

# **Safety Data Sheet**

### Titebond PROvantage Heavy Duty Construction Adhesive

### Section 1. Identification

| GHS product identifier                               | : Titebond PROvantage Heavy Duty Construction Adhesive             |
|--|--|
| Physical state                                       | : Liquid.  |
| Address  | : Franklin International<br>2020 Bruck Street<br>Columbus OH 43207 |
| Contact person                                       | : Franklin Technical Services                                      |
| Telephone  | : (800) 877-4583   |
| In case of emergency                                 | : Franklin Security<br>(614) 445-1300                              |
| e-mail address of person<br>responsible for this SDS | : SDS@FranklinInternational.com                                    |
| Reference number                                     | : 3707   |
| Product code   | : 5251   |
| Date of revision                                     | : 4/24/2018  |
| Safety Data Sheets are available online at           | : www.FranklinInternational.com                                    |
| Chemtrec (24 Hour)                                   | : (800) 424 - 9300   |
| Chemtrec International                               | : (703) 527 - 3887   |
| Chemical family                                      | : Adhesive.  |
| Delevent identified was a fi                         |  |

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

### Section 2. Hazards identification

| OSHA/HCS status                            | : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).   |
|--|---|
| Classification of the substance or mixture | <ul> <li>FLAMMABLE LIQUIDS - Category 2<br/>EYE IRRITATION - Category 2A<br/>CARCINOGENICITY (inhalation) - Category 2<br/>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract<br/>irritation) - Category 3<br/>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) -<br/>Category 3</li> </ul> |
| GHS label elements                         |   |
| Hazard pictograms                          |   |
| Signal word                                | : Danger  |

### Section 2. Hazards identification

| Hazard statements                   | <ul> <li>Highly flammable liquid and vapor.<br/>Causes serious eye irritation.<br/>Suspected of causing cancer if inhaled.<br/>May cause respiratory irritation.<br/>May cause drowsiness or dizziness.</li> </ul>  |
|-------------------------------------|---|
| Precautionary statements            |   |
| Prevention                          | : Obtain special instructions before use. Do not handle until all safety precautions have<br>been read and understood. Wear protective gloves. Wear eye or face protection.<br>Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and<br>other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting<br>and all material-handling equipment. Use only non-sparking tools. Take precautionary<br>measures against static discharge. Keep container tightly closed. Use only outdoors or<br>in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling. |
| Response                            | : IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. 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 attention.   |
| Storage                             | : Store locked up. Store in a well-ventilated place. Keep cool.   |
| Disposal                            | : Dispose of contents and container in accordance with all local, regional, national and international regulations.   |
| Supplemental label elements         | : Avoid contact with skin and clothing. Wash thoroughly after handling.   |
| Hazards not otherwise<br>classified | : Prolonged or repeated contact may dry skin and cause irritation.  |

## Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

| Ingredient name                              | %         | CAS number |
|--|-----------|------------|
| Low VOC Premix                               | ≥50 - ≤75 | -          |
| methyl acetate                               | ≤10       | 79-20-9    |
| n-hexane                                     | ≤3        | 110-54-3   |
| 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol | ≤0.3      | 119-47-1   |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First aid measures

### Description of necessary first aid measures

| Eye contact | : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.   |
|-------------|---|
| Inhalation  | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |

| Section 4. First aid measures                              |  |  |  |
|--|--|--|--|
| Skin contact   | : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.   |  |  |
| Ingestion  | : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |  |  |
| Most important symptoms/                                   |  |  |  |
| Potential acute health effe                                |  |  |  |
| Eye contact  | : Causes serious eye irritation.   |  |  |
| Inhalation   | <ul> <li>Can cause central nervous system (CNS) depression. May cause drowsiness or<br/>dizziness. May cause respiratory irritation.</li> </ul>  |  |  |
| Skin contact   | : Defatting to the skin. May cause skin dryness and irritation.  |  |  |
| Ingestion  | : Can cause central nervous system (CNS) depression.   |  |  |
| Over-exposure signs/sym                                    | <u>otoms</u>   |  |  |
| Eye contact  | : Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness   |  |  |
| Inhalation   | : Adverse symptoms may include the following:<br>respiratory tract irritation<br>coughing<br>nausea or vomiting<br>headache<br>drowsiness/fatigue<br>dizziness/vertigo<br>unconsciousness  |  |  |
| Skin contact   | : Adverse symptoms may include the following:<br>irritation<br>dryness<br>cracking   |  |  |
| Ingestion  | : No specific data.  |  |  |
| Indication of immediate me                                 | dical attention and special treatment needed, if necessary   |  |  |
| Notes to physician   | <ul> <li>Treat symptomatically. Contact poison treatment specialist immediately if large<br/>quantities have been ingested or inhaled.</li> </ul>  |  |  |
| Specific treatments  | : No specific treatment.   |  |  |
| Protection of first-aiders<br>See toxicological informatio | : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.   |  |  |

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

| Extinguishing media                            |  |
|--|--|
| Suitable extinguishing media                   | : Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.   |
| Unsuitable extinguishing media                 | : Do not use water jet.  |
| Specific hazards arising from the chemical     | : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard.<br>In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.  |
| Hazardous thermal decomposition products       | : Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide   |
| Special protective actions for fire-fighters   | : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |
| Special protective equipment for fire-fighters | : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.  |

## Section 6. Accidental release measures

| Personal precautions, protective equipment and emergency procedures |  |  |  |
|---|--|--|--|
| For non-emergency<br>personnel                                      | : No action shall be taken involving any personal risk or without suitable training.<br>Evacuate surrounding areas. Keep unnecessary and unprotected personnel from<br>entering. Do not touch or walk through spilled material. Shut off all ignition sources.<br>No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide<br>adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put<br>on appropriate personal protective equipment.  |  |  |
| For emergency responders  | : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".  |  |  |
| Environmental precautions   | : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).  |  |  |
| Methods and materials for co  | ntainment and cleaning up  |  |  |
| Small spill   | : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.   |  |  |
| Large spill   | : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. |  |  |

## Section 7. Handling and storage

| Precautions for safe handling                                      | L |  |
|--|---|--|
| Protective measures  | : | Put on appropriate personal protective equipment (see Section 8). Avoid exposure -<br>obtain special instructions before use. Do not handle until all safety precautions have<br>been read and understood. Do not get in eyes or on skin or clothing. Do not ingest.<br>Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate<br>respirator when ventilation is inadequate. Do not enter storage areas and confined<br>spaces unless adequately ventilated. Keep in the original container or an approved<br>alternative made from a compatible material, kept tightly closed when not in use. Store<br>and use away from heat, sparks, open flame or any other ignition source. Use<br>explosion-proof electrical (ventilating, lighting and material handling) equipment. Use<br>only non-sparking tools. Take precautionary measures against electrostatic discharges.<br>Empty containers retain product residue and can be hazardous. Do not reuse container. |
| Advice on general<br>occupational hygiene                          | : | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.  |
| Conditions for safe storage,<br>including any<br>incompatibilities | : | Store between the following temperatures: -17 to 40°C (1.4 to 104°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.  |

## Section 8. Exposure controls/personal protection

### **Control parameters**

### **Occupational exposure limits**

| Ingredient name                  | Exposure limits  |
|----------------------------------|--|
| Low VOC Premix<br>methyl acetate | None.ACGIH TLV (United States, 3/2017).TWA: 200 ppm 8 hours.TWA: 606 mg/m³ 8 hours.STEL: 250 ppm 15 minutes.STEL: 757 mg/m³ 15 minutes.OSHA PEL 1989 (United States, 3/1989).TWA: 200 ppm 8 hours.TWA: 610 mg/m³ 8 hours.STEL: 750 ppm 15 minutes.STEL: 760 mg/m³ 15 minutes.STEL: 760 mg/m³ 15 minutes.NIOSH REL (United States, 10/2016).TWA: 610 mg/m³ 10 hours.STEL: 250 ppm 15 minutes.STEL: 250 ppm 15 minutes.STEL: 250 ppm 15 minutes.TWA: 610 mg/m³ 10 hours.STEL: 250 ppm 15 minutes.STEL: 250 ppm 15 minutes.TWA: 610 mg/m³ 15 minutes.TWA: 610 mg/m³ 15 minutes.STEL: 250 ppm 15 minutes.STEL: 250 ppm 15 minutes.TWA: 610 mg/m³ 15 minutes.TWA: 610 mg/m³ 15 minutes.TWA: 610 mg/m³ 15 minutes.TWA: 200 ppm 8 hours.TWA: 200 ppm 8 hours.TWA: 610 mg/m³ 8 hours.TWA: 610 mg/m³ 8 hours. |
| n-hexane                         | OSHA PEL 1989 (United States, 3/1989).<br>TWA: 50 ppm 8 hours.<br>TWA: 180 mg/m <sup>3</sup> 8 hours.<br>NIOSH REL (United States, 10/2016).<br>TWA: 50 ppm 10 hours.  |

