


## MATERIALS SAFETY DATA SHEET

	MSDS No:	<b>005</b>	Issue No	<b>1</b>
	Issue Date:	<b>14/01/14</b>		
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<b>PRODUCT</b>	<b>NovaWeld SignFix 33 – (Part A &amp; B)</b>			

### 1. IDENTIFICATION OF CHEMICAL

Product Name: **NOVAWELD SIGNFIX 33 - Polyurethane Adhesive Part A**

#### Supplier:

Innova Solutions Ltd  
Lower Draught Gates Farm  
Burnley Rd  
Colne  
Lancs  
BB8 8PW  
+44(0)1282 867390  
[info@innovasolutions.co.uk](mailto:info@innovasolutions.co.uk) - [www.innovasolutions.co.uk](http://www.innovasolutions.co.uk)

### 2. COMPOSITION, INFORMATION ON INGREDIENTS:

COMPONENT	CAS NO.	Weight	ACGIH TLV	OSHA PEL
Methylene Bis (Phenylisocyanate)(MDI)	101-68-8	< 99 %	0.051 mg/m <sup>3</sup> TWA	0.20 mg/m <sup>3</sup> TWA
DiphenylmethaneDiisocyanate	26447-40-5	< 10 %	Not Established	Not Established

### 3. HAZARD IDENTIFICATION:

#### SKIN CONTACT :

Prolonged or repeated exposure may cause skin irritation. Acute skin contact :- Isocyanates reacts with skin protein & moisture & cause irritation which may include reddening, swelling, rash, scaling or blistering.

#### EYE CONTACT :

Product may be irritating to eyes. May cause temporary corneal injury.

#### INHALATION :

MDI vapors at concentrations above the TLV can irritate the mucous membranes in the respiratory tract (nose, throat, lungs) causing a runny nose, soar throat, coughing, chest discomfort, shortness of breath and reduced lung function. Persons with pre-existing, nonspecific bronchial hyperreactivity can respond to concentrations below TLV with similar symptoms as well as asthma attack. Overexposure to isocyanates has also been reported to cause lung damage (including decrease in lung function) which may be permanent.

#### INGESTION :


#### AGGRAVATED MEDICAL CONDITION:

Pre-existing eye, skin & respiratory disorders may be aggravated by exposure to fumes or vapors of this product. Existing allergies may increase the chance of developing increased allergy symptoms. Asthma, other respiratory disorders (bronchitis, emphysema, bronchial hyperreactivity), skin allergies, eczema.

#### OTHER HEALTH HAZARDS:

Lung tumors have been observed in laboratory animals exposed to aerosol droplets of MDI/Polymeric MDI (6 mg/m<sup>3</sup>) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

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#### 4. FIRST AID MEASURES

##### **Skin contact:**

Immediately remove contaminated clothing or shoes, wipe excess from skin. Wash with soap and plenty of water (warm water is preferable if readily available).

##### **EYE CONTACT :**

Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open and seek medical attention.

##### **INHALATION :**

Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing and seek medical help immediately. Asthmatic- type symptoms may develop and may be immediate or delayed up to several hours.

##### **INGESTION :**

Do not give any liquids (do not induce vomiting). Get medical help immediately. Give 1 to 2 cups of milk or water to drink. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

#### 5. FIRE FIGHTING MEASURES

**FLASH POINT :** >300°F (PMCC) **FLAMMABILITY LIMITS:** UEL % Not established

LEL % Not established

##### **EXTINGUISHING MEDIA:**

Use Dry Chemical, Carbon Dioxide, Foam or Water Fog. For large fires, alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function but much less effectively. Water is not recommended but may be applied in very large quantities as a fine spray when other extinguishing media are not available.

##### **SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS :**

Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by fire fighters. Do not enter a confined space without full bunker gear, including a positive pressure NIOSH approved self-contained breathing apparatus. During fire, irritating and toxic gases may be generated by thermal decomposition or combustion. Product reacts with water. Reaction may produce heat and / or gases.


#### 6. HANDLING AND STORAGE

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing. Employee education and training in the safe use and handling of this material are required under the OSHA Hazard communication standard. Use with adequate ventilation.

##### **STORAGE:**

Store indoors in a dry place away from heat between 64 to 86 °F. Keep containers tightly closed when not in use. Keep product from exposing to atmospheric moisture and maintain a nitrogen atmosphere in the containers at all times. Do not store product contaminated with water to prevent potential hazardous reaction. Refer to Section X of the MSDS for Reactivity and Stability data.

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### 7. EXPOSURE CONTROLS / PERSONAL PROTECTION

**EYE PROTECTION:** Safety glasses, Chemical / splash goggles.

**SKIN PROTECTION:**

Avoid contact with skin and clothing. Use permeation resistant gloves such as Butyl rubber, nitrile rubber or polyvinyl alcohol. However, please note that PVA degrades with water.

**RESPIRATORY PROTECTION:**

Atmospheric levels should be maintained below the exposure guidelines. When respiratory protection is required for certain operations, use an approved positive-pressure supplied - air respirator. Avoid breathing vapors which may be produced under some conditions such as heating or applications. Avoid breathing aerosols and mists. Use NIOSH / MSHA approved respiratory protection equipment when airborne exposure is excessive. Observe OSHA regulations for respirator use (29 CFR 1910.134).

**VENTILATION :**

Hazard control from vapor or spray mist is ideally performed by the use of engineering controls. MDI levels must be monitored.

### 8. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL FORM:** Liquid **COLOR:** Beige

**BOILING POINT:** 406 °F @ 5 mm Hg for MDI **ODOR:** Slightly musty odor

**Vapor Pressure:** < 10-5 mm Hg @ 77°F **VAPOR DENSITY:** 8.5 (MDI) (Air =1)

**EVAPORATION RATE :** Not available **Bulk Density:** 11.75 lbs/gal (N-Butyl Acetate) **Sp. Gravity:** 1.41 @ 77°F

Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guarantee analysis of any specific lot or as specifications for the product.

### 9. STABILITY AND REACTIVITY

**STABILITY:**

Product is stable under normal conditions of storage and handling. Product is very Unstable when contaminated with water.

**CONDITIONS TO AVOID :**

Avoid temperatures above 86°F. Avoid temperatures below 64°F. Avoid moisture. Product can decompose at elevated temperature..


**MATERIALS TO AVOID:**

Avoid contact with metals such as aluminum, brass, copper, galvanized metals, zinc. Reaction with water can generate carbon dioxide. Generation of gas can cause pressure build up in closed systems. Avoid contact with acids, alcohol, amines, ammonia, bases, metal compounds, moist air, strong oxidizers, water. Avoid unintended contact with polyols.

**HAZARDOUS POLYMERIZATION :**

Can occur. Polymerization can be catalyzed by strong bases and water.

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### 10. TOXICOLOGICAL INFORMATION

#### ACUTE TOXICITY:

Oral LD50 : > 15,800 mg/Kg (Rat)

Dermal LD50: > 5010 but < 7,940 mg/Kg (Rabbit)

Inhalation LC50: The 4 hour LC50 for polymeric MDI in rats ranges from 370 to 490 mg/m<sup>3</sup>. The LC50 for monomeric MDI was estimated to be between 172 and 187 mg/m<sup>3</sup>.

#### MUTAGENICITY:

Positive (Salmonella microsome test with metabolic activation; cell transformation assay). As well as negative (mouse lymphoma specific locus mutation test with or without metabolic activation) results have been observed "in vitro".

However, MDI was negative in an "in vivo" (mouse micronucleus) assay.

### 11. ECOLOGICAL EFFECTS

- Ecotoxicity: Data not available.
- Persistence: Data not available.
- Appraisal: Data not available.

### 12. DISPOSAL CONSIDERATIONS

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue. Do not heat or cut empty containers with electric or gas torch.

### 14. TRANSPORTATION INFORMATION:

#### Domestic Surface:

**PROPER SHIPPING NAME** : Not Regulated

**HAZARD CLASS or DIVISION**: Not Applicable

**UN / NA Number** : Not Applicable

**PACKING GROUP** : PG III

**DOT PRODUCT RQ, Lb.** 25000 lbs

**HAZARD LABEL(S)** : Not Applicable

**HAZARD PLACARD(S)** : Not Applicable

### 15. REGULATORY INFORMATION

#### TSCA STATUS:

All ingredients in this products are listed in the T.S.C.A. inventory.

#### CERCLA REPORTABLE QUANTITY:

5000 lbs for 4,4'-Diphenylmethane Diisocyanate , CAS # 101-68-8

#### SARA TITLE III:

**SECTION 302 EXTREMELY HAZARDOUS SUBSTANCE** :

None

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**PRODUCT**

**NovaWeld SignFix 33 – (Part A & B)**

**SECTION 311 and 312 HAZARD CATEGORIES:**

Under applicable definitions, the product is considered to meet following categories:

An immediate health hazard, A delayed health hazard and a reactive hazard.

**SECTION 313 TOXIC CHEMICALS :**

Methylene Bis (Phenylisocyanate) (MDI) CAS #: 101-68-8 < 99 % by weight

Diphenylmethane Diisocyanate CAS #: 26447-40-5 < 10 % by weight

**RCRA :**

If discarded in its purchased form, this product would not be a hazardous waste by listing. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

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**PRODUCT**

**NovaWeld SignFix 33 – (Part A & B)**

**1. IDENTIFICATION OF CHEMICAL**

Product Name: **NOVAWELD SIGNFIX 33 - Polyurethane Adhesive Part B**

**Supplier:**

Innova Solutions Ltd  
 Lower Draught Gates Farm  
 Burnley Rd  
 Colne  
 Lancs  
 BB8 8PW  
 +44(0)1282 867390  
[info@innovasolutions.co.uk](mailto:info@innovasolutions.co.uk) - [www.innovasolutions.co.uk](http://www.innovasolutions.co.uk)

**2. COMPOSITION, INFORMATION ON INGREDIENTS:**

<b>COMPONENT</b>	<b>CAS NO.</b>	<b>Weight</b>	<b>ACGIH TLV</b>	<b>OSHA</b>
<b>PEL</b>				
Polyol Blend	----	100%	N/A	N/A

**3. HAZARD IDENTIFICATION:**

**SKIN CONTACT:** Acute – May result in irritation.  
**EYE CONTACT:** Acute – May results in irritation.  
**INHALATION:** **Acute – May results in respiratory irritation.**  
**INGESTION:** **Acute – May results in gastric disturbances.**

**4. FIRST AID MEASURES**

**Skin contact:**

Immediately remove contaminated clothing or shoes, wipe excess from skin. Wash with soap and plenty of water (warm water is preferable if readily available).

**EYE CONTACT :**

Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open and seek medical attention.

**INHALATION :**

Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing and seek medical help immediately. Asthmatic- type symptoms may develop and may be immediate or delayed upto several hours.

**INGESTION :**

Do not give any liquids (do not induce vomiting). Get medical help immediately. Give 1 to 2 cups of milk or water to drink. **DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.**

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### PRODUCT

**NovaWeld SignFix 33 – (Part A & B)**

### 5. FIRE FIGHTING MEASURES

**FLASH POINT :** >320°F (PMCC) **FLAMMABILITY LIMITS:** UEL % Not established  
LEL % Not established

**EXTINGUISHING MEDIA:**

Use Dry Chemical, Carbon Dioxide, Foam or Water Fog.

**SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS :**

Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by fire fighters. Do not enter a confined space without full bunker gear, including a positive pressure NIOSH approved self-contained breathing apparatus. During fire, irritating and toxic gases may be generated by thermal decomposition or combustion. Product reacts with water. Reaction may produce heat and / or gases.

### 6. HANDLING AND STORAGE

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing. Employee education and training in the safe use and handling of this material are required under the OSHA Hazard communication standard. Use with adequate ventilation.

**STORAGE:**

Store indoors in a dry place away from heat between 64 to 86 °F. Keep containers tightly closed when not in use.

### 7. EXPOSURE CONTROLS / PERSONAL PROTECTION

**EYE PROTECTION:** Safety glasses, Chemical / splash goggles.

**SKIN PROTECTION:**

Avoid contact with skin and clothing. Use permeation resistant gloves such as Butyl rubber, nitrile rubber or polyvinyl alcohol. However, please note that PVA degrades with water.

**RESPIRATORY PROTECTION:**

Atmospheric levels should be maintained below the exposure guidelines. When respiratory protection is required for certain operations, use an approved positive-pressure supplied - air respirator. Avoid breathing vapors which may be produced under some conditions such as heating or applications. Avoid breathing aerosols and mists. Use NIOSH / MSHA approved respiratory protection equipment when airborne exposure is excessive. Observe OSHA regulations for respirator use (29 CFR 1910.134).

**VENTILATION :**

Hazard control from vapor or spray mist is ideally performed by the use of engineering controls.

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**PRODUCT****NovaWeld SignFix 33 – (Part A & B)****8. PHYSICAL AND CHEMICAL PROPERTIES****PHYSICAL FORM:** Liquid **COLOR:** Gray**BOILING POINT:** Not Available**EVAPORATION RATE :** Not available Bulk Density: 11.75 lbs/gal

(N-Butyl Acetate) Sp. Gravity: 1.41 @ 77°F

Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guarantee analysis of any specific lot or as specifications for the product.



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### PRODUCT

**NovaWeld SignFix 33 – (Part A & B)**

## 9. STABILITY AND REACTIVITY

### STABILITY:

Product is stable under normal conditions of storage and handling.

### CONDITIONS TO AVOID :

Product can decompose at elevated temperature..

### MATERIALS TO AVOID:

Avoid contact with metals such as aluminum, brass, copper, galvanized metals, zinc. Reaction with water can generate carbon dioxide. Generation of gas can cause pressure build up in closed systems. Avoid contact with acids, alcohol, amines, ammonia, bases, metal compounds, moist air, strong oxidizers, water. Avoid unintended contact with polyols.

### HAZARDOUS POLYMERIZATION :

Does not Occur.

## 10. TOXICOLOGICAL INFORMATION

Product is Non-Toxic.

## 11. ECOLOGICAL EFFECTS

- Ecotoxicity: Data not available.
- Persistence: Data not available.
- Appraisal: Data not available.

## 12. DISPOSAL CONSIDERATIONS

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue. Do not heat or cut empty containers with electric or gas torch.

## 13. TRANSPORTATION INFORMATION:

### Domestic Surface:

**PROPER SHIPPING NAME** : Not Regulated **HAZARD CLASS or DIVISION**: Not Applicable **UN / NA Number** : Not Applicable  
**PACKING GROUP** : PG III  
**DOT PRODUCT RQ**, Lb. 25000 lbs  
**HAZARD LABEL(S)** : Not Applicable  
**HAZARD PLACARD(S)** : Not Applicable

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**PRODUCT****NovaWeld SignFix 33 – (Part A & B)****14. REGULATORY INFORMATION****TSCA STATUS:**

All ingredients in this products are listed in the T.S.C.A. inventory.

**CERCLA REPORTABLE QUANTITY:****SARA TITLE III:****SECTION 302 EXTREMELY HAZARDOUS SUBSTANCE :**

None

**SECTION 311 and 312 HAZARD CATEGORIES:**

Under applicable definitions, the product is considered to meet following categories: An immediate health hazard, A delayed health hazard and a reactive hazard.

**SECTION 313 TOXIC CHEMICALS :**

If discarded in its purchased form, this product would not be a hazardous waste by listing. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.