



iLevel Subfloor Adhesive

Weyerhaeuser Company
 PO Box 9777
 Federal Way, WA 98063-9777
<http://www.weyerhaeuser.com/Sustainability/MSDS>

Emergency Phone: (253) 924-5000
 Additional Information: (253) 924-3865
 CHEMTREC: (800) 424-9300
 Revised Date: March 28, 2008

1. Product Identification

Product	Manufacturing Location(s)
iLevel™ Subfloor Adhesive	USA: ITW TAAC Rockland, MA Canada: none

Synonyms: Bonding Agent, Glue

2. Hazardous Ingredients/Identity Information

Name	CAS#	Percent	Agency	Exposure Limits	Comments
Silica, Crystalline (Quartz)	14808-60-7	0.1- 1	OSHA	PEL-TWA 10 mg/m ³	Quartz - respirable
			OSHA	PEL-TWA 30 mg/m ³	Quartz - total dust
			ACGIH	TLV-TWA 0.025 mg/m ³	Respirable fraction
Ammonia (NH ₃) ¹	7664-41-7	< 0.5	OSHA ACGIH	PEL-TWA 50 ppm TLV-TWA 25 ppm TLV-STEL 35 ppm	None None None
Ethylene glycol ² (CH ₂ OHCH ₂ OH)	107-21-1	<1	ACGIH	TLV-STEL 100 mg/m ³	Ceiling (aerosol only)
Diethylene glycol ³ (C ₄ H ₁₀ O ₃)	111-46-6	<1	OSHA ACGIH	None None	
Titanium dioxide ⁴	13463-67-7	<0.2	OSHA ACGIH	PEL-TWA 15 mg/m ³ TLV-TWA 10 mg/m ³	

¹Aqua Ammonia, ²Ethylene Alcohol; Ethulene Dihydrate, ³Cellosolve; glycol ether, ⁴Titania.

3. Hazard Identification

Appearance and Odor: iLevel™ Subfloor Adhesive is a green, viscous liquid; slight odor.

Primary Health Hazards: The primary health hazards posed by this product are slight skin irritation due to prolonged, repeated contact and eye irritation upon direct contact.

CAUTION: Although it is not conducted under normal circumstances, power sanding the finished product following application of the adhesive may create airborne dust which can contain silica. Avoid sanding the finished product without an assessment of potential exposure levels and corresponding use of personal protective equipment (see section 8 below).

Continued on next page

3. Hazard Identification, (cont'd.)

Primary Route(s) of Exposure:

- Ingestion: Not considered to be a likely route of exposure.
- Skin: Prolonged, repeated contact with the product may result in slight skin irritation. Avoid contact with skin as much as possible.
- Inhalation: The product is low in volatility and is not expected to pose an inhalation hazard under normal conditions. The silica is bound in the product matrix and will not be released as a dust under normal conditions of use. Power sanding of the applied product may release silica dust; see further information on this MSDS.
- Eye: Direct contact with the product may cause minor eye irritation.

Medical Conditions Generally Aggravated by Exposure: Existing skin conditions may be exacerbated by prolonged, repeated contact with the product.

Signs and Symptoms of Exposure:

Acute Health Hazards: Irritating to the skin and eyes on contact.

Chronic Health Hazards: None are expected due to the low percentage by weight of the hazardous ingredients in this product and if airborne dusts are not created from the finished product. Power sanding may create airborne dust which can contain crystalline silica. Excessive exposure to silica, crystalline (quartz) can cause silicosis, a fibrosis or scarring of the lung tissue, characterized by cough and shortness of breath. Silicosis may occur over many years of low-level exposure and may be progressive, leading to disability and possibly death. Silica, crystalline (quartz) of respirable particle size is listed by some organizations as a known human carcinogen.

Carcinogenicity Listing:

- NTP: Silica, Crystalline (quartz) is known to be a Human Carcinogen
- IARC Monographs: Silica, Crystalline (quartz) Group 1, Carcinogenic to Humans
Titanium dioxide - Group 2B, Possibly carcinogenic to humans.
- OSHA Regulated: Not Listed

4. Emergency and First-Aid Procedures

Ingestion: Not a typical route of occupational exposure. Small amounts are not expected to produce adverse health effects. If larger amounts are ingested, seek medical attention immediately.

Eye Contact: Flush eyes with clean water for at least 15 minutes. Seek medical help if irritation persists.

Skin Contact: Wash exposed skin with mild soap and water. A mild moisturizing cream may assist with reducing symptoms of skin irritation. Seek medical attention if rash, irritation or dermatitis persists.

Skin Absorption: Not known to occur under normal use.

Inhalation: Remove worker to fresh air. Seek medical attention if persistent irritation, severe coughing or breathing difficulty occurs. Provide medical personnel a copy of this Material Safety Data Sheet.

Note to Physician: None

5. Fire and Explosion Data

Flash Point (Method Used): > 200° F

Flammable Limits: LFL = NAV UFL = NAV

Extinguishing Media: Water spray, carbon dioxide, dry chemical or foam.

Autoignition Temperature: NAV. This is a Class IIIB liquid.

Special Firefighting Procedures: After water evaporates, remaining material will burn. Breathing apparatus should be worn when fighting fires in enclosed or poorly ventilated areas.

Unusual Fire and Explosion Hazards: Thermal decomposition products may cause a health hazard as aldehydes; oxides of carbon and nitrogen are anticipated.

HMIS Rating (Scale 0-4): Health = 2 Fire = 1 Physical Hazard = 0

NFPA Rating (Scale 0-4): Health = 1 Fire = 1 Reactivity = 0

6. Accidental Release Measures

Steps to be Taken In Case Material Is Released or Spilled: Confine spill to a small area. Use absorbent material to clean up. Place in container for disposal according to local environmental regulations.

7. Handling and Storage

Precautions to be Taken In Handling and Storage: Do not store above 125° F (51.7° C) or below freezing or damage to product may occur.

Other Precautions: For professional or industrial use only. Always read and follow label instructions. Keep out of reach of children. Not for consumption. Do not smoke while using/applying this product. Avoid skin and eye contact. To prevent build-up and inhalation of vapors from this product, ensure proper ventilation by opening windows and doors to achieve adequate natural ventilation or provide mechanical dilution ventilation if necessary. Turn off all pilot lights, flames, stoves, heaters, electric motors, welding equipment and other sources of ignition. Never use a welding or cutting torch on or near product containers. Close product containers when not in use. Empty product containers must not be washed or re-used for any purpose. Containers may be hazardous when empty. Wash hands thoroughly after handling. For spray applications, use only with approved spray equipment.

CAUTION: Avoid sanding the finished product following application of the adhesive - power sanding may create airborne dust which can contain crystalline silica.

8. Exposure Control Measures, Personal Protection

Personal Protective Equipment:

RESPIRATORY PROTECTION – If the product is power sanded where the exposure limit may be exceeded and engineering controls are not feasible, a half-face high efficiency particulate respirator (e.g. NIOSH type N100 filter) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. Any other respirator requirements should be evaluated and implemented as part of a respiratory protection program (e.g. OSHA 1910.134 in the USA).

EYE PROTECTION – Safety glasses. Use a face shield if spraying product.

PROTECTIVE GLOVES – Impervious chemical gloves are recommended to avoid repeated or prolonged skin contact.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT – General protective clothing to suit work conditions.

WORK/HYGIENE PRACTICES – Follow good hygiene and housekeeping practices.

Ventilation:

LOCAL EXHAUST – Not likely to be needed. Natural ventilation should be adequate under normal conditions.

MECHANICAL (GENERAL) – Not likely to be needed. To prevent build-up of vapors from this product, ensure proper ventilation by opening windows and doors to achieve adequate natural ventilation or provide mechanical dilution ventilation if necessary.

SPECIAL – Self-contained breathing apparatus (SCBA) recommended when fighting a fire.

OTHER – NAP

9. Physical/Chemical Properties

Physical Description: iLevel™ Subfloor Adhesive is a green, viscous liquid with a slight odor.

Boiling Point (@ 760 mm Hg): >212° F (100° C)

Evaporation Rate (Butyl Acetate = 1): Slower than n-Butyl Acetate

Freezing Point: NAV

Melting Point: NAV

Continued on next page

9. Physical/Chemical Properties, (cont'd.)

Molecular Formula:	Mixture
Molecular Weight:	Mixture
Oil-water Distribution Coefficient:	NAV
Odor Threshold:	NAV
pH:	NAV
Solubility in Water (% by weight):	Insoluble
Specific Gravity (H₂O = 1):	1.305
Vapor Density (air = 1; 1 atm):	NAV
Vapor Pressure (mm Hg):	NAV
Viscosity:	NAV
% Volatile by Volume [@ 70° F (21° C)]:	NAV

10. Stability and Reactivity

Stability: Unstable Stable

Conditions to Avoid: None known.

