

POLYFOAM PRODUCTS, INC.
THIS MATERIAL SAFETY DATA SHEET PROVIDED AS A GUIDE TO THE USER
PLEASE READ ENTIRE MSDS BEFORE USING THIS PRODUCT
PLEASE CONTACT THE TECHNICAL ASSISTANCE NUMBER FOR ANY ADDITIONAL INFORMATION

Product Name:

TITASET® COMPONENT A

THIS MATERIAL IS EITHER MANUFACTURED BY AND OR DISTRIBUTED BY:

Polyfoam Products, Inc.
11715 Boudreaux Road
Tomball, TX 77375

Ph - 281 350 8888

REVISION DATE: MARCH 2, 2006

24 HOUR EMERGENCY RESPONSE: CALL CHEMTREC 800 424 9300

SECTION I IDENTIFICATION

PRODUCT NAME: TITASET® COMPONENT A

CHEMICAL FAMILY: Diisocyanate

FORMULA CONFIDENTIAL: Contact Manufacturer for confidential release of information.

SECTION II— HAZARDOUS INGREDIENTS COMPOSITION

HAZARDOUS INGREDIENT	CAS NUMBER	PEL	PERCENT
Polymeric Diphenylmethane Diisocyanate	9016-87-9	not listed	>80
Polymeric Diphenylmethane Diisocyanate CONTAINS APPROX. 45% OF:			
4,4 Diphenylmethane Disocyanate	101-68-8	0.02ppm	
Fire Retardant	Trade Secret	Not Determined	<10
HFC-134A	811-97-2	1000ppm WEEL TWA	<20
Polyalkyleneoxide-methylsiloxane Copolymer	Trade Secret		<10

ALWAYS FOLLOW YOUR COMPANIES HEALTH AND SAFETY PLAN BEFORE WORKING WITH THIS PRODUCT OR ANY OTHER CHEMICAL. ALWAYS WEAR THE APPROPRIATE SAFETY GEAR WHEN WORKING WITH OR AROUND CHEMICALS.

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SECTION III — HAZARD - PHYSICAL DATA -

APPEARANCE: Liquid and gas under pressure
PHYSICAL FORM: LIQUID **COLOR:** Light Brown
BOILING POINT: <0° F
VAPOR PRESSURE 85.7 psig @ 70°F
SPECIFIC GRAVITY: 1.23 @ 25°C
SOLUBILITY IN WATER Not Soluble. Reacts slowly with water to liberate CO2 gas.
% VOLATILES BY VOLUME <20

SECTION IV – FIRST AID

EYES: FLUSH IMMEDIATELY WITH WATER OR EYE WASH SOLUTION FOR 15 MINUTES. CONTACT WITH EYES MAY CAUSE MODERATE TO SEVERE IRRITATION. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN: WASH OFF IMMEDIATELY WITH SOAP AND WATER FOR AT LEAST 15 MINUTES. REMOVE ALL CONTAMINATED CLOTHING AND SHOES FOR DISPOSAL. FOR SEVERE EXPOSURES, GET UNDER SAFETY SHOWER AFTER REMOVING CLOTHING, THEN GET MEDICAL ATTENTION IMMEDIATELY.

INHALATION: MOVE TO AREA FREE FROM RISK OF FURTHER EXPOSURE. ADMINISTER OXYGEN OR ARTIFICIAL RESPIRATION AS NEEDED. OBTAIN MEDICAL ATTENTION. ASTHMATIC LIKE SYMPTONS MAY DEVELOP AND MAY BE IMMEDIATE OR DELAYED FOR SEVERAL HOURS. CONSULT PHYSICIAN SHOULD THIS OCCUR.

INGESTION: IF INGESTED DO NOT INDUCE VