





# SAFETY DATA SHEET

1. Product and Company Identification		
PRODUCT NUMBER:	1474	COMPANY PHONE: 1-800-241-8180
PRODUCT NAME:	EXPANDO – NEW & IMPROVED	EMERGENCY TELEPHONE: 1-800-535-5053
PRODUCT DESCRIPTION:	Aerosol Expanding, Insulating Foam Sealant	INFOTRAC: 1-800-535-5053
COMPANY INFORMATION:	<b>PRO CHEM, INC.</b> 1475 Bluegrass Lakes Parkway Alpharetta, GA 30004	

2. Hazards Identification						
<b>GHS CLASSIFICATION:</b> Flammable Aerosol: Category 1 Gases under pressure: Compressed gas Acute Toxicity (inhalation): Category 4- Inhalation Skin irritation: Category 2 Serious eye irritation: Category 2A Sensitization, respiratory: Category 1 Sensitization, skin: Category 1 Specific target organ toxicity, single exposure: Category 3 Specific target organ toxicity, repeated exposure: Category 2-inhalation	<b>SIGNAL WORD:</b> <b>DANGER</b>	<b>SYMBOL:</b>				

**HAZARD STATEMENTS:**  
 Aerosol can content under pressure and extremely flammable.  
 Do not heat above 120°F (49°C), puncture or incinerate.  
 May cause skin and serious eye irritation on direct contact.  
 May cause irritation of mucous membranes in the mouth and digestive tract if swallowed.  
 May irritate mucous membranes with tightness in chest, coughing or allergic asthma-like sensitivity if inhaled.

**PRECAUTIONARY STATEMENTS:**  
**Prevention:** Obtain special instructions before use.  
 Do not puncture or incinerate container.  
 Do not tamper with valve.  
 Do not expose to heat or store at temperatures above 120°F (49°C).  
 Use with adequate ventilation.  
 Open doors and windows or use other means to ensure fresh air supply during use and while product is drying.  
 Do not breathe gas/mist/vapors.  
 Wash hands thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 In case of inadequate ventilation wear respiratory protection.  
**Response:** IF IN EYES: Remove contact lenses if worn. Rinse with water for at least 15 minutes. If eye irritation persists, seek medical attention.  
 IF ON SKIN: Wash with plenty of soap and water. If skin irritation persists or if rash occurs, seek medical attention. Remove contaminated clothing.  
 IF INHALED: If breathing becomes labored, remove to fresh air. Keep person in a comfortable position for breathing. If breathing remains abnormal, seek medical attention.  
**Storage:** Keep away from children. Protect from sunlight. Store in well-ventilated place. Exposure to high temperatures may cause can to burst. Store locked up.  
**Disposal:** Dispose of contents in accordance with local, regional and national regulations.

**HAZARDS NOT OTHERWISE SPECIFIED:**  
 None presently known.

3. Composition / Information on Ingredients		
Chemical Name	CAS	Concentration % by Weight
Urethane pre-polymer blend	Proprietary	60-100
4,4'-Diphenylmethane Dissocyanate	101-68-8	5-10
Polymethylene Polyphenyl isocyanate (MDI)	9016-87-9	5-10
Isobutane	75-28-5	3-7
Dimethyl Ether	115-10-6	3-7
Propane	74-98-6	1-5
The specific identity and/or exact percentage of composition has been withheld as a trade secret.		

