2-LB "A"
SAFETY DATA SHEET

PRODUCT NAME:
2 LB FOAM COMP "A"

GHS SDS DATE: June 15, 2015

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER:
Multi-Tech Products Corp
41519 Cherry Street.
Murrieta CA 92562
Phone: 951-834-9066

TRANSPORTATION EMERGENCY CALL
CHEMTREC: 800-424-9300
INTERNATIONAL 703-527-3887

PRODUCT IDENTIFICATION NUMBER: 2 LB Polyurethane Foam "A"
CHEMICAL FAMILY: POLYMERIC ISOCYANATE
RECOMMENDED USE: POUR FOAM/INJECTION – COMPOSITE REPAIR & FABRICATION

SECTION 2: HAZARDOUS IDENTIFICATION

GHS CLASSIFICATION

Skin irritation	: Category 2
Acute toxicity, Inhalative	: Category 4
Sensitization of respiratory airways	: Category 1
Eye Irritation	: Category 2
Carcinogenicity	: Category 2
Sensitization of the skin	: Category 1
Specific target organ toxicity (repeated exposure)	: Category 2
Specific target organ toxicity (single exposure)	: Category 3

GHS LABEL ELEMENT
Hazard pictograms

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Signal Word : Danger

Hazard Statements
: H313 May cause and allergic skin reaction.
: H315 Causes skin irritation.
: H332 Harmful if inhaled.
: H319 Causes serious eye irritation.
: H335 May cause respiratory irritation.
: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
: H373 May cause damage to organs through prolonged or repeated exposure.
: H351 Suspected of causing cancer.

Precautionary statements
: P260 Do not breathe fume/gas/mist/vapors/spray.
: P280 Wear protective gloves/eye protection/face protection.
: P305+351+338 If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing.
: P302 + P352 If on skin, wash with plenty of soap and water.
: P304+340 If inhaled, remove person to fresh air and keep comfortable for breathing.

SECTION 3: COMPOSITIONS/INFORMATION ON INGREDIENTS

MATERIAL OR COMPONENT	CAS NUMBER	% BY WEIGHT
POLYMERIC DIPHENYLMETHANE DIISOCYANATE (MDI)	9016-87-9	100%

***Occupational Exposure Limit(s) if available, are listed in section 8.**

This material is classified as hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200)
Physical State and Appearance: Brown Liquid

Medical Conditions Aggravated by Overexposure: Preexisting conditions such as asthma, allergies, eczema, bronchitis, and other lung and skin disorders may be aggravated by exposure to the product. Results from a lifetime inhalation study in rats indicate that MDI aerosol was carcinogenic at 9 mg/m^3, the highest dose tested. This is well above the recommended TLV of 5ppb (0.05 mg/m^3). Only irritation was noted at the lower concentration of 0.2 and 1 mg/m3. No
birth defects or teratogenic effects were reported in a teratology study with rats exposed to 1, 4, and 12 mg/m3 polymeric MDI for 6 hr/day on days 6-15 of gestation. Embryo toxicity and fetotoxicity was reported at the top dose in the presence of maternal toxicity. As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma), which will cause them to react to a later exposure to isocyanate at levels well below the PEL/TVL. Those symptoms, which include chest tightness, wheezing, cough, shortness of breath, or asthmatic attack, could be immediate of delayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years.
Chronic overexposure to isocyanates has also been reported to cause lung damage, including a decrease in lung function, which may be permanent. Sensitization may e either temporary of permanent. Prolonged contact can cause reddening, swelling, rash, scaling, or blistering, in those who have developed a skin sensitization, these symptoms can develop as a result of contact with very small amount s of liquid material, or even as a result of vapor-only exposure.

Aggravated Medical Conditions:
Individuals who are sensitized to isocyanates and those with preexisting lung diseases of conditions, including non-specific bronchial hyper reactivity or asthma, must avoid all exposure to isocyanates.

SECTION 4: FIRST AID MEASURES

Eyes: In case of eye contact, immediately flush eyes with large amounts of water for at least 15 minutes, keeping the eyelids open. Get immediate medical attention.

Skin Contact: Remove contaminated clothing. In case of contact, immediately wash skin with soap and plenty of water. If symptoms develop obtain medical attention. Contaminated clothing should be thoroughly cleaned. An MDI study has demonstrated that a polyglycol-based skin cleaner or corn oil may be more effective than soap and water.

Inhalation: If excessive inhalation of vapor occurs, remove patient to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, qualified personnel may administer oxygen. Get immediate medical attention.

Ingestion: If swallowed, dilute with water. **DO NOT INDUCE VOMITING.** Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

NOTES TO PHYSICIANS: There is no specific antidote to counteract the effects of MDI. Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

Other First Aid Procedures: Medical supervision of all employees who handle or come into contact with MDI is recommended. Pre-employment and periodic medical examinations with respiratory function test (PEV, PVC, as a minimum are suggested). Persons with asthmatic conditions chronic bronchitis, other chronic respiratory diseased, recurrent eczema or pulmonary sensitization should be excluded from working with MDI. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to MDI, further exposure is not permissible.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: >93.3°C, Closed Cup.

Autoignition: >600°C.

Flammable Limits: Not available.

Products of Combustion: Carbon Monoxide, Carbon Dioxide, Nitrous Oxide and HCN.

Fire Hazards in Presence of Various Substances: Slightly flammable to flammable in presence of open flames, sparks and static discharge or combustible materials.

Fire Fighting Media and Instructions: Small Fire: Use DRY chemical powder.
Large Fire: Use water spray, fog or foam. Do not use water jet.

Protective Clothing (Fire): Splash goggles. Full suit. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product.

Special Remarks on Fire Hazards: Reacts slowly with water to produce carbon dioxide, which may rupture closed containers. This reaction accelerates at higher temperatures.

SECTION 6: ACCIDENTAL RELEASE MEASURES

For major spills call Chemtrec (800-424-9300)

Small Spill and Leak: Clean-up should only be performed by trained personnel. People dealing with major spillages should wear full protective clothing including appropriate respiratory protection. Evacuate the area. Prevent further leakage, spillage or entry into drains.

Large Spill and Leak: Contain and absorb large spillages onto an inert, non-flammable adsorbent carrier (such as earth or sand). Shovel into open-top drums or plastic bags for further decontamination, if necessary. Wash the spillage area with
Liquid decontaminant. Test atmosphere for MDI. Neutralize small spillages with decontaminant. Remove and properly dispose of residues (see Section 13 for disposal considerations). Notify applicable government authorities if release is reportable. The CERCLA RQ for 4,4-MDI is 5000 lbs (see CERCLA in Section 15).

Decontaminant: Preparation of Decontaminant Solution: Prepare a decontamination solution of 0.2-0.5% liquid detergent and 3-8% concentrated ammonium hydroxide in water (5-10% sodium carbonate may be substituted for ammonium hydroxide). Follow the precautions on the supplier's material safety data sheets when preparing and using solution.
Use of Decontamination Solution: Allow deactivated material to stand for at least 30 minutes before shoveling into drums. Do not tighten the bungs. Mixing with wet earth is also effective, but slower.

SECTION 7: HANDLING AND STORAGE

Handling: Avoid personal contact with the product or reaction mixture. Use only with adequate ventilation to ensure that the occupational exposure limit is not exceeded. The efficiency of the ventilation system must be monitored regularly because of the possibility of blockage. Avoid breathing aerosols, mists and vapors. (See Section 8 Exposure Control for details.)

Storage: Keep containers properly sealed and when stored indoors, in a well ventilated area. Keep contents away from moisture. Due to reaction with water, producing CO_2-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Do not reseal contaminated containers. Uncontaminated containers, free of moisture, may be resealed only after placing under a nitrogen blanket. Do not store in containers made of cooper, cooper alloys or galvanized surfaces.

Ideal storage temperature is 16-38°C (60-100°F).

Keep stocks of decontaminant (see Section 6) readily available.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

Preventive Measures: Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

Engineering Controls: Use local exhaust ventilation to maintain airborne concentrations bellow the TLV. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it. For guidance on engineering control measures refer to publications such as the ACGIH current edition of " Industrial Ventilation, a manual of Recommended Practice".

Personal Protection

Eyes: Chemical safety goggles. If there is a potential for splashing, use a full face shield.

Body and Hands: The following protective materials are recommended: Gloves-neoprene, nitrile rubber, butyl rubber. Thin latex disposable gloves should be avoided for repeated or long term use. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH.

Respiratory: When the product is sprayed or heated without adequate ventilation, an approved MSHA/NIOSH positive-pressure, supplied-air respirator may be required. Air purifying respirators equipped with organic vapor cartridges and a HEPA (P100) particulate filter may be used under certain conditions when a cartridge change-out schedule has been developed in accordance with the OSHA respiratory protection standard (29 C.F.R. 1910.134).

Personal Protection in Case of a Large Spills: Splash goggles. Full suit. Vapor respirator or a self-contained breathing apparatus. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product Name	**Exposure Limits**	
4,4-Diphenylmethane Diisocyanate	ACGIH TLV	0.05 mg/m3 (8-hour, 40 hours/week)
	OSHA PEL Ceiling Limit	0.20 mg/m3
	NIOSH REL/TWA	0.05 mg/m3 (10-hour, 40 hours/week)
	NIOSH REL/CEILING	0.20 mg/m3 (10-minutes)

Exposure control/ personal protection: Medical supervision of all employees who handle or come in contact with respiratory sensitizers is recommended. Persons with respiratory problems including asthmatic-type conditions, chronic Bronchitis, other chronic respiratory diseases or recurrent skin eczema or skin allergies should be evaluated for their suitability of working with this product. Once a person is diagnosed as sensitized, no further exposure to the material that caused the sensitization should be permitted. The Occupational Exposure limits do not apply to previously sensitized individuals.

SECTION 9: PHYSICAL AHD CHEMICAL PROPERTIES

APPEARANCE AND ODOR	Brown Liquid Slightly Musty
BOILING POINT (°C)	>300°C
MELTING POINT (°F/°C)	Not available
SPECIFIC GRAVITY (WATER = 1)	1.23 gr/ml
BULK DENSITY	9.0 lb/gal
pH	Not applicable
VAPOR PRESSURE (MM Hg.)	0.000004 mmHg @ 25°C
VAPOR DENSITY (AIR-1)	8.5
VISCOSITY	900-1300 cps @ 25° C
PERCENT (%) VOC	0%
FLASH POINTS	>93.3°C (230°F) Closed Cup

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable at room temperature.

Incompatibility with various Substances: Reactive with moisture.
Conditions of Instability: Avoid high temperatures. Avoid freezing.

Hazardous Decomposition Products: Carbon Monoxide, Carbon Dioxide, Nitrous Oxide and HCN.

Hazardous Polymerization: Polymerization may occur at elevated temperatures in the presence of alkalies, tertiary amines and metal compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity to Animals: LD50 Rat Oral: >5000mg/kg
LD50 Rabbit Dermal: >5000 mg/kg

Inhalation: This product is a respiratory irritant and potential respiratory sensitizer. Repeated inhalation of vapor or aerosol at levels above the occupational exposure limit could cause respiratory sensitization. Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty in breathing. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitized persons.

Skin Contact: Moderate irritant. Repeated and/or prolonged contact may cause skin sensitization. There is limited evidence from animal studies that skin contact may play a role in respiratory sensitization. These results emphasize the need for protective clothing including gloves to be worn at all times when handling these chemicals or in maintenance work.

Eye Contact: The vapor, aerosol, and liquid are irritant.

Ingestion: Ingestion may cause irritation of the gastrointestinal tract. Based on the acute oral LD50 this product is considered practically non-toxic by ingestion.

Remarks: Short term test have shown that it is unlikely to be genotoxic. (BUTYLATEDHYDROXYTOLUENE)

Carcinogenic Effects: The ingredients of this product are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.

Mutagenic Effects: There is no substantial evidence of mutagenic potential.

Reproductive Effects: No adverse reproductive effects are anticipated.

Teratogenic Effects: No birth defects were seen in two independent animal (rat) studies. Fetotoxicity was observed at doses that were extremely toxic (including lethal) to the mother. Fetotoxicity was not observed at doses that were not maternally toxic. The doses used in these studies were maximal respirable concentrations well in excess of the defined limits.

Remark: A study was conducted where groups of rats were exposed for 6 hours/day, 5 days/week for a lifetime to atmosphere of respirable polymeric MDI aerosol at concentrations of 0, 0.2, 1 or 6 mg/m3. No adverse effects were observed at 0.2 mg/m3. At the 1mg/m3 concentration, minimal nasal and lung irritant effect were seen. Only at the top concentration (6.0 mg/m3) was there an increased incidence of a benign tumor of the lung (adenoma). One malignant pulmonary tumor (adenocarcinoma) was seen in the 6.0 mg/m3 group. MDI administration to rats in this study did not change the distribution and incidence of tumors from those seen in control animals. The increased incidence of lung tumors is associated with prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung. In the absence of prolonged exposure to high concentration leading to chronic irritation and lung damage, it is highly unlikely that tumor formation will occur.

There are reports that excessive chronic exposure to diisocyanates may result in permanent decrease in lung function.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Polymeric MDI. LC50 (Zebra Fish) >1000 ml/l. EC50 (Daphnia magna) (24 hours) >1000 mg/l EC50 (E. Coli) > 100ml/l.

Environmental Fate and Distribution: It is unlikely that significant environmental exposure in the air or water will arise based on consideration of the production and use of the substance.

Persistence and Degradation: Immiscible with water, but will react with water to produce inert and non-biodegradable solids.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Information: The generation of waste should be avoided or minimized wherever possible.

Disposal should be in accordance with local, state, provincial or national regulations, This material is not hazardous waste under RCRA 40 CFR 261. Small quantities should be treated with a decontaminant solution (see Section 6). The treated waste is not a hazardous material under RCRA 40 CFR 261. Chemical waste, even small quantities, should never be poured down drains, sewers or waterways. Empty containers should be decontaminated and either passed to an approved drum recycler or destroyed.

SECTION 14: TRANSPORT INFORMATION

For major spills call Chemtrec (800-424-9300).

DOT Classification: Single containers less than 5000 lbs. are not regulated. Single containers with 5000 lbs. Or more of 4,4-Methylene Diphenyl Diisocyanate are regulated as: Other Regulated Substances, Liquid, N.O.S. (Methylene Diphenyl Diisocyanate), 9, NA3082, PGIII, RQ.

TDG Classification: Not regulated.

IMO/IMDG Classification: Not regulated.

ICAO/IATA Classification: Not regulated.

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations

This material is classified as hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).

HCS Classification: Class: Toxic
Class: Irritating substance.
Class: Sensitizing substance.

TSCA 8(b) inventory: All Ingredients Listed

EPCRA Section 313 (40 CFR 372)
Diisocyanate Compounds (Category Code N120) 100%

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act):
This product does not contain nor is it manufactured with ozone depleting substances.

State Regulations:

Canadian Regulations: This material has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS (Material Safety Data Sheet) contains all the information required by the CPR.

WHMIS (Canada): Class D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
Class D-2A: Material causing other toxic effects (VERY TOXIC).
Class D-2B: Material causing other toxic effects (TOXIC).

CEPA: DSL/NDSL: All Ingredients Listed.

SECTION 16: OTHER INFORMATION

CAUSES DAMAGE TO THE FOLLOWING ORGANS: LUNGS, RESPIRATORY TRACT, SKIN AND EYES. MAY BE HARMFULL IF INHALED. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION.

Hazardous Material Information System (U.S.A.)			**National Fire Protection Association (U.S.A.)**		
Health: 2	**Fire Hazard: 1**	**Reactivity: 1**	**Health: 2**	**Fire Hazard: 1**	**Reactivity: 1**

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