | Epoxy Adhesive.              |  |
| Uses advised against              | None known                   |  |
| Details of the supplier of the sa | fety data sheet              |  |
| Manufacturer Address              |                              |  |
| Hernon Manufacturing Inc.         |                              |  |
| 121 Tech Drive                    |                              |  |
| Sanford, FL 32771                 |                              |  |
| 800-527-0004                      |                              |  |
| Emergency telephone number        |                              |  |
| Company Phone Number              | 407-322-4000                 |  |
| Emergency Telephone               | Chemtel 800-255-3924         |  |

# 2. HAZARDS IDENTIFICATION

#### **Classification**

#### **OSHA Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| Skin corrosion/irritation         | Category 2  |
|-----------------------------------|-------------|
| Serious eye damage/eye irritation | Category 2A |
| Skin sensitization                | Category 1  |
| Category 4                        |             |

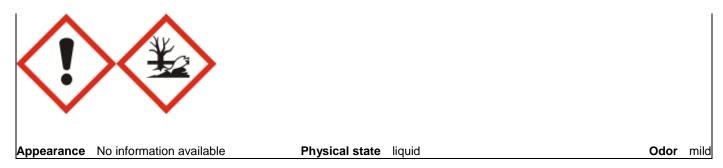
#### Label elements

**Emergency Overview** 

| Warning |  |
|---------|--|
|---------|--|

#### Hazard statements

Causes skin irritation Causes serious eye irritation May cause an allergic skin reaction May cause respiratory irritation Toxic to aquatic life with long lasting effects



#### **Precautionary Statements - Prevention**

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Wear protective gloves/protective clothing/eye protection/face protection Wash face, hands and any exposed skin thoroughly after handling Avoid breathing dust/fume/gas/mist/vapors/spray Contaminated work clothing must not be allowed out of the workplace Keep away from flames and hot surfaces. - No smoking

#### **Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention IF ON SKIN: Wash with plenty of water and soap Take off contaminated clothing and wash it before reuse If skin irritation or rash occurs: Get medical advice/attention In case of fire: Use CO2, dry chemical, or foam to extinguish

#### **Precautionary Statements - Storage**

Store locked up Store in a well-ventilated place. Keep cool

#### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

Not applicable

#### Other Information

Not applicable

# 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

| Chemical Name                         | CAS No.    | Weight-% | Trade Secret |
|---------------------------------------|------------|----------|--------------|
| Epoxy Resin / Bisphenyl A epoxy resin | 25068-38-6 | 60-70    | *            |
| Calcined Alumina                      | 1344-28-1  | 30-50    | *            |
| Aluminum Silicate                     | 66402-68-4 | 5-10     | *            |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

# 4. FIRST AID MEASURES

#### Description of first aid measures

| Eye contact  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
|--------------|--|
| Skin contact | Wash with soap and water. Flush skin with water for several minutes. Remove  |

|  | contaminated clothing and shoes. If irritation develops, seek medical attention. Wash clothing before reuse.   |  |
|--|--|--|
| Inhalation   | Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately. |  |
| Ingestion  | Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell.            |  |
| Most important symptoms and effects, both acute and delayed                |  |  |
| Symptoms   | No information available.  |  |
| Indication of any immediate medical attention and special treatment needed |  |  |

Note to physicians

Treat symptomatically.

### **5. FIRE-FIGHTING MEASURES**

#### Suitable extinguishing media

Use CO2, dry chemical, or foam.

**Unsuitable extinguishing media** Do not use a solid water stream as it may scatter and spread fire.

#### Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Hazardous combustion products Irritating organic vapors.

# Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

#### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

| Personal precautions               | Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas.                                     |
|------------------------------------|---|
| For emergency responders           | Use personal protection recommended in Section 8.   |
| Environmental precautions          |   |
| Environmental precautions          | Do not allow into any sewer, on the ground or into any body of water. Collect spillage. See Section 12 for additional ecological information. |
| Methods and material for containme | ent and cleaning up   |
| Methods for containment            | Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.                                      |
| Methods for cleaning up            | Soak up with inert absorbent material. Store in a closed container until ready for disposal.  |
| 7. HANDLING AND STORAGE            |   |

#### Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Wash thoroughly after handling. Ensure adequate ventilation, especially in confined areas.

#### Conditions for safe storage, including any incompatibilities

Storage Conditions Keep at temperatures between 46° and 82 °F.

None.

Incompatible materials

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

| Chemical Name     | ACGIH TLV   | OSHA PEL                                      | NIOSH IDLH                                |
|-------------------|---|---|---|
| Calcined Alumina  | TWA: 1 mg/m <sup>3</sup> respirable fraction            | TWA: 15 mg/m <sup>3</sup> total dust          | -   |
| 1344-28-1         |   | TWA: 5 mg/m <sup>3</sup> respirable fraction  |   |
|                   |   | (vacated) TWA: 10 mg/m <sup>3</sup> total     |   |
|                   |   | dust  |   |
|                   |   | (vacated) TWA: 5 mg/m <sup>3</sup> respirable |   |
|                   |   | fraction                                      |   |
| Aluminum Silicate | STEL: 10 mg/m <sup>3</sup> Zr                           | TWA: 5 mg/m <sup>3</sup> Zr                   | IDLH: 25 mg/m <sup>3</sup> Zr             |
| 66402-68-4        | TWA: 5 mg/m <sup>3</sup> Zr TWA: 0.02 mg/m <sup>3</sup> | (vacated) TWA: 5 mg/m <sup>3</sup> Zr         | TWA: 5 mg/m <sup>3</sup> except Zirconium |
|                   | Mn respirable fraction                                  | (vacated) STEL: 10 mg/m <sup>3</sup> Zr       | tetrachloride Zr                          |
|                   | TWA: 0.1 mg/m <sup>3</sup> Mn inhalable                 | -   | STEL: 10 mg/m <sup>3</sup> Zr             |
|                   | fraction  |   | _   |

#### Appropriate engineering controls

| Engineering Controls | Showers              |
|----------------------|----------------------|
|                      | Eyewash stations     |
|                      | Ventilation systems. |
|                      |                      |

#### Individual protection measures, such as personal protective equipment

| Eye/face protection            | Wear safety glasses with side shields (or goggles).   |
|--------------------------------|---|
| Skin and body protection       | Wear protective gloves and protective clothing. Use rubber or plastic gloves.   |
| Respiratory protection         | If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. |
| General Hygiene Considerations | Handle in accordance with good industrial hygiene and safety practice.  |

# 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

| Physical state<br>Appearance<br>Color  | liquid<br>No information available<br>white                                      | Odor<br>Odor threshold  | mild<br>No information available |
|--|--|-------------------------|----------------------------------|
| <u>Property</u><br>pH<br>Melting point / freezing point<br>Boiling point / boiling range | <u>Values</u><br>Does not apply<br>No information available<br>> 149 °C / 300 °F | <u>Remarks • Method</u> |                                  |

Flash point **Evaporation rate** Flammability (solid, gas) Flammability Limit in Air Upper flammability limit: Lower flammability limit: Vapor pressure Vapor density **Relative density** Water solubility Solubility in other solvents Partition coefficient Autoignition temperature Decomposition temperature **Kinematic viscosity** Dynamic viscosity **Explosive properties Oxidizing properties** 

#### **Other Information**

Softening point Molecular weight VOC Content (%) Density **Bulk density** 

No information available No information available No information available No information available > 50 mm at 80°F No information available 1.58 slightly soluble No information available No information available

> 93 °C / 200 °F

No information available No information available 0.2 % No information available No information available

# **10. STABILITY AND REACTIVITY**

#### Reactivity No data available

**Chemical stability** Stable under recommended storage conditions. Possibility of Hazardous Reactions None under normal processing. Conditions to avoid None known. Incompatible materials None. **Hazardous Decomposition Products** None.

# **11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

| Product Information | No data available                            |
|---------------------|--|
| Inhalation          | No data available.                           |
| Eye contact         | Irritating to eyes.                          |
| Skin contact        | May cause skin irritation and/or dermatitis. |
| Ingestion           | No data available.                           |

| Chemical Name                         | Oral LD50           | Dermal LD50 | Inhalation LC50 |
|---------------------------------------|---------------------|-------------|-----------------|
| Epoxy Resin / Bisphenyl A epoxy resin | = 11400 mg/kg (Rat) | -           | -               |

| 25068-38-6       |                    |   |   |
|------------------|--------------------|---|---|
| Calcined Alumina | > 5000 mg/kg (Rat) | - | - |
| 1344-28-1        |                    |   |   |

#### Information on toxicological effects

Symptoms

No information available.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

| Sensitization            | No information available. |
|--------------------------|---------------------------|
| Germ cell mutagenicity   | No information available. |
| Carcinogenicity          | No information available. |
| Reproductive toxicity    | No information available. |
| STOT - single exposure   | No information available. |
| STOT - repeated exposure | No information available. |
| Aspiration hazard        | No information available. |

#### Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document.ATEmix (oral)8,339.00 mg/kg

#### **12. ECOLOGICAL INFORMATION**

#### Ecotoxicity

Toxic to aquatic life with long lasting effects

#### Persistence and degradability

No information available.

#### **Bioaccumulation**

No information available.

Other adverse effects

No information available

# **13. DISPOSAL CONSIDERATIONS**

#### Waste treatment methods

Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** 

Do not reuse container.

| Chemical Name     | California Hazardous Waste Status |
|-------------------|-----------------------------------|
| Aluminum Silicate | Toxic                             |
| 66402-68-4        |                                   |

# 14. TRANSPORT INFORMATION

DOT UN/ID no. Proper shipping name Hazard Class

Not regulated None Not regulated None

| Packing Group   | None   |
|---|--|
| Special Provisions  | None   |
| IATA  | Not regulated  |
| UN/ID no.   | None   |
| Proper shipping name  | Not regulated  |
| Hazard Class  | None   |
| Packing Group   | None   |
| Special Provisions  | None   |
| IMDG  | Not regulated  |
| UN/ID no.   | None   |
| Proper shipping name  | Not regulated  |
| Hazard Class  | None   |
| Packing Group   | None   |
| Special Provisions  | None   |
| <u>RID</u>  | Not regulated  |
| UN/ID no.   | None   |
| Proper shipping name  | Not regulated  |
| Hazard Class  | None   |
| Packing Group   | None   |
| Special Provisions  | None   |
| <u>ADR</u> UN/ID no.<br>Proper shipping name<br>Hazard Class<br>Packing Group<br>Special Provisions | Not regulated<br>None<br>Not regulated<br>None<br>None<br>None |

# **15. REGULATORY INFORMATION**

| International Inventories |          |
|---------------------------|----------|
| TSCA                      | Complies |
| DSL/NDSL                  | Complies |
| EINECS/ELINCS             | Complies |
| ENCS                      | Complies |
| IECSC                     | Complies |
| KECL                      | Complies |
| PICCS                     | Complies |
| AICS                      | Complies |

All ingredients are on the inventory or are exempt from listing.

#### Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances **IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

#### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical Name                     | SARA 313 - Threshold Values % |  |
|-----------------------------------|-------------------------------|--|
| Calcined Alumina - 1344-28-1      | 1.0                           |  |
| Aluminum Silicate - 66402-68-4    | 1.0                           |  |
| SARA 311/312 Hazard Categories    |                               |  |
| Acute health hazard               | No                            |  |
| Chronic Health Hazard             | No                            |  |
| Fire hazard                       | No                            |  |
| Sudden release of pressure hazard | No                            |  |
| Reactive Hazard                   | No                            |  |

#### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name                   | CWA - Reportable<br>Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous<br>Substances |
|---------------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Aluminum Silicate<br>66402-68-4 | -                              | Х                      | -                         | -                             |
| 00402-08-4                      |                                |                        |                           |                               |

#### <u>CERCLA</u>

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

#### US State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals

#### U.S. State Right-to-Know Regulations

| Chemical Name                   | New Jersey | Massachusetts | Pennsylvania |
|---------------------------------|------------|---------------|--------------|
| Calcined Alumina<br>1344-28-1   | Х          | Х             | Х            |
| Aluminum Silicate<br>66402-68-4 | Х          | -             | Х            |

#### U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

# 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

| <u>NFPA</u> | Health hazards 0 | Flammability 0 | Instability 0      | Physical and Chemical<br>Properties - |
|-------------|------------------|----------------|--------------------|---------------------------------------|
| HMIS        | Health hazards 0 | Flammability 0 | Physical hazards 0 | Personal protection X                 |

Prepared BySDS coordinatorIssue Date08-Jun-2015Revision Date28-Oct-2015Revision NoteNo information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

#### End of Safety Data Sheet



# SAFETY DATA SHEET

Issue Date 08-Jun-2015

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Version 1

|                                   | 1. IDENTIFICATION             |  |  |
|-----------------------------------|-------------------------------|--|--|
|                                   |                               |  |  |
| Product identifier                |                               |  |  |
| Product Name                      | Tuffbond 3661B                |  |  |
| Other means of identification     |                               |  |  |
| Product Code                      | MS-3661B                      |  |  |
| UN/ID no.                         | None                          |  |  |
| Synonyms                          | None                          |  |  |
| Recommended use of the chem       | nical and restrictions on use |  |  |
| Recommended Use                   | Hardener.                     |  |  |
| Uses advised against              | None known                    |  |  |
| Details of the supplier of the sa | fety data sheet               |  |  |
| Manufacturer Address              |                               |  |  |
| Hernon Manufacturing Inc.         |                               |  |  |
| 121 Tech Drive                    |                               |  |  |
| Sanford, FL 32771                 |                               |  |  |
| 800-527-0004                      |                               |  |  |
| Emergency telephone number        |                               |  |  |
| Company Phone Number              | 407-322-4000                  |  |  |
| Emergency Telephone               | Chemtel 800-255-3924          |  |  |

2. HAZARDS IDENTIFICATION

**Classification** 

#### **OSHA Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

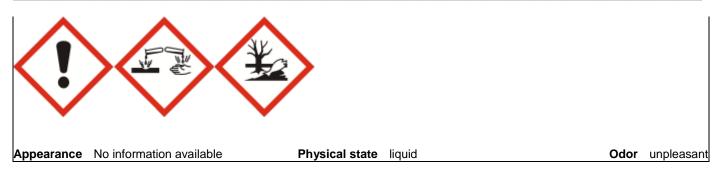
| Acute toxicity - Oral             | Category 4                |
|-----------------------------------|---------------------------|
| Skin corrosion/irritation         | Category 1 Sub-category B |
| Serious eye damage/eye irritation | Category 1                |
| Skin sensitization                | Category 1                |
| Category 4                        |                           |

#### Label elements

**Emergency Overview** 

# Warning

Hazard statements Harmful in contact with skin Harmful if swallowed Causes severe skin burns and eye damage May cause an allergic skin reaction Harmful to aquatic life with long lasting effects



### **Precautionary Statements - Prevention**

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Wear protective gloves/protective clothing/eye protection/face protection Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Do not breathe dusts or mists Contaminated work clothing must not be allowed out of the workplace Keep away from flames and hot surfaces. - No smoking

#### **Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention 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 or doctor IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower Wash contaminated clothing before reuse If skin irritation or rash occurs: Get medical advice/attention IF INHALED: Remove person to fresh air and keep comfortable for breathing Immediately call a POISON CENTER or doctor IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell Rinse mouth Do NOT induce vomiting In case of fire: Use CO2, dry chemical, or foam to extinguish

#### Precautionary Statements - Storage

Store locked up Store in a well-ventilated place. Keep cool

#### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

# Hazards not otherwise classified (HNOC)

Not applicable

#### Other Information

Not applicable

#### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

#### Substance

| Chemical Name    | CAS No.     | Weight-% | Trade Secret |
|------------------|-------------|----------|--------------|
| Calcined Alumina | 1344-28-1   | 50-70    | *            |
| Aliphatic Amine  | Proprietary | 40-60    | *            |
| Carbon Black     | 1333-86-4   | 0.1-1    | *            |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

#### 4. FIRST AID MEASURES

#### **Description of first aid measures**

| Eye contact  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.   |
|--|--|
| Skin contact   | Wash with soap and water. Flush skin with water for several minutes. Remove contaminated clothing and shoes. If irritation develops, seek medical attention. Wash clothing before reuse. |
| Inhalation   | Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.                                   |
| Ingestion  | Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell.  |
| Most important symptoms and effe   | cts, both acute and delayed  |
| Symptoms   | No information available.  |
| Indication of any immediate medical attention and special treatment needed |  |
| Note to physicians   | Treat symptomatically.   |

# **5. FIRE-FIGHTING MEASURES**

#### Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, dry chemical, dry sand, limestone powder.

**Unsuitable extinguishing media** Do not use a solid water stream as it may scatter and spread fire.

# Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Hazardous combustion products No information available.

Explosion data Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

#### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

# 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas.

Environmental precautions

**Environmental precautions** Do not allow into any sewer, on the ground or into any body of water. Dike to collect large liquid spills. See Section 12 for additional ecological information.

#### Methods and material for containment and cleaning up

| Methods for containment                | Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.   |  |
|--|--|--|
| Methods for cleaning up                | Approach suspected leak areas with caution. Place in appropriate chemical waste container.   |  |
|  | 7. HANDLING AND STORAGE  |  |
| Precautions for safe handling          |  |  |
| Advice on safe handling                | Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Wash thoroughly after handling. Ensure adequate ventilation, especially in confined areas. |  |
| Conditions for safe storage, including | ng any incompatibilities   |  |
| Storage Conditions                     | Keep at temperatures between 46° and 82 °F.  |  |
| Incompatible materials                 | Sodium hypochlorite. Organic acids. Mineral acids. Peroxides.  |  |

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

# Control parameters

# **Exposure Guidelines**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

| Chemical Name    | ACGIH TLV                                    | OSHA PEL                                      | NIOSH IDLH                                 |
|------------------|--|---|--|
| Calcined Alumina | TWA: 1 mg/m <sup>3</sup> respirable fraction |   | -  |
| 1344-28-1        |  | TWA: 5 mg/m <sup>3</sup> respirable fraction  |  |
|                  |  | (vacated) TWA: 10 mg/m <sup>3</sup> total     |  |
|                  |  | dust  |  |
|                  |  | (vacated) TWA: 5 mg/m <sup>3</sup> respirable |  |
|                  |  | fraction                                      |  |
| Carbon Black     | TWA: 3 mg/m <sup>3</sup> inhalable fraction  | n TWA: 3.5 mg/m <sup>3</sup>                  | IDLH: 1750 mg/m <sup>3</sup>               |
| 1333-86-4        | -  | (vacated) TWA: 3.5 mg/m <sup>3</sup>          | TWA: 3.5 mg/m <sup>3</sup>                 |
|                  |  |   | TWA: 0.1 mg/m <sup>3</sup> Carbon black in |
|                  |  |   | presence of Polycyclic aromatic            |
|                  |  |   | hydrocarbons PAH                           |

# Appropriate engineering controls

| Engineering Controls | Showers              |
|----------------------|----------------------|
|                      | Eyewash stations     |
|                      | Ventilation systems. |

#### Individual protection measures, such as personal protective equipment

| Eye/face protection            | Wear safety glasses with side shields (or goggles).   |  |
|--------------------------------|---|--|
| Skin and body protection       | Wear protective gloves and protective clothing. Use rubber or plastic gloves.   |  |
| Respiratory protection         | If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. |  |
| General Hygiene Considerations | Handle in accordance with good industrial hygiene and safety practice.  |  |
|                                |   |  |

# 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

Physical state Appearance Color

| Property                            |
|-------------------------------------|
| pH<br>Molting point (freezing point |
| Melting point / freezing point      |
| Boiling point / boiling range       |
| Flash point                         |
| Evaporation rate                    |
| Flammability (solid, gas)           |
| Flammability Limit in Air           |
| Upper flammability limit:           |
| Lower flammability limit:           |
| Vapor pressure                      |
| Vapor density                       |
| Relative density                    |
| Water solubility                    |
| Solubility in other solvents        |
| Partition coefficient               |
| Autoignition temperature            |
| Decomposition temperature           |
| Kinematic viscosity                 |
| Dynamic viscosity                   |
| Explosive properties                |
| Oxidizing properties                |
| exisizing properties                |

#### **Other Information**

Softening point Molecular weight VOC Content (%) Density Bulk density liquid No information available black

#### Values

Does not apply No information available > 149 °C / 300 °F > 93 °C / 200 °F No information available No information available No information available No information available <1 mm at 21°C No information available 1.66 Low No information available No information available

No information available No information available No information available No information available No information available

# **10. STABILITY AND REACTIVITY**

Reactivity No data available

Chemical stability
Stable under recommended storage conditions.
Possibility of Hazardous Reactions
None under normal processing.
Conditions to avoid
Storage near to reactive materials.
Incompatible materials
Sodium hypochlorite. Organic acids. Mineral acids. Peroxides.
Hazardous Decomposition Products
Nitric acid. Ammonia. Nitrogen oxides (NOx). Carbon monoxide. Carbon dioxide (CO2). Aldehydes. Hydrocarbons.

No information available

unpleasant

Remarks • Method

**Odor threshold** 

Odor

# 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

| Product Information | No data available   |
|---------------------|---------------------|
| Inhalation          | No data available.  |
| Eye contact         | Irritating to eyes. |

#### Skin contact

May cause skin irritation and/or dermatitis.

Ingestion

No data available.

| Chemical Name                 | Oral LD50           | Dermal LD50          | Inhalation LC50 |
|-------------------------------|---------------------|----------------------|-----------------|
| Calcined Alumina<br>1344-28-1 | > 5000 mg/kg (Rat)  | -                    | -               |
| Aliphatic Amine               | = 2140 µL/kg (Rat)  | = 880 µL/kg (Rabbit) | -               |
| Carbon Black<br>1333-86-4     | > 15400 mg/kg (Rat) | > 3 g/kg (Rabbit)    | -               |

#### Information on toxicological effects

Symptoms

No information available.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

| Sensitization<br>Germ cell mutagenicity<br>Carcinogenicity                                       | No information | No information available.<br>No information available.<br>No information available.                              |   |   |  |
|--|----------------|--|---|---|--|
| Chemical Name  | ACGIH          | ACGIH IARC NTP OSHA  |   |   |  |
| Carbon Black<br>1333-86-4  | A3             | Group 2B   | - | х |  |
| Reproductive toxicity<br>STOT - single exposure<br>STOT - repeated exposure<br>Aspiration hazard | No information | No information available.<br>No information available.<br>No information available.<br>No information available. |   |   |  |

#### Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document.

| ATEmix (oral)   | 1,044.00 mg/kg |  |
|-----------------|----------------|--|
| ATEmix (dermal) | 2,590.00 mg/kg |  |

# **12. ECOLOGICAL INFORMATION**

#### Ecotoxicity

Harmful to aquatic life with long lasting effects

| Chemical Name             | Algae/aquatic plants                                   | Fish   | Crustacea                             |
|---------------------------|--|--|---------------------------------------|
| Aliphatic Amine           | 495: 72 h Pseudokirchneriella<br>subcapitata mg/L EC50 | 1950 - 2460: 96 h Pimephales<br>promelas mg/L LC50 flow-through<br>1000: 96 h Poecilia reticulata mg/L<br>LC50 semi-static 100: 96 h<br>Oncorhynchus mykiss mg/L LC50<br>semi-static | 32: 48 h Daphnia magna mg/L<br>EC50   |
| Carbon Black<br>1333-86-4 | -  | -  | 5600: 24 h Daphnia magna mg/L<br>EC50 |

# Persistence and degradability

No information available.

