

# Ready Bond

## TECHNICAL DATA SHEET

ITEM: AP030016

## POLYURETHANE FOAM ADHESIVE PLUS

### PRODUCT DESCRIPTION

**Ready Bond AP030016** is a single-component moisture cured polyurethane adhesive designed to provide excellent bonding strength while offering the chemical and moisture resistance properties consistent with polyurethane. Efficient and easy-to-use application system. Complies with stringent California SCAQMD 1168 Rule.

### ADVANTAGES

- Extreme High Heat Resistance
- Single Component for Ease of Use
- Extreme High Coverage
- ZERO VOC California Compliant SCAQMD 1168
- 100% Adhesive Transfer to Substrate
- Re-position-able during open time

### DIRECTIONS FOR USE

- **Ready Bond AP030016** is designed as a portable, self-contained spray system for field or shop applications.
- Shake or agitate gently before using.
- Adhesive should be applied in a thin bead to one of the surfaces to be bonded.
- Bonds should be made within 5 minutes of application. Be sure to apply adequate pressure to ensure maximum bonding!
- Bonded surfaces will begin to cure in approximately 15 minutes, depending on temperature and humidity. Full cure is reached after 24 hours.
- Clean excess adhesive immediately with solution such as citrus cleaner.

### TECHNICAL DATA

TYPICAL PROPERTIES	
Total Solids	100%
VOC Content	0 g/l
Color	White
Temperature Resistance	Up to 400F/205C
System Flammability	Flammable
Solvent System	Polymeric MDI
Open Time	5 minutes dependent on temp & humidity
Handling Strength Time	15 minutes dependent on temp & humidity
Full Cure Time	24-hour dependent on temp & humidity
Coverage	4,800 linear feet with 1" bead
Shelf Life	12 Months from date of manufacture

### PACKAGING

22L	Disposable Canister / Item # AP030016
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- Canister system will work sufficiently above 60° F. Surrounding temperature should be 25° F and rising.
- Canister system should be kept in a warm area. In the event that the canister gets too cold and/or dispenses abnormally slow, warm up before continuing usage. Warming canister by immersion in warm water is recommended.
- Notice!!! Do not store at temperatures over 120° F.

### CANISTER STORAGE/CHANGE OVER

- When hose is connected, keep canister valve open and hose pressurized at all times. To avoid adhesive curing in hose, use within 30 days.
- Do not disconnect the hose until ready to connect to a new canister.
- Release pressure in hose before disconnecting from canister and reconnect immediately. Or if not connecting hose/gun to new canister immediately, connect hose to canister of cleaning solvent to clean out.

### HANDLING AND STORAGE

- Consult Safety Data Sheet prior to use.
- Do not store at temperatures over 120°F/50°C.
- Avoid exposure to direct sunlight.
- Do not store directly on concrete floor.
- Always store above 60°F/15°C.
- When connected, keep valve open and hose pressurized at all times.
- Always test product to determine suitability for your particular application prior to use in production.

**SAFETY DATA SHEET**  
**Ready Bond AP030016 Polyurethane Foam Adhesive Plus Canister**

**1. Identification**

**Product identifier**

**Product name** Ready Bond AP030016 Polyurethane Foam Adhesive Plus Canister

**Product number** USA

**Recommended use of the chemical and restrictions on use**

**Application** Pressurized Polyurethane Foam Adhesive

**Details of the supplier of the safety data sheet**

**Supplier** Titan Adhesives / Adhesion Products  
22290 Challenger Drive  
Elkhart, IN 46514  
5749708425

**Emergency telephone number**

**Emergency telephone** Chemtrec: 1 800 424 9300

**2. Hazard(s) identification**

**Classification of the substance or mixture**

**Physical hazards** Flam. Aerosol 1 - H222 Press. Gas, Compressed - H280

**Health hazards** Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373

**Environmental hazards** Not Classified

**Human health** The liquid may be irritating to eyes, respiratory system and skin. Symptoms following overexposure may include the following: Headache. Dizziness. Nausea, vomiting.

**Label elements**

**Hazard symbols**



**Signal word**

Danger

**Hazard statements**

H222 Extremely flammable aerosol.  
H280 Contains gas under pressure; may explode if heated.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H317 May cause an allergic skin reaction.  
H351 Suspected of causing cancer.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.

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<b>Precautionary statements</b>	P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing. 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. P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C /122°F.
<b>Supplemental label information</b>	AT(o) 16.36% of the mixture consists of ingredient(s) of unknown acute oral toxicity.
<b>Contains</b>	Polymeric MDI, 1,1, Difluoroethane (152a), Monomeric MDI, 2,2'-dimorpholinyl-diethyl ether (6425-39-4)

## Other hazards

This product does not contain any substances classified as PBT or vPvB.

## 3. Composition/information on ingredients

### Mixtures

<b>Polymeric MDI</b> CAS number: 9016-87-9	<b>10-25%</b>
<b>Classification</b> Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Resp. Sens. 1 - H334 Skin Sens. 1A - H317 STOT SE 3 - H335	
<b>1,1, Difluoroethane (152a)</b> CAS number: 75-37-6	<b>10-25%</b>
<b>Classification</b> Flam. Aerosol 1 - H222 Press. Gas, Compressed - H280 Acute Tox. 4 - H332 Simple Asphyxiant - USH03	

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<b>Monomeric MDI</b> CAS number: 101-68-8	<b>10-25%</b>
<b>Classification</b> Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373	
<b>2,2'-dimorpholinyl-diethyl ether (6425-39-4)</b> CAS number: 6425-39-4	<b>1-5%</b>
<b>Classification</b> Eye Irrit. 2 - H319	

The full text for all hazard statements is displayed in Section 16.

#### 4. First-aid measures

##### Description of first aid measures

<b>General information</b>	Remove affected person from source of contamination. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention if any discomfort continues.
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention.
<b>Ingestion</b>	Get medical attention immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
<b>Skin Contact</b>	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
<b>Eye contact</b>	Remove any contact lenses and open eyelids wide apart. Only remove contact lenses if the person is conscious, coherent and they can remove them themselves. If adhesive bonding occurs, do not force eyelids apart. Continue to rinse for at least 15 minutes. If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.

##### Most important symptoms and effects, both acute and delayed

<b>Inhalation</b>	May cause coughing and difficulties in breathing. May cause eye and respiratory system irritation. Overexposure may depress the central nervous system, causing dizziness and intoxication.
<b>Ingestion</b>	Aspiration hazard if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause severe irritation of the mouth, the esophagus and the gastrointestinal tract. May Cause the following effects: Gastrointestinal symptoms, including upset stomach. Central nervous system depression. Nausea, vomiting. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

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<b>Skin contact</b>	May be absorbed through the skin. Product has a defatting effect on skin. The liquid is irritating to eyes and skin. A single exposure may cause the following adverse effects: Dryness and/or cracking.
<b>Eye contact</b>	Causes serious eye irritation. Burns can occur. A single exposure may cause the following adverse effects: Pain. Conjunctivitis, irritation, tearing. Prolonged or repeated exposure may cause the following adverse effects: Irritation of eyes and mucous membranes. Prolonged contact causes serious eye and tissue damage.

## 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

### Special hazards arising from the substance or mixture

**Specific hazards** Pressurized container: Must not be exposed to temperatures above 50°C/120°F Containers can burst violently or explode when heated, due to excessive pressure build-up. Vapors are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.

### Advice for firefighters

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** For personal protection, see Section 8. No smoking, sparks, flames or other sources of ignition near spillage.

### Environmental precautions

**Environmental precautions** Avoid discharge into drains. Contain spillage with sand, earth or other suitable non-combustible material.

### Methods and material for containment and cleaning up

**Methods for cleaning up** Stop leak if possible without risk. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb in vermiculite, dry sand or earth and place into containers. Wash thoroughly after dealing with a spillage.

## 7. Handling and storage

### Precautions for safe handling

**Usage precautions** Avoid contact with skin and eyes. Keep away from heat, sparks and open flame. Provide adequate ventilation. Avoid inhalation of vapors. Use approved respirator if air contamination is above an acceptable level. Container must be kept tightly closed when not in use. Use explosion proof electric equipment. Avoid discharge into drains or watercourses or onto the ground.

**Advice on general occupational hygiene** Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

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**Storage precautions** Keep away from heat, sparks and open flame. Keep container tightly closed. Keep only in the original container. Pressurized container: Must not be exposed to temperatures above 50°C/120°F

## Specific end uses(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.

## 8. Exposure controls/Personal protection

### Control parameters

### Occupational exposure limits

#### **1,1, Difluoroethane (152a)**

Long-term exposure limit (8-hour TWA): WEEL:US.AIHA = Workplace Environmental Exposure Level Guides 2700 mg/m<sup>3</sup>  
1000 ppm

#### **Monomeric MDI**

Long-term exposure limit (8-hour TWA): ACGIH 0.005 ppm

Ceiling exposure limit: OSHA 0.02 ppm 0.2 mg/m<sup>3</sup>

ACGIH = American Conference of Governmental Industrial Hygienists.

OSHA = Occupational Safety and Health Administration.

#### Polymeric MDI (CAS: 9016-87-9)

**Ingredient comments** No exposure limits known for ingredient(s).

#### 2,2'-dimorpholinyl-diethyl ether (6425-39-4) (CAS: 6425-39-4)

**Ingredient comments** No exposure limits known for ingredient(s).

### Exposure controls

#### **Protective equipment**



#### **Appropriate engineering controls**

This product must not be handled in a confined space without adequate ventilation. Avoid inhalation of vapors and spray/mists. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist.

#### **Eye/face protection**

Wear chemical splash goggles.

#### **Hand protection**

Use protective gloves.

#### **Other skin and body protection**

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

#### **Hygiene measures**

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

#### **Respiratory protection**

If exposure levels are likely to be exceeded, use a half face mask fitted with an organic vapor filter for short term low level exposures. For long term or high level exposures, a supplied air respirator should be used.

## 9. Physical and chemical properties

## Ready Bond AP030016 Polyurethane Foam Adhesive Plus Canister

### Information on basic physical and chemical properties

<b>Appearance</b>	Aerosol.
<b>Color</b>	Natural.
<b>Odor</b>	Characteristic.
<b>Odor threshold</b>	No information available.
<b>pH</b>	No information available.
<b>Melting point</b>	No information available.
<b>Initial boiling point and range</b>	-25°C (-13°F)
<b>Flash point</b>	> -50°C/-58°F
<b>Evaporation rate</b>	No information available.
<b>Flammability (solid, gas)</b>	Flammable Vapour
<b>Upper/lower flammability or explosive limits</b>	Lower flammable/explosive limit: 3.9 % Upper flammable/explosive limit: 16.9 %
<b>Vapor pressure</b>	No information available.
<b>Vapor density</b>	No information available.
<b>Relative density</b>	1.085
<b>Bulk density</b>	Data lacking.
<b>Solubility(ies)</b>	Insoluble in water.
<b>Partition coefficient</b>	Data lacking.
<b>Auto-ignition temperature</b>	No information available.
<b>Decomposition Temperature</b>	No information available.
<b>Viscosity</b>	No information available.
<b>Volatile organic compound</b>	This product contains a maximum VOC content of 0 g/l.

### **10. Stability and reactivity**

<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
<b>Conditions to avoid</b>	Avoid heat, flames and other sources of ignition. Avoid contact with the following materials: Oxidizing agents. Reducing agents.
<b>Hazardous decomposition products</b>	Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). Hydrogen chloride (HCl). Nitrous gases (NO <sub>x</sub> ).

### **11. Toxicological information**

#### Information on toxicological effects

##### Acute toxicity - oral

ATE oral (mg/kg) 1,325.94

##### Acute toxicity - inhalation

ATE inhalation (gases ppm) 27,506.11

ATE inhalation (vapours mg/l) 34.88

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## Toxicological information on ingredients.

### Polymeric MDI

#### Acute toxicity - oral

ATE oral (mg/kg) 500.0

#### Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l) 0.49

Species Rat

ATE inhalation (vapours mg/l) 11.0

#### Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic.

#### Specific target organ toxicity - single exposure

STOT - single exposure May cause respiratory irritation.

#### Aspiration hazard

Aspiration hazard No data available.

### 1,1, Difluoroethane (152a)

#### Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> mg/kg) 1,500.0

Species Rat

ATE oral (mg/kg) 500.0

#### Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> gases ppmV) 383,000.0

Species Rat

ATE inhalation (gases ppm) 4,500.0

#### Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic.

### Monomeric MDI

#### Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> mg/kg) 9,200.0

Species Rat

ATE oral (mg/kg) 500.0

#### Acute toxicity - inhalation



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Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l) 2.24

Species Rat

ATE inhalation (vapours mg/l) 11.0

### Serious eye damage/irritation

Serious eye damage/irritation Slightly irritating.

### Respiratory sensitization

Respiratory sensitization May cause sensitisation.

### Skin sensitization

Skin sensitization May cause sensitisation.

### Carcinogenicity

Carcinogenicity Data lacking.

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

### Specific target organ toxicity - single exposure

STOT - single exposure May cause respiratory irritation.

### Specific target organ toxicity - repeated exposure

STOT - repeated exposure Inhalation - May cause damage to organs through prolonged or repeated exposure

### Aspiration hazard

Aspiration hazard No data available.

### 2,2'-dimorpholinyldiethyl ether (6425-39-4)

Toxicological effects No data recorded.

### Carcinogenicity

Carcinogenicity No information available.

### Aspiration hazard

Aspiration hazard No data available.

## 12. Ecological information

### Bioaccumulative potential

Partition coefficient Data lacking.

## 13. Disposal considerations

### Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

## 14. Transport information

Air transport notes Cargo aircraft only. <75kg

UN Number

## Ready Bond AP030016 Polyurethane Foam Adhesive Plus Canister

UN No. (ICAO) 3501

UN No. (DOT) 3501

### UN proper shipping name

**Proper shipping name (TDG)** Chemical Under Pressure, Flammable, N.O.S. (1,1, Difluoroethane (152a))

**Proper shipping name (DOT)** Chemical Under Pressure, Flammable, N.O.S. (1,1, Difluoroethane (152a))

### Transport hazard class(es)

**DOT hazard class** 2.1

### Transport labels



### Packing group

**Packing group (International)** Not applicable.

## 15. Regulatory information

**National regulations** The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I. 2009 No. 716).

**Guidance** CHIP for everyone HSG228.  
Workplace Exposure Limits EH40.  
Safety Data Sheets for Substances and Preparations.  
Approved Classification and Labelling Guide (Sixth edition) L131.

### US Federal Regulations

#### **CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**

The following ingredients are listed or exempt:

##### *Monomeric MDI*

Final CERCLA RQ: 5000(2270) pounds (Kilograms)

#### **SARA (311/312) Hazard Categories**

##### *1,1, Difluoroethane (152a)*

Fire  
Pressure  
Hazard  
Acute  
Health hazard

##### *Polymeric MDI*

Acute  
Health hazard

##### *Monomeric MDI*

Chronic  
Health hazard  
Acute  
Health hazard

### US State Regulations

#### **California Proposition 65 Carcinogens and Reproductive Toxins**

This product does not contain any chemicals known to the State of California to cause cancer, birth or any other reproductive harm.

# Ready Bond AP030016 Polyurethane Foam Adhesive Plus Canister

## California Directors List of Hazardous Substances

The following ingredients are listed or exempt:

*Monomeric MDI*

Present.

## Massachusetts "Right To Know" List

The following ingredients are listed or exempt:

*1,1, Difluoroethane (152a)*

Present

## New Jersey "Right To Know" List

The following ingredients are listed or exempt:

*1,1, Difluoroethane (152a)*

Present.

*Polymeric MDI*

Present.

*Monomeric MDI*

Present.

## Pennsylvania "Right To Know" List

The following ingredients are listed or exempt:

*1,1, Difluoroethane (152a)*

Present.

*Polymeric MDI*

Present.

## Inventories

### US - TSCA

The following ingredients are listed or exempt:

*2,2'-dimorpholinyl diethyl ether (6425-39-4)*

Present.

*Monomeric MDI*

Present.

## 16. Other information

Revision date	2/1/2019
Revision	8
Supersedes date	11/30/2017
SDS No.	24838

## Ready Bond AP030016 Polyurethane Foam Adhesive Plus Canister

**Hazard statements in full**

H222 Extremely flammable aerosol.  
H280 Contains gas under pressure; may explode if heated.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.  
USH03 May displace oxygen and cause rapid suffocation

**ACA HMIS Health rating.** Slight hazard. (1)

**ACA HMIS Flammability rating.** Extremely flammable. (4)

**ACA HMIS Physical hazard rating.** Normally stable. (0)

**ACA HMIS Personal protection rating.** B

**DIRECTIONS FOR USE**

**PRODUCT LOGO**

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. The manufacturer MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. Given the variety of factors that can affect the use and application of this product, many of which are solely within the user's knowledge and control, the user is responsible for determining whether the usage of this product is fit for a particular purpose and suitable for the user's method of use or application. It is essential that the user, not the manufacturer, evaluates this product to determine whether it is fit for a particular purpose and suitable for the user's method of use or application.