#### 4. First Aid Measures

##### EMERGENCY OVERVIEW:

- EYES:** Immediately flush eyes with water for at least 15 minutes holding the eyelids apart. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention without delay, preferably from an ophthalmologist. Suitable eyewash facility should be immediately available.
- SKIN:** Remove contaminated clothing immediately and wash with soap and water. In case of skin disorders such as eczema, rash, skin irritation, seek medical attention and bring this Safety Data Sheet to the attending physician or trained medical personnel. Cleaning very soon after exposure is important. Corn oil, acetone (contained in some nail polish removers) or Polyglycol based skin cleaner or similar products may be more effective than soap and water. Cured foam can be physically removed by persistent washing with soap and water and a non-abrasive soap. If irritation develops, use a skin cream. If skin irritation persists, seek medical attention.
- INHALATION:**  
Remove to fresh air and keep comfortable for breathing. If breathing is labored, administer oxygen as needed by qualified personnel. If breathing remains labored, get medical attention.
- INGESTION:**  
If large amounts ingested, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.
- MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED:**  
May cause an allergic skin reaction. May cause eye irritation. May cause gastrointestinal irritation, stomach distress, nausea or vomiting if swallowed. May cause allergy or asthma symptoms or breathing difficulty if inhaled.

#### 5. Fire-Fighting Measures

##### SUITABLE FIRE EXTINGUISHING MEDIA:

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General-purpose, synthetic foams or protein foams may function, but will be less effective.

##### UNSUITABLE FIRE EXTINGUISHING MEDIA:

Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.

##### SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

**Hazardous Combustion Products:** During a fire smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen chloride. Carbon monoxide. Carbon dioxide. Hydrogen cyanide.

##### UNUSUAL FIRE & EXPLOSION HAZARDS:

Contains flammable propellant. Aerosol cans exposed to fire can rupture and become flaming projectiles. Propellant release may result in a fireball. Vapors are heavier than air and may travel a long distance and accumulate in low-lying areas. Ignition and/or flashback may occur. Dense smoke is produced when product burns.

##### SPECIFIC FIRE-FIGHTING METHODS:

Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Do not use direct water stream. May spread fire. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Use water spray to cool fire exposed containers and fire-affected zone until fire is out.

##### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:

Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots and gloves). Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire cleanup situations, refer to the relevant sections.

#### 6. Accidental Release Measures

##### PERSONAL PRECAUTIONS:

Evacuate area. Only trained and properly protected personnel must be involved in cleanup operations. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Confined space entry procedures must be followed before entering the area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

##### ENVIRONMENTAL PRECAUTIONS:

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

##### METHODS & MATERIALS FOR CONTAINMENT & CLEANUP:

Contain spilled material if possible. Isolate area until gas has dispersed. Use non-sparking tools in cleanup operations. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Collect in suitable and properly labeled containers. Absorb with materials such as: Clay. Dirt. Milord®. Sand. Sawdust. Vermiculite. See Section 10 for more specific information. See Section 13, Disposal Considerations, for additional information.

#### 7. Handling and Storage

##### SAFE HANDLING:

Keep away from heat, sparks and flame. No smoking, open flames or sources of ignition in handling and storage area. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated contact with skin. Avoid breathing vapor. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. Keep out of reach of children. Vapors are heavier than air and may travel a long distance and accumulate in low-lying areas. Ignition and/or flashback may occur. Contents under pressure. Do not puncture or incinerate container. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld or perform similar operations on or near empty containers. Do not enter confined spaces unless adequately ventilated. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. See Section 8, Exposure Controls and Personal Protection.

##### SAFE STORAGE & INCOMPATIBILITIES:

Minimize sources of ignition such as static build up, heat, sparks or flames. Store in dry place. See Section 10 for more specific information. Shelf life: use within 12 months for best results. Do not store at temperatures exceeding 100°F.

## 8. Exposure Controls / Personal Protection

Chemical Name	Exposure Limits
4,4' Methylenediphenyl Diisocyanate	0.005 ppm; ACGIH TLV 0.020; OSHA PEL (CEILING) 0.005 ppm NIOSH, TWA
Isobutane	1000 ppm; ACGIH TLV 1000 ppm; OSHA PEL
Propane	1000 ppm; ACGIH TLV 1000 ppm; OSHA PEL
Dimethyl Ether	1000 ppm; NIOSH TWA

### PERSONAL PROTECTIVE EQUIPMENT:



**Eye/Face Protection:** Use safety glasses (with side shields).

**Skin Protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron or full body suit will depend on the task. Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Viton. Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Respiratory Protection:** Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particulate filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply. The following should be effective types of air purifying respirators: Organic vapor cartridge with a particulate pre-filter.

**General Hygiene Considerations:** Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

### APPROPRIATE ENGINEERING CONTROLS:

Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure. Lethal concentrations may exist in areas with poor ventilation.

## 9. Physical & Chemical Properties

<b>Appearance:</b>	Viscous liquid which turns to yellow foam.	<b>Flammability(solid/gas):</b>	Flammable gas.
<b>Odor:</b>	Slight hydrocarbon odor during curing stage.	<b>Flammability Limit-lower (%):</b>	Not established.
<b>Odor Threshold:</b>	Not established.	<b>Flammability Limit-upper (%):</b>	Not established.
<b>pH:</b>	Not available.	<b>Oxidizing Properties:</b>	Not oxidizing.
<b>Melting/Freezing Point:</b>	No test data.	<b>Vapor Density (air = 1):</b>	No test data available.
<b>Boiling Point:</b>	Not applicable.	<b>Vapor Pressure:</b>	1,151 kPa @ 55°C
<b>Viscosity:</b>	Not available.	<b>Solubility (water):</b>	Not soluble.
<b>Flash Point:</b>	-155°F (-104°C).	<b>Auto-Ignition Temp:</b>	Not available.
<b>Specific Gravity:</b>	1.1 estimated.	<b>Decomposition Temp:</b>	Not available.
<b>Evaporation Rate:</b>	No data available.	<b>Octanol/Water Partition Coeff(log Pow):</b>	Reacts with water.
<b>VOC Content:</b>	165 g/L	<b>Aerosol Fire Protection Level:</b>	Not applicable.
<b>Explosive Properties:</b>	None.		

## 10. Stability & Reactivity Information

### REACTIVITY:

Not reactive under normal conditions of use.

### CHEMICAL STABILITY:

Stable under normal storage and handling conditions. Unstable at elevated temperatures.

### POSSIBILITY OF HAZARDOUS REACTIONS:

Can occur. Elevated temperatures can cause hazardous polymerization. Do not heat this material to encourage polymerization.

### CONDITIONS TO AVOID:

Avoid temperatures above 122°F (50°C). Elevated temperatures can cause container to vent and/or rupture. Exposure to elevated temperatures can cause product to decompose.

### INCOMPATIBLE MATERIALS:

Avoid contact with: Acids, alcohols, amines, ammonia, bases or caustics, metal compounds, strong oxidizers. Products based on Diisocyanate may react with many materials to release heat. The reaction rate increases with temperature and surface area: these reactions can become violent.

### HAZARDOUS DECOMPOSITION PRODUCTS:

The thermal decomposition products are highly dependent upon the combustion conditions. Noxious or toxic fumes may be generated, some of which may be toxic or irritating.

## 11. Toxicological Information

Product	Species	Test Results
<b>Acute</b> <i>Dermal</i> LD50	Rabbit	>2,000 mg/Kg - Prolonged skin contact is unlikely to result in absorption of harmful amounts.
<i>Oral</i> LD50	Rat	>2,000 mg/Kg estimated.

**SERIOUS EYE DAMAGE/EYE IRRITATION:**  
May cause eye irritation. May cause slight temporary corneal injury.

**RESPIRATORY SENSITIZATION:**  
May cause allergic respiratory response. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

**SKIN SENSITIZATION:**  
Skin corrosion/irritation Prolonged contact may cause moderate skin irritation with local redness. Material may stick to skin causing irritation upon removal. May stain skin. Skin contact may cause an allergic skin reaction. Animal studies have shown that skin contact with Isocyanates may play a role in respiratory sensitization.

**GENETIC TOXICOLOGY:**  
In vitro genetic toxicity studies were negative for component(s) tested. Genetic toxicity data on MDI are inconclusive. MDI was weakly positive in some in vitro studies; other in vitro studies were negative. Animal mutagenicity studies were predominantly negative.

**CARCINOGENICITY:**  
Lung tumors have been observed in laboratory animals exposed to respirable 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.

**DEVELOPMENTAL TOXICITY:**  
In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

**REPRODUCTIVE TOXICITY:**  
No relevant data found.

**SPECIFIC TARGET ORGAN TOXICITY -Repeated Exposure:**  
Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols. Contains component(s) which have been reported to cause effects on the following organs in animals: Kidney. Liver.

## 12. Ecological Information

**ECOTOXICITY:**  
The measured ecotoxicity is that of the hydrolyzed product generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis. ( LC50, EC50, EI50, II50 > 100 mg/L in the most sensitive species tested.)

**ACUTE & PROLONGED TOXICITY:**

Product	Species	Test Results	
<b>Aquatic</b>			
Crustacea	EC50	Daphnia magna (water flea)	1,000 mg/L; 96 hr; static test
Fish	LC50	Danio rerio (zebra fish)	1,000 mg/L; 96 hr; static test
Invertebrate	NOEC	Desmodesmus subspicatus (green algae)	1,640 mg/L; 72 hr; growth rate inhibition
Soil Dwelling Organism	EC50	Earthworm	1,000 mg/kg; 14 d

**BIOACCUMULATIVE POTENTIAL:**  
In the aquatic and terrestrial environment materials react with water, forming predominantly insoluble polyurea which appear to be stable. In the atmospheric environment material is expected to have a short tropospheric half-life based on calculations and by analogy with related Diisocyanate.

## 13. Disposal Consideration

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. Dispose of in a responsible manner. Follow local, state and federal guidelines. Do not discharge into sewers or waterways. Incineration is the preferred method of disposal, although it may be land filled at an approved facility.

## 14. Transportation Information

**DOT:** UN Number: UN1950  
UN Proper Shipping Name: Aerosols.  
Technical Name: None.  
Transport Hazard Class(es):  
Class: 2.1  
Label(s): LTD QTY

**ICAO/IATA:** UN Number: UN1950  
UN Proper Shipping Name: Aerosols, Flammable.  
Transport Hazard Class(es):  
Class: 2.1  
Subsidiary risk: -  
Label(s):  
Packing Group: None.

**IMDG:** UN Number: UN1950  
**UN Proper Shipping Name:** Aerosols.  
**Transport Hazard Class(es):**  
Class: 2.1  
Subsidiary risk: -  
Label(s): Limited Quantity Mark.  
Packing Group: None.



#### 15. Regulatory Information

**OSHA HAZARD COMMUNICATION STANDARD:**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910-1200.

**TASCA INVENTORY STATUS:**

All chemical components listed on the TSCA inventory except as exempted.

**SARA 311, 312:**

Acute health hazard. Chronic health hazard. Fire hazard. Pressure. Reactive.

**SARA 313:** 4,4'-Diphenylmethane Diisocyanate (MDI): 101-68-8

Polymethylene Polyphenyl isocyanate (PMDI): 9016-87-9

**CALIFORNIA PROP 65:**

No listed chemicals.

**STATE SUBSTANCE LIST:**

This product contains a listed substances that appears on one or more of the Substance Lists for Pennsylvania.

Isobutane – 75-28-5

Methyl Ether – 115-10-6

Propane – 74-98-6

#### 16. Other Information

**DISCLAIMER:**

To the best of our knowledge, information contained herein is accurate. However, there is no assumption of liability for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazard, which exists. The information contained in this SDS was obtained from current and reliable sources; however, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of the manufacturer, the manufacturer will not be responsible for loss, injury, or expense arising out of the products improper use. No warranty, expressed or inferred, regarding the product described in this SDS shall be created or inferred by any statement in this SDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product, which may not be covered by this SDS. The user is responsible for full compliance.