## Section 8. Exposure controls/personal protection

|                                     | TWA: 180 mg/m <sup>3 /</sup><br>ACGIH TLV (United<br>TWA: 50 ppm 8 ho<br>OSHA PEL (United<br>TWA: 500 ppm 8 h<br>TWA: 1800 mg/m <sup>3</sup>  | d States, 3/2017). Absorbed through skin.<br>ours.<br>I States, 6/2016).<br>nours.  |
|-------------------------------------|---|---|
| 6,6'-di-tert-butyl-2,2'-methyle     | _   |   |
| Appropriate engineering<br>controls | other engineering controls to keep work<br>recommended or statutory limits. The   | e process enclosures, local exhaust ventilation or<br>ker exposure to airborne contaminants below any<br>engineering controls also need to keep gas,<br>v lower explosive limits. Use explosion-proof   |
| Environmental exposure<br>controls  | Emissions from ventilation or work process equipment should be checked to ensure<br>they comply with the requirements of environmental protection legislation. In some<br>cases, fume scrubbers, filters or engineering modifications to the process equipment<br>will be necessary to reduce emissions to acceptable levels. |   |
| Individual protection measu         | <u>s</u>  |   |
| Hygiene measures                    | eating, smoking and using the lavatory<br>Appropriate techniques should be used   | I to remove potentially contaminated clothing.<br>using. Ensure that eyewash stations and safety  |
| Eye/face protection                 | assessment indicates this is necessary gases or dusts. If contact is possible, t  | roved standard should be used when a risk<br>to avoid exposure to liquid splashes, mists,<br>he following protection should be worn, unless<br>ree of protection: chemical splash goggles.  |
| Skin protection                     |   |   |
| Hand protection                     | worn at all times when handling chemic<br>necessary. Considering the parameter<br>during use that the gloves are still retain<br>noted that the time to breakthrough for  | complying with an approved standard should be<br>cal products if a risk assessment indicates this is<br>is specified by the glove manufacturer, check<br>ning their protective properties. It should be<br>any glove material may be different for different<br>ixtures, consisting of several substances, the<br>accurately estimated. |
| Body protection                     | performed and the risks involved and s handling this product. When there is a   | body should be selected based on the task being<br>hould be approved by a specialist before<br>risk of ignition from static electricity, wear anti-<br>test protection from static discharges, clothing<br>s and gloves.  |
| Other skin protection               |   | al skin protection measures should be selected<br>I the risks involved and should be approved by a  |
| Respiratory protection              | appropriate standard or certification. R  | exposure, select a respirator that meets the<br>lespirators must be used according to a<br>re proper fitting, training, and other important   |

### Section 9. Physical and chemical properties

| Date of issue/Date of revision | : 4/24/2018        | Version : 1 | 6/14 |
|--------------------------------|--------------------|-------------|------|
| рН                             | Not applicable.    |             |      |
| Odor threshold                 | : Not available.   |             |      |
| Odor                           | : Solvent(s)       |             |      |
| Color                          | : Brown. [Light]   |             |      |
| Physical state                 | : Liquid. [Paste.] |             |      |
| Appearance                     |                    |             |      |

### Section 9. Physical and chemical properties

| -   |  |
|---|--|
| Melting point                             | : Not available.   |
| Boiling point                             | : 54.44°C (130°F)  |
| Flash point                               | : Closed cup: -18°C (-0.4°F)   |
| Evaporation rate                          | : >1 (butyl acetate = 1)   |
| Flammability (solid, gas)                 | : Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat. |
| VOC (less water, less<br>exempt solvents) | : 44 g/l   |
| Volatility                                | : 37.28% (w/w)   |
| Relative density                          | : 1.2469   |
| Solubility                                | : Very slightly soluble in the following materials: cold water and hot water.  |
| Auto-ignition temperature                 | : 252°C (485.6°F)  |

## Section 10. Stability and reactivity

| Reactivity                            | : No specific test data related to reactivity available for this product or its ingredients.  |
|---------------------------------------|---|
| Chemical stability                    | : The product is stable.  |
| Possibility of hazardous<br>reactions | : Under normal conditions of storage and use, hazardous reactions will not occur.   |
| Conditions to avoid                   | : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |
| Incompatible materials                | <ul> <li>Reactive or incompatible with the following materials:<br/>oxidizing materials</li> </ul>  |
| Hazardous decomposition products      | : Under normal conditions of storage and use, hazardous decomposition products should not be produced.  |

## Section 11. Toxicological information

### Information on toxicological effects

### Acute toxicity

| Product/ingredient name                          | Result               | Species | Dose        | Exposure |
|--|----------------------|---------|-------------|----------|
| methyl acetate                                   | LD50 Dermal          | Rabbit  | >5 g/kg     | -        |
|  | LD50 Oral            | Rat     | >5 g/kg     | -        |
| n-hexane   | LC50 Inhalation Gas. | Rat     | 48000 ppm   | 4 hours  |
|  | LD50 Dermal          | Rabbit  | >3295 mg/kg | -        |
|  | LD50 Oral            | Rat     | 15840 mg/kg | -        |
| 6,6'-di-tert-butyl-2,2'-<br>methylenedi-p-cresol | LD50 Oral            | Rat     | 4880 mg/kg  | -        |

Irritation/Corrosion

| Product/ingredient name                          | Result                   | Species | Score | Exposure                   | Observation |
|--|--------------------------|---------|-------|----------------------------|-------------|
| methyl acetate                                   | Eyes - Moderate irritant | Rabbit  | -     | 24 hours 100 milligrams    | -           |
|  | Skin - Mild irritant     | Rabbit  | -     | 24 hours 500<br>milligrams | -           |
|  | Skin - Moderate irritant | Rabbit  | -     | 24 hours 20<br>milligrams  | -           |
| n-hexane   | Eyes - Mild irritant     | Rabbit  | -     | 10 milligrams              | -           |
| 6,6'-di-tert-butyl-2,2'-<br>methylenedi-p-cresol | Eyes - Moderate irritant | Rabbit  | -     | 24 hours 100 milligrams    | -           |
| Conclusion/Summary                               | -                        | •       | •     |                            | •           |

Conclusion/Summai

Skin

Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

## Section 11. Toxicological information

### Eyes

### Respiratory

: This product may irritate eyes upon contact.

: High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

### **Sensitization**

Not available.

### **Mutagenicity**

Not available.

### **Carcinogenicity**

Not available.

#### **Reproductive toxicity**

Not available.

#### **Teratogenicity**

Not available.

### Specific target organ toxicity (single exposure)

| Name   | Category   | Route of exposure | Target organs   |
|--|------------|-------------------|---|
| Titebond PROvantage Heavy Duty Construction Adhesive | Category 3 | Not applicable.   | Respiratory tract<br>irritation and<br>Narcotic effects |
| Low VOC Premix                                       | Category 3 | Not applicable.   | Respiratory tract<br>irritation and<br>Narcotic effects |
| methyl acetate                                       | Category 3 | Not applicable.   | Respiratory tract<br>irritation and<br>Narcotic effects |
| n-hexane   | Category 3 | Not applicable.   | Respiratory tract<br>irritation and<br>Narcotic effects |

### Specific target organ toxicity (repeated exposure)

| Name     |            | Route of exposure | Target organs                |
|----------|------------|-------------------|------------------------------|
| n-hexane | Category 1 |                   | peripheral nervous<br>system |

#### Aspiration hazard

| Name     | Result                         |
|----------|--------------------------------|
| n-hexane | ASPIRATION HAZARD - Category 1 |

Information on the likely : Not available. routes of exposure

### Potential acute health effects

| Eye contact             | : Causes serious eye irritation.  |
|-------------------------|---|
| Inhalation              | <ul> <li>Can cause central nervous system (CNS) depression. May cause drowsiness or<br/>dizziness. May cause respiratory irritation.</li> </ul> |
| Skin contact            | : Defatting to the skin. May cause skin dryness and irritation.   |
| Ingestion               | : Can cause central nervous system (CNS) depression.  |
| Symptoms related to the | e physical, chemical and toxicological characteristics  |

## Section 11. Toxicological information

| Eye contact                    | : Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness  |
|--------------------------------|---|
| Inhalation                     | : Adverse symptoms may include the following:<br>respiratory tract irritation<br>coughing<br>nausea or vomiting<br>headache<br>drowsiness/fatigue<br>dizziness/vertigo<br>unconsciousness |
| Skin contact                   | : Adverse symptoms may include the following:<br>irritation<br>dryness<br>cracking  |
| Ingestion                      | : No specific data.   |
| Delayed and immediate effect   | ts and also chronic effects from short and long term exposure   |
| Short term exposure            |   |
| Potential immediate<br>effects | : Not available.  |
| Potential delayed effects      | : Not available.  |
| <u>Long term exposure</u>      |   |
| Potential immediate<br>effects | : Not available.  |
| Potential delayed effects      | : Not available.  |
| Potential chronic health eff   | ects  |
| Not available.                 |   |
| General                        | : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.  |
| Carcinogenicity                | : Suspected of causing cancer if inhaled. Risk of cancer depends on duration and level of exposure.   |
| Mutagenicity                   | : No known significant effects or critical hazards.   |
| Teratogenicity                 | : No known significant effects or critical hazards.   |
| Developmental effects          | : No known significant effects or critical hazards.   |
| Fertility effects              | : No known significant effects or critical hazards.   |
| Numerical measures of toxic    | <u>ity</u>  |
| Acute toxicity estimates       |   |
|                                |   |

Not available.

## Section 12. Ecological information

### **Toxicity**

| Product/ingredient name    | Result  | Species   | Exposure   |
|----------------------------|---|---|--|
| methyl acetate<br>n-hexane | Acute LC50 320000 µg/l Fresh water<br>Acute EC50 0.89 mg/l<br>Acute EC50 3.9 mg/l<br>Acute LC50 2500 µg/l Fresh water<br>Chronic NOEC 4.9 mg/l<br>Chronic NOEC 2.8 mg/l | Fish - Pimephales promelas<br>Algae<br>Crustaceans<br>Fish - Pimephales promelas<br>Crustaceans<br>Fish - rainbow trout | 96 hours<br>96 hours<br>48 hours<br>96 hours<br>21 days<br>28 days |

### Persistence and degradability

Titebond PROvantage Heavy Duty Construction Adhesive

## Section 12. Ecological information

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| n-hexane                | -                 | -          | Readily          |

### Bioaccumulative potential

| Product/ingredient name  | LogP <sub>ow</sub> | BCF                    | Potential           |
|--|--------------------|------------------------|---------------------|
| methyl acetate<br>n-hexane<br>6,6'-di-tert-butyl-2,2'-<br>methylenedi-p-cresol | 0.18<br>4<br>6.25  | -<br>501.187<br>549.54 | low<br>high<br>high |

### Mobility in soil

| Soil/water partition coefficient (Koc) | : Not available.                                    |
|--|---|
| Other adverse effects                  | : No known significant effects or critical hazards. |

## Section 13. Disposal considerations

| Disposal methods | : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere |
|------------------|--|
|                  | inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact  |
|                  | with soil, waterways, drains and sewers.   |

## Section 14. Transport information

|                               | DOT<br>Classification                           | TDG<br>Classification                           | Mexico<br>Classification                        | ADR/RID   | IMDG  | ΙΑΤΑ  |
|-------------------------------|---|---|---|---|---|---|
| UN number                     | UN1133  | 1133  | 1133  | 1133  | 1133  | 1133  |
| UN proper<br>shipping name    | ADHESIVES,<br>containing<br>flammable<br>liquid | ADHESIVES,<br>containing<br>flammable<br>liquid | ADHESIVES,<br>containing<br>flammable<br>liquid | ADHESIVES,<br>containing<br>flammable<br>liquid | ADHESIVES,<br>containing<br>flammable<br>liquid | ADHESIVES,<br>containing<br>flammable<br>liquid |
| Transport<br>hazard class(es) | $\diamond$                                      | $\diamond$                                      | $\diamond$                                      | 3   | 3   | 3   |
| Packing group                 | Ш   | 111   | ш   | ш   | 111   | Ш   |
| Environmental<br>hazards      | No.   | No.   | No.   | No.   | No.   | No.   |

Additional information

**DOT Classification** 

: Remarks Limited quantity

10/14

## Section 14. Transport information

| _                            | - |   |
|------------------------------|---|---|
| TDG Classification           | : | Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).<br><u>Remarks</u> Limited quantity  |
| Mexico Classification        | 1 | Remarks Limited quantity  |
| ADR/RID                      | 1 | Tunnel code (D/E)   |
|                              |   | Remarks Limited quantity  |
| IMDG                         | 1 | Remarks Limited quantity  |
| Special precautions for user | : | <b>Transport within user's premises:</b> always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage. |

## Section 15. Regulatory information

### U.S. Federal regulations

### SARA 302/304

Composition/information on ingredients

|                |   |  |                                  | SARA 3                  | 02 TPQ       | SARA 30 | 04 RQ     |
|----------------|---|--|----------------------------------|-------------------------|--------------|---------|-----------|
| Name           |   | %  | EHS                              | (lbs)                   | (gallons)    | (lbs)   | (gallons) |
| vinyl acetate  |   | ≤0.3   | Yes.                             | 1000                    | 129          | 5000    | 644.8     |
| SARA 304 RQ    | : 2145669.  | 5 lbs / 974134 kg  | [206383                          | gal / 7812              | 244.7 L]     |         |           |
| SARA 311/312   |   |  |                                  |                         |              |         |           |
| Classification | EYE IRR<br>CARCING<br>SPECIFIC<br>irritation)<br>SPECIFIC<br>Category | BLE LIQUIDS - C<br>TATION - Catego<br>DGENICITY (inha<br>C TARGET ORG/<br>- Category 3<br>C TARGET ORG/<br>3<br>Defatting irritant | ory 2A<br>lation) - (<br>AN TOXI | Category 2<br>CITY (SIN | IGLE EXPOSUF |         | 5         |

### **Composition/information on ingredients**

| Name           | %         | Classification   |
|----------------|-----------|--|
| Low VOC Premix | ≥50 - ≤75 | FLAMMABLE LIQUIDS - Category 2<br>EYE IRRITATION - Category 2A<br>CARCINOGENICITY - Category 2<br>TOXIC TO REPRODUCTION (Fertility) - Category 2<br>TOXIC TO REPRODUCTION (Unborn child) - Category 2<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)<br>(Respiratory tract irritation) - Category 3<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)<br>(Narcotic effects) - Category 3<br>HNOC - Defatting irritant |
| methyl acetate | ≤10       | FLAMMABLE LIQUIDS - Category 2<br>EYE IRRITATION - Category 2A<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)<br>(Respiratory tract irritation) - Category 3  |

## Section 15. Regulatory information

|                          |      | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)<br>(Narcotic effects) - Category 3 |
|--------------------------|------|---|
| n-hexane                 | ≤3   | FLAMMABLE LIQUIDS - Category 2  |
|                          |      | SKIN IRRITATION - Category 2  |
|                          |      | EYE IRRITATION - Category 2A  |
|                          |      | TOXIC TO REPRODUCTION (Fertility) (inhalation) - Category 2                         |
|                          |      | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)                                    |
|                          |      | (Respiratory tract irritation) - Category 3   |
|                          |      | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)                                    |
|                          |      | (Narcotic effects) - Category 3   |
|                          |      | SPECIFIC TARGET ORGAN TOXICITY (REPEATED  |
|                          |      | EXPOSURE) - Category 1  |
|                          |      | SPECIFIC TARGET ORGAN TOXICITY (REPEATED  |
|                          |      | EXPOSURE) (peripheral nervous system) (inhalation) - Category                       |
|                          |      |   |
|                          |      | ASPIRATION HAZARD - Category 1  |
| 6,6'-di-tert-butyl-2,2'- | ≤0.3 |   |
| methylenedi-p-cresol     |      | TOXIC TO REPRODUCTION (Fertility) (oral) - Category 2                               |
|                          |      | TOXIC TO REPRODUCTION (Unborn child) (oral) - Category 2                            |

#### SARA 313

|                                    | Product name | CAS number           | %          |
|------------------------------------|--------------|----------------------|------------|
| Form R - Reporting<br>requirements |              |                      | ≤3<br>≤0.3 |
| Supplier notification              |              | 110-54-3<br>108-05-4 | ≤3<br>≤0.3 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

#### State regulations

| Massachusetts | : The following components are listed: METHYL ACETATE; HEXANE; N-HEXANE  |
|---------------|--|
| New York      | : The following components are listed: Hexane; Vinyl acetate   |
| New Jersey    | <ul> <li>The following components are listed: METHYL ACETATE; ACETIC ACID, METHYL<br/>ESTER; n-HEXANE; HEXANE; VINYL ACETATE; ACETIC ACID ETHENYL ESTER</li> </ul> |
| Pennsylvania  | <ul> <li>The following components are listed: ACETIC ACID, METHYL ESTER; HEXANE;<br/>ACETIC ACID ETHENYL ESTER</li> </ul>  |
|               |  |

### California Prop. 65

**WARNING**: This product can expose you to methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

| •        |   | Maximum<br>acceptable dosage<br>level |
|----------|---|---------------------------------------|
| methanol | - | -                                     |

#### **International regulations**

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

### Montreal Protocol (Annexes A, B, C, E)

Not listed.

### Stockholm Convention on Persistent Organic Pollutants

Not listed.

## Section 15. Regulatory information

**Rotterdam Convention on Prior Informed Consent (PIC)** Not listed.

## **UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

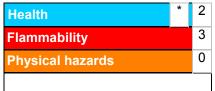
### Inventory list

China

- : Not determined.
- United States TSCA 8(b) inventory
- : All components are listed or exempted.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

#### Procedure used to derive the classification

| Classification  | Justification   |
|---|---|
| FLAMMABLE LIQUIDS - Category 2<br>EYE IRRITATION - Category 2A<br>CARCINOGENICITY (inhalation) - Category 2<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract<br>irritation) - Category 3<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) -<br>Category 3 | Expert judgment<br>Expert judgment<br>Expert judgment<br>Expert judgment<br>Expert judgment |
| History<br>Date of printing : 4/25/2018   |   |
| Date of issue/Date of revision : 4/24/2018  | Version : 1 13/14   |

## Section 16. Other information

| Date of issue/Date of revision | : 4/24/2018   |
|--------------------------------|---|
| Date of previous issue         | : No previous validation  |
| Version                        | : 1   |
| Key to abbreviations           | : ATE = Acute Toxicity Estimate<br>BCF = Bioconcentration Factor<br>GHS = Globally Harmonized System of Classification and Labelling of Chemicals<br>IATA = International Air Transport Association<br>IBC = Internediate Bulk Container<br>IMDG = International Maritime Dangerous Goods<br>LogPow = logarithm of the octanol/water partition coefficient<br>MARPOL = International Convention for the Prevention of Pollution From Ships, 1973<br>as modified by the Protocol of 1978. ("Marpol" = marine pollution)<br>UN = United Nations |
| References                     | : Not available.  |

✓ Indicates information that has changed from previously issued version.

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