Incompatibility (Materials to Avoid): Strong acids or alkaline materials.

Hazardous Decomposition or By-Products: Thermal decomposition products include fumes, smoke, carbon monoxide, aldehydes, carbon dioxide and oxides of nitrogen in the case of incomplete combustion.

Hazardous Polymerization: May occur Will not occur

Sensitivity to Mechanical Impact: NAP

Sensitivity to Static Discharge: NAP

11. Toxicological Information

Toxicity Data: No information is available for the product in purchased form.

Components: Individual component information is listed below if available, for informational and relative comparison purposes only (these results are for exposure to the components in concentrated forms). The concentration of these components in the product, as purchased and used as intended, is not anticipated to expose the user to any of the listed effects.

Silica, crystalline (quartz): Mammalian acute toxicity data: Oral LD₅₀ rat 500 mg/kg. LDLo intraperitoneal rat 200 mg/kg (form unspecified). Carcinogenity and chronic effects: Fibrosis and enlarged mediastinal lymph nodes reported in rats inhaling 10 mg/m³ for 1 year.

Ethylene Glycol: Oral rat LD₅₀: 4700 mg/kg; skin rabbit LD₅₀: 9530 mg/kg.
Irritation - skin rabbit: 555mg (open), mild; eye rabbit: 500mg/24H, mild.
Investigated as a tumorigen, mutagen, and reproductive effector. Results have shown teratogenic effects in laboratory animals.

Diethylene Glycol: Oral rat LD₅₀: 12565 mg/kg. Skin rabbit LD₅₀: 11.89 g/kg Irritation: eye rabbit, standard Draize: 50 mg mild. Investigated as a tumorigen and reproductive effector and results were negative.

Ammonia: Mammalian acute toxicity data: LD₅₀ oral rat 350 mg/kg. LC₅₀ (1 hour) inhalation rat, mouse, rabbit 3360-7050 mg/m³. Human toxicity: LCLo human inhalation 7,000 mg/m³/3 hour.

Target Organs: Eyes, skin, and respiratory system.

12. Ecological Information

Environmental Fate: No information is available for the product in purchased form. Titanium is the ninth most abundant element in the earth's crust, and titanium dioxide occurs widely in geologic materials. Titanium dioxide was nontoxic to Daphnia up to 1000 mg/L. Ethylene glycol undergoes rapid

Continued on next page

12. Ecological Information, (cont'd.)

Environmental Fate: (cont'd.)

biodegradation in aerobic and anaerobic environments (100% removal of EG within 24 h to 28 days). In air ethylene glycol reacts with photo-chemically produced hydroxyl radicals with a resulting atmospheric half-life of 2 days. Diethylene glycol is not expected to partition to soil or sediment and can be expected to biodegrade quickly in soil or water. Ammonia is fully soluble in water and readily metabolized by bacteria. Ammonia would not be expected to pose any localized environmental hazard at the very amounts contained in the product.

Environmental Toxicity: No information is available for the product in purchased form.

Components:

Ethylene Glycol: The LC50/96-hour values for fish are over 100 mg/l.

Diethylene Glycol: The EC50/96-hour value for fathead minnow is over 100 mg/l and for Daphnia is 0.3-1.0 mg/L.

13. Disposal Considerations

Waste Disposal Method: Do not burn the empty containers with waste at the site. Dispose of in accordance with federal, state, local and provincial regulations.

14. Transport Information

Mode: (Air, Land, water) Not regulated as a hazardous material by the U.S. Department of Transportation. Not listed as a hazardous material in Canadian Transportation of Dangerous Goods (TDG) regulations.

Proper Shipping Name:	NAP
Hazard Class:	NAP
UN/NA ID Number:	NAP
Packing Group:	NAP
Information Reported for Product/Size:	NAP

15. Regulatory Information

TSCA: Ingredients Silica - crystalline quartz, ammonia, ethylene glycol, diethylene glycol, formaldehyde (trace amounts) are on the TSCA inventory.

CERCLA: The following ingredients are on the CERCLA Lists: ammonia, RQ = 100 lbs.; ethylene glycol, RQ = 5,000 lbs; formaldehyde RQ = 100 lbs.

DSL: The following ingredients are on the Canadian Domestic Substance List (DSL) inventory: silica (crystalline quartz); ammonia; ethylene glycol; diethylene glycol; and formaldehyde.

OSHA: This product is regulated by OSHA under the Hazard Communication ("Employee Right-to-Know") Standard (29 CFR §1910.1200).

STATE RIGHT-TO-KNOW:

California – This product contains substances identified on the Proposition 65 list at levels that pose a significant risk for purposes of Section 25249.10(c) or result in an observable effect for purposes of Section 25249.10(c) of the Act. Ingredients: Silica, crystalline quartz (inhalable fraction) and formaldehyde.

NOTE: This product contains trace amounts of formaldehyde (CAS# 50-00-0) in trace amounts. Environmental Chamber tests were conducted on the adhesive, simulating standard application techniques. The results indicated that the emissions from the cured adhesive were below the California - No Significant Risk Level (NSRL) limit of 40µg/day.

New Jersey – This product contains silica; ethylene glycol; ammonia, formaldehyde; and titanium dioxide, chemicals which are listed in New Jersey.

Continued on next page

15. Regulatory Information (cont'd.)

Pennsylvania – This product contains quartz (SiO₂); ammonia; formaldehyde; and titanium dioxide; chemicals which are listed in Pennsylvania.

SARA 313 Information:

This product contains the following ingredients listed on the SARA Title III Section 313 List of Toxic Chemicals: ammonia and ethylene glycol.

SARA 311/312 Hazard Category:

An immediate (acute) health hazard	Yes
A delayed (chronic) health hazard	Yes
A corrosive hazard	No
A fire hazard	No
A reactivity hazard	No
A sudden release hazard	No

FDA: This product is not intended to be ingested or used as a food contact material.

WHMIS Classification: This is a controlled product. silica (crystalline quartz) - Class D2A - Chronic toxicity, Carcinogenicity (IARC Group 1). Ethylene glycol Class D2A - Other effects - Very toxic (embryotoxic and teratogenic in animal studies).

16. Additional Information

Date Prepared: 07/04/2007

Date Revised: 03/28/2008

Prepared By: Weyerhaeuser Company Corporate Environment, Health & Safety

Weyerhaeuser MSDS available on: <http://www.weyerhaeuser.com/Sustainability/MSDS>

User's Responsibility: The information contained in this Material Safety Data Sheet is based on the experience of occupational health and safety professionals and comes from sources believed to be accurate or otherwise technically correct. It is the user's responsibility to determine if the product is suitable for its proposed application(s) and to follow necessary safety precautions. The user has the responsibility to make sure that this MSDS is the most up-to-date issue.

Definition of Common Terms:

ACGIH	= American Conference of Governmental Industrial Hygienists
AICS	= Australian Inventory of Chemical Substances
C	= Ceiling Limit
CAS#	= Chemical Abstracts System Number
DOT	= U. S. Department of Transportation
DSL	= Domestic Substance List
EC50	= Effective concentration that inhibits the endpoint to 50% of control population
EINECS	= European Inventory of Existing Commercial Chemical Substances or European List of Notified Chemical Substances
ENCS	= Japanese Existing and New Chemical Substances List
EPA	= U.S. Environmental Protection Agency
HMIS	= Hazardous Materials Identification System
IARC	= International Agency for Research on Cancer
IATA	= International Air Transport Association
IMDG	= International Maritime Dangerous Goods
KECL	= South Korean Existing Chemicals List
LC50	= Concentration in air resulting in death to 50% of experimental animals
LCLo	= Lowest concentration in air resulting in death
LD50	= Administered dose resulting in death to 50% of experimental animals
LDLo	= Lowest dose resulting in death
LEL	= Lower Explosive Limit

Continued on next page

16. Additional Information, (cont'd.)

LFL	=	Lower Flammable Limit
MSHA	=	Mine Safety and Health Administration
NAP	=	Not Applicable
NAV	=	Not Available
NFPA	=	National Fire Protection Association
NIOSH	=	National Institute for Occupational Safety and Health
NPRI	=	Canadian National Pollution Release Inventory
NTP	=	National Toxicology Program
OSHA	=	Occupational Safety and Health Administration
PEL	=	Permissible Exposure Limit
RCRA	=	Resource Conservation and Recovery Act
STEL	=	Short-Term Exposure Limit (15 minutes)
STP	=	Standard Temperature and Pressure
TCLo	=	Lowest concentration in air resulting in a toxic effect
TDG	=	Canadian Transportation of Dangerous Goods
TDLo	=	Lowest dose resulting in a toxic effect
TLV	=	Threshold Limit Value
TSCA	=	Toxic Substance Control Act
TWA	=	Time-Weighted Average (8 hours)
UFL	=	Upper Flammable Limit
WHMIS	=	Workplace Hazardous Materials Information System