#### **Bioaccumulation**

No information available.

| Chemical Name   | Partition coefficient |  |  |
|-----------------|-----------------------|--|--|
| Aliphatic Amine | -1.48                 |  |  |
|                 |                       |  |  |

#### Other adverse effects

No information available

# **13. DISPOSAL CONSIDERATIONS**

| Waste treatment methods |   |
|-------------------------|---|
| Disposal of wastes      | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| Contaminated packaging  | Do not reuse container.   |

# 14. TRANSPORT INFORMATION

| DOT  | Not regulated  |
|--|--|
| UN/ID no.  | None   |
| Proper shipping name   | Not regulated  |
| Hazard Class   | None   |
| Packing Group  | None   |
| Special Provisions   | None   |
| IATA_<br>UN/ID no.<br>Proper shipping name<br>Hazard Class<br>Packing Group<br>Special Provisions      | Not regulated<br>None<br>Not regulated<br>None<br>None |
| IMDG   | Not regulated  |
| UN/ID no.  | None   |
| Proper shipping name   | Not regulated  |
| Hazard Class   | None   |
| Packing Group  | None   |
| Special Provisions   | None   |
| <u>RID</u>   | Not regulated  |
| UN/ID no.  | None   |
| Proper shipping name   | Not regulated  |
| Hazard Class   | None   |
| Packing Group  | None   |
| Special Provisions   | None   |
| <u>ADR</u><br>UN/ID no.<br>Proper shipping name<br>Hazard Class<br>Packing Group<br>Special Provisions | Not regulated<br>None<br>Not regulated<br>None<br>None |

# International Inventories TSCA

# **15. REGULATORY INFORMATION**

```
Complies
```

| DSL/NDSL<br>EINECS/ELINCS | Complies<br>Complies |
|---------------------------|----------------------|
| ENCS                      | Complies             |
| IECSC                     | Complies             |
| KECL                      | Complies             |
| PICCS                     | Complies             |
| AICS                      | Complies             |

All ingredients are on the inventory or are exempt from listing.

#### Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances ENCS - Japan Existing and New Chemical Substances IECSC - China Inventory of Existing Chemical Substances KECL - Korean Existing and Evaluated Chemical Substances PICCS - Philippines Inventory of Chemicals and Chemical Substances AICS - Australian Inventory of Chemical Substances

#### US Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical Name                     | SARA 313 - Threshold Values %<br>1.0 |  |  |
|-----------------------------------|--------------------------------------|--|--|
| Calcined Alumina - 1344-28-1      |                                      |  |  |
| SARA 311/312 Hazard Categories    |                                      |  |  |
| Acute health hazard               | No                                   |  |  |
| Chronic Health Hazard             | No                                   |  |  |
| Fire hazard                       | No                                   |  |  |
| Sudden release of pressure hazard | No                                   |  |  |
| Reactive Hazard                   | No                                   |  |  |

#### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

#### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

#### US State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals

| Chemical Name                        | California Proposition 65 |  |  |  |
|--------------------------------------|---------------------------|--|--|--|
| CARBON BLACK - 1333-86-4             | Carcinogen                |  |  |  |
| U.C. State Bight to Know Begulations |                           |  |  |  |

#### U.S. State Right-to-Know Regulations

| Chemical Name                 | New Jersey | Massachusetts | Pennsylvania |  |
|-------------------------------|------------|---------------|--------------|--|
| Calcined Alumina<br>1344-28-1 | Х          | Х             | Х            |  |
| Aliphatic Amine               | Х          | X             | Х            |  |
| Carbon Black<br>1333-86-4     | Х          | X             | Х            |  |

#### EPA Pesticide Registration Number Not applicable

# 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

| <u>NFPA</u>              | Health hazards     | 0        | Flammability  | 0          | Instability 0           | Physical and Chemical                 |
|--------------------------|--------------------|----------|---------------|------------|-------------------------|---------------------------------------|
| HMIS                     | Health hazards     | 0        | Flammability  | 0          | Physical hazards 0      | Properties -<br>Personal protection X |
| Prepared By              | SDS coordinator    |          |               |            |                         |                                       |
| Issue Date               | 08-Jun-2015        |          |               |            |                         |                                       |
| Revision Date            | 28-Oct-2015        |          |               |            |                         |                                       |
| Revision Note            |                    |          |               |            |                         |                                       |
| No information available |                    |          |               |            |                         |                                       |
| <u>Disclaimer</u>        |                    |          |               |            |                         |                                       |
| The information provide  | d in this Matorial | I Safaty | Data Shoot is | corroct to | the best of our knowled | an information and holiof             |

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet