

SAFETY DATA SHEET**TEC WOOD PERFECT**

Version 0.0

Revision Date 00/00/0000

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : TEC WOOD PERFECT
Product code : 100000034682

Manufacturer or supplier's details

Company : H.B. Fuller Company
Address : 1200 Willow Lake Boulevard
Vadnais Heights, MN 55110
Telephone : 1-651-236-5842

Medical Emergency Phone Number (24 Hours): 1-888-853-1758

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

Recommended use of the chemical and restrictions on use

Recommended use : Isocyanate based product
Restrictions on use : For industrial use only.

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance	Liquids
Color	light brown
Odor	Characteristic

GHS Classification

Skin irritation : Category 2
Eye irritation : Category 2A
Respiratory sensitisation : Category 1
Skin sensitisation : Category 1
Specific target organ toxicity - repeated exposure : Category 2
Specific target organ toxicity - repeated exposure (Inhalation) : Category 2 (Respiratory Tract)

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements:

SAFETY DATA SHEET**TEC WOOD PERFECT**

Version 0.0

Revision Date 00/00/0000

H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H373 May cause damage to organs through prolonged or repeated exposure. H373 May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

Precautionary Statements:

Prevention: P260 Do not breathe mist or vapours. P264 Wash skin thoroughly after handling. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/ eye protection/ face protection. P285 In case of inadequate ventilation wear respiratory protection.

Response: P302 + P352 IF ON SKIN: Wash with plenty of water. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor. P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects**Carcinogenicity:****IARC**

Group 1: Carcinogenic to humans During normal handling of the product, this substance is encapsulated within the product and will not present a cancer exposure risk.

quartz (SiO₂)

14808-60-7

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

Known to be human carcinogen During normal handling of the product, this substance is encapsulated within the product and will not present a cancer exposure risk.

quartz (SiO₂)

14808-60-7

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration [%]
calcium carbonate	471-34-1	45 - 70
limestone	1317-65-3	45 - 70
4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with .alpha -hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl)	9048-57-1	10 - 30
Glass, oxide, chemicals	65997-17-3	1 - 5
Sodium borosilicate	50815-87-7	1 - 5
4,4'-methylenediphenyl diisocyanate	101-68-8	1 - 5
quartz (SiO ₂)	14808-60-7	0.1 - 1

SECTION 4. FIRST AID MEASURES

General advice : Even minimal concentrations of isocyanate can lead to a

SAFETY DATA SHEET

TEC WOOD PERFECT

Version 0.0

Revision Date 00/00/0000

reaction in sensitised people.

Symptoms that may occur include the following:

irritation of the eyes, nose, throat and lungs, possibly together with a dry throat, a feeling of chest tightness and breathing difficulties.

Immediately remove clothing if soiled by product.

Show this safety data sheet to the doctor in attendance.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- | | |
|---|---|
| If inhaled | : Remove person to fresh air. If signs/symptoms continue, get medical attention.
In case of unconsciousness bring patient into stable side position for transport. |
| In case of skin contact | : Wash off with polyethylene glycol and afterwards with plenty of water.
Use a mild soap if available.
Treat affected skin with cotton wool or cellulose.
Call a physician if irritation develops or persists. |
| In case of eye contact | : Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
Protect unharmed eye. |
| If swallowed | : Do NOT induce vomiting.
If accidentally swallowed obtain immediate medical attention. |
| Most important symptoms and effects, both acute and delayed | : Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause damage to organs through prolonged or repeated exposure. |
| Notes to physician | : In instances of existing sensitisation towards isocyanates, a doctor should be consulted with regards to work-related contact with other sensitising substances, or substances which irritate the airway. |

Treatment for exposure should be geared towards monitoring symptoms and the patient's clinical condition.

It must be ensured that the patient has sufficient ventilation and oxygen supply.

Isocyanates can cause sensitisation of the airways, or asthma-like symptoms (bronchospasms). Delayed breathing symptoms, including lung oedema, may occur.

People who have shown signs of breathlessness after considerable exposure should remain under observation for 24-48 hours.

SAFETY DATA SHEET**TEC WOOD PERFECT**

Version 0.0

Revision Date 00/00/0000

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Alcohol-resistant foam
Dry powder
Carbon dioxide (CO₂)
- Unsuitable extinguishing media : Do NOT use water jet.
- Specific hazards during fire fighting : May release toxic, irritating and/or corrosive gases.
In case of fire CO, NO_x, isocyanates and traces of HCN can be formed.
- Specific extinguishing methods :
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for fire-fighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Use breathing protection against the effects of fumes/dust/aerosol.
Evacuate personnel to safe areas.
Ensure adequate ventilation.
- : Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : The product should not be allowed to enter drains, water courses or the soil.
- If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Ensure adequate ventilation.
Send for recovery or disposal in suitable containers.
- Dispose of contaminated material as waste according to section 13.

SAFETY DATA SHEET

TEC WOOD PERFECT

Version 0.0

Revision Date 00/00/0000

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Take note of emission threshold.
Avoid formation of aerosol.
Do not heat the product.
Ensure that suitable extractors are available on processing machines.
Handle with care. Avoid inhalation and skin contact.
Keep eye wash bottle available on working place.
Avoid release to the environment.
Keep out of reach of children.
- Ensure good ventilation. This can be achieved by using a local exhaust or general exhaust system. If these measures are insufficient to keep the vapor concentration below the workplace limit, wear an adequate respiratory protective device.
- Conditions for safe storage : Do not freeze.
Keep tightly closed in a dry, cool and well-ventilated place.
Protect against light.
- Materials to avoid : Keep away from food, drink and animal feedingstuffs.
Never allow product to get in contact with water during storage.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
calcium carbonate	471-34-1	PEL (Total dust)	10 mg/m3	CAL PEL
		PEL (respirable dust fraction)	5 mg/m3	CAL PEL
		TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
limestone	1317-65-3	TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total)	15 mg/m3	OSHA P0
		TWA	5 mg/m3	OSHA P0

SAFETY DATA SHEET
TEC WOOD PERFECT

Version 0.0

Revision Date 00/00/0000

		(Respirable fraction)		
		TWA (Total dust)	15 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
Glass, oxide, chemicals	65997-17-3	TWA	1 fibres per cubic centimeter	ACGIH
		TWA (Inhalable particulate matter)	5 mg/m3	ACGIH
		TWA	1 fibres per cubic centimeter	ACGIH
		TWA (fibres)	1 fibres per cubic centimeter	ACGIH
		TWA (fibres)	1 fibres per cubic centimeter	ACGIH
4,4'-methylenediphenyl diisocyanate	101-68-8	C	0.02 ppm 0.2 mg/m3	OSHA Z-1
		C	0.2 ppm 0.2 mg/m3	NIOSH REL
		TWA	0.005 ppm	ACGIH
		C	0.02 ppm 0.2 mg/m3	OSHA P0
		TWA	0.005 ppm 0.05 mg/m3	NIOSH REL
		C	0.02 ppm 0.2 mg/m3	NIOSH REL
		PEL	0.005 ppm 0.051 mg/m3	CAL PEL
		TWA	0.005 ppm 0.05 mg/m3	NIOSH REL
quartz (SiO2)	14808-60-7	TWA (Respirable particulate matter)	0.025 mg/m3	ACGIH
		TWA (total dust)	30 mg/m3 / %SiO2+2	OSHA Z-3
		TWA (respirable)	10 mg/m3 / %SiO2+2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO2+5	OSHA Z-3
		TWA (Respirable fraction)	0.1 mg/m3	OSHA P0
		TWA (Respirable dust)	0.05 mg/m3	OSHA Z-1
		PEL (Respirable dust)	0.05 mg/m3	CAL PEL

SAFETY DATA SHEET

TEC WOOD PERFECT

Version 0.0

Revision Date 00/00/0000

		TWA (respirable dust fraction)	0.1 mg/m3	OSHA P0
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Engineering measures : Please take care on national and local requirements.
Use local exhaust ventilation or other engineering controls to minimize exposures.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate risk management measures (exhaust/ ventilation) are provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
In case of brief exposure or low pollution (exceeding of TLV) use breathing filter apparatus.
In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

Filter type : For short term, use combination charcoal and particulate filter or equipment with better protection.

Hand protection

Material

Remarks

: Nitrile rubber or equipment with better protection

: Direct contact with the product must be avoided by organizational measures.

The glove material has to be impermeable and resistant to the product/the substance/the preparation.

The exact break through time can be obtained from the protective glove producer and this has to be observed.

The gloves need to be disposed after the penetration time and replaced by new ones.

Apply skin protectant before working with gloves to avoid skin swellings and use a skin cleansing and skincare product after the work.

For the permanent contact gloves made of the following materials are suitable:

If longer exposure to the chemical preparation is necessary, a sturdy overglove against mechanical strain is recommended in combination with the Barrier 02-100 underglove from Ansell or other suppliers (penetration time: 480 min).

For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:

Butyl rubber (minimum thickness: 0.7 mm; penetration time: 15 min)

SAFETY DATA SHEET**TEC WOOD PERFECT**

Version 0.0

Revision Date 00/00/0000

As protection from splashes gloves made of the following materials are suitable:

Nitril (minimum thickness 0.12 mm), Disposable gloves with long cuffs

After contact with the chemical preparation, take the disposable nitrile glove off immediately and put on a new disposable nitrile glove.

Eye protection : Tightly fitting safety goggles or equipment with better protection

Skin and body protection : Protective clothing

When carrying out activities where unintentional skin contact with the isocyanate-based product may occur (e.g. during maintenance work, or when opening a barrel), wear long-sleeved protective clothing and gloves.

Protective measures : Instantly remove any soiled and impregnated garments.
Wash hands before breaks and immediately after handling the product.
Avoid contact with the eyes and skin.
Store protective clothing separately.
Keep away from food, drink and animal feedingstuffs.

Wear suitable protective clothing.
When carrying out activities where unintentional skin contact with the isocyanate-based product may occur (e.g. during maintenance work, or when opening a barrel), wear long-sleeved protective clothing and gloves.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquids
Color	: light brown
Odor	: Characteristic
Odor Threshold	: is not determined
pH	: is not determined
Melting point/freezing point	: is not determined
Boiling point/boiling range	: is not determined
Flash point	: Not applicable
Evaporation rate	: is not determined
Flammability (solid, gas)	: Not classified as a flammability hazard
Relative vapor density	: is not determined
Density	: 1.27 g/cm ³
Solubility(ies)	

SAFETY DATA SHEET**TEC WOOD PERFECT**

Version 0.0

Revision Date 00/00/0000

Water solubility	: partly soluble, reacts with water
Partition coefficient: n-octanol/water	: no data available
Autoignition temperature	: is not determined
Thermal decomposition	: Not applicable
Explosive properties	: Not explosive

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.
Chemical stability	: No decomposition if used according to the specifications.
Possibility of hazardous reactions	: Reacts with alcohols, amines, aqueous acids and alkalis. Mixture reacts with water resulting in evolution of CO ₂ . Evolution of CO ₂ in closed containers causes overpressure and produces a risk of bursting.
Conditions to avoid	: No further relevant information available.
Incompatible materials	: Amines Strong acids and strong bases
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Nitrogen oxides (NO _x) Isocyanates Additional information: Open and release pressure carefully with pressurised containers.

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Product:**

Acute inhalation toxicity	: Acute toxicity estimate : 72.86 mg/l Exposure time: 4 Hours Test atmosphere: dust/mist Method: Calculation method
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Components:**4,4'-methylenediphenyl diisocyanate:**

Acute inhalation toxicity	: Acute toxicity estimate : 1.5 mg/l Test atmosphere: dust/mist Method: Expert judgement
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SAFETY DATA SHEET**TEC WOOD PERFECT**

Version 0.0

Revision Date 00/00/0000

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Aspiration toxicity

No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**

No data available

Persistence and degradability

No data available

Bioaccumulative potential**Mobility in soil****Product:**

Mobility

: Medium: Soil

Remarks: Do not allow product to reach ground water, water bodies or sewage system.

Other adverse effects

No data available

SAFETY DATA SHEET**TEC WOOD PERFECT**

Version 0.0

Revision Date 00/00/0000

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Disposal via incineration at an approved facility is recommended as industry best practice. Consult state, local or provincial authorities for more restrictive requirements.

Contaminated packaging : Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION**Special precautions for user**

Not applicable

Domestic regulation**49 CFR**

Not regulated as a dangerous good

International Regulations**UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION**SARA 311/312 Hazards**

: Respiratory or skin sensitisation
Specific target organ toxicity (single or repeated exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 302

: This material does not contain any components with a section 302 EHS TPQ.

SAFETY DATA SHEET**TEC WOOD PERFECT**

Version 0.0

Revision Date 00/00/0000

SARA 313

: The following components are subject to reporting levels established by SARA Title III, Section 313:

4,4'-methylenediphenyl diisocyanate	101-68-8
Diphenylmethanediisocyanate, polymeric	9016-87-9

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

US State Regulations**California Prop 65**

, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Glass, oxide, chemicals	65997-17-3
quartz (SiO ₂)	14808-60-7

The ingredients of this product are reported in the following inventories:

TCSI	Not in compliance with the inventory
TSCA	All substances listed as active on the TSCA inventory
AIIC	Not in compliance with the inventory
DSL	All components of this product are on the Canadian DSL
ENCS	Not in compliance with the inventory
ISHL	Not in compliance with the inventory
KECI	Not in compliance with the inventory
PICCS	Not in compliance with the inventory
IECSC	Not in compliance with the inventory
NZIoC	Not in compliance with the inventory
CH INV	The formulation contains substances listed on the Swiss Inventory

REACH	Not in compliance with the inventory
	Not in compliance with the inventory
	Not in compliance with the inventory

TECI	Not in compliance with the inventory
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Inventories Legend TSCA (USA), DSL (Canada), REACH(Europe), AIIC (Australia), NZIoC (New Zealand), ENCS (Japan), KECI (Korea), PICCS (Philippines), IECSC (China), TWINV (Taiwan)

SECTION 16. OTHER INFORMATION

Prepared by: Global Regulatory Office - phone: 1-651-236-5842 - email: msds.request@hbfuller.com

SAFETY DATA SHEET

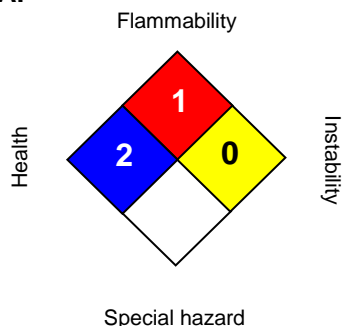
TEC WOOD PERFECT

Version 0.0

Revision Date 00/00/0000

Further information

NFPA:



HMIS III:

HEALTH	2*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to the H.B. Fuller Company from its suppliers, and because the H.B. Fuller Company has no control over the conditions of handling and use, the H.B. Fuller Company makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and the H.B. Fuller Company assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Company products to comply with all applicable federal, state and local laws and regulations.