



**MATERIAL SAFETY DATA SHEET (MSDS)  
ISOBUTANE**

IDENTITY (As Used on Label and List) <b>Isobutane (DOT ID No: UN 1969 or 1075)</b>		<b>(Hazard Rating: Health-1/Fire-4/Reactivity-0) DOT Hazard Classification: 2.1 (Flammable Gas)</b>		
<b>Section I – Chemical Product and Company Identification</b>				
Manufacturer's Name <b>MARKWEST</b>		Emergency Phone Number <b>Markwest (800) 730-8388 / CHEMTREC (800) 424-9300</b>		
Address (Number, Street, City, State and ZIP code) <b>1515 Arapahoe Street</b>		Telephone Number for Information: <b>(800) 730-8388</b>		
<b>Tower 1, Suite 1600</b>		Date Prepared <b>June 21, 2011</b>		
<b>Denver, Colorado 80202-2126</b>		Signature of Preparer (optional) <b>N/A</b>		
<b>Section II – Hazardous Ingredients/Identity Information</b>				
Hazardous Components (Specific Chemical Identity; Common Name (s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
<b>Isobutane (75-28-5)</b>	<b>1000*ppm</b>	<b>800 ppm</b>		<b>95</b>
<b>Propane (74-98-6)</b>	<b>1000 ppm</b>	<b>1000 ppm</b>		<b>&lt;3</b>
<b>Normal Butane (106-97-8)</b>	<b>1000*ppm</b>	<b>800 ppm</b>		<b>&lt;5</b>
<b>Section III – Physical/Chemical Characteristics</b>				
Boiling Point <b>11° F (-12° C) Based on Isobutane</b>		Specific Gravity (H <sub>2</sub> O = 1): <b>~.56</b>		
Vapor Pressure (Reid): <b>50 to 60 psi at 100°F</b>		Melting Point: <b>N/A</b>		
Vapor Density (AIR = 1): <b>~ 2</b>		Evaporation Rate (Butyl Acetate = 1): <b>Very Rapid</b>		
Solubility in Water: <b>Slightly</b>				
Appearance and Odor: <b>Colorless liquid under pressure. Faint hydrocarbon odor unless odorant is added.</b>				
<b>Section IV – Fire and Explosion Hazard Data</b>				
Flash Point (Method Used): <b>-117° F (-83° C) Based on Iso-Butane</b>	Flammable Limits <b>Based on Iso-Butane</b>	LEL <b>1.8%</b>	UEL <b>8.5%</b>	
Extinguishing Media: <b>Dry chemical, foam, carbon dioxide</b>				



Emergency and First Aid Procedures:

**If In Eyes:** Rinse immediately with water. Remove contact lenses. Flush with water for 10-15 minutes. Consult a physician.

**If On Skin:** Warm frostbite areas gradually and get medical help if there is evidence of tissue damage.

**If Swallowed:** Rinse mouth with water. Drink 1-2 glasses of milk or water. Do not induce vomiting unless directed by a physician.

## Section VII – Precautions for Safe Handling and Use

Steps to be taken in Case Material is Released or Spilled:

**Eliminate and prevent source of ignition. Supply maximum ventilation. Use water fog to evaporate or ventilate. Protect against body contact with liquid. If confined space, wear self-contained breathing apparatus. For small containers, remove leaking container to remote area and allow to bleed off. Consult with local fire jurisdiction as necessary.**

Waste Disposal Method:

**Conduct waste gas (not liquid) to a furnace by means of piping and incinerate with caution in accordance with state and local applicable government regulations, if any.**

Precautions to Be Taken in Handling and Storing:

**Store small containers in well ventilated area, away from heat, direct sunlight and sources of ignition. Prohibit smoking in areas of storage or use. Keep isolated from cylinders of oxygen, chlorine and other oxidizers. Protect against damaging valves on containers. Be sure personnel are trained in proper procedures for handling compressed gas containers.**

Other Precautions:

**A minimum of a 20% vapor space (or outage) should be maintained on all containers of liquefied petroleum gas. Important Notice: The information contained in this Material Safety Data Sheet has been prepared in accordance with the OSHA Hazard Communication Standard 29 CFR 1910.1200. This information relates specifically to the product designated and may not be valid for the product when used in combination with any other materials or products or in a particular process. The information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation warranty or guarantee is made as to its accuracy, reliability or completeness. It is the users responsibility to review this information, satisfy himself as to its suitability and completeness and pass on the information to its employees or customers in accordance with applicable federal, state or local hazard communications requirements. We do not accept responsibility for any loss or damage, which may occur from the use of this information.**

## Section VIII – Control Measures

Respiratory Protection (Specify Type):

**NIOSH approved self-contained breathing apparatus accompanied by sufficient water spray to reduce the risk of fire or explosion, is required when concentration in the air exceeds TLV.**

Ventilation:	Local Exhaust	Special
	Mechanical (General)	Other <b>Explosion proof ventilation as needed to keep concentration in the air below TLV.</b>
Protective Gloves <b>Neoprene</b>	Eye Protection <b>Face shield and safety glasses</b>	

Other Protective Clothing or Equipment:

**Appropriate, impervious clothing for prolonged or repeated contact. NOMEX or equivalent type clothing when applicable. Protect steel toe for cylinder handling.**

Work/Hygienic Practices

N/A

N/A – Not Applicable  
N/D – Not Determined  
~ -- Approximately  
\* -- Based on LP (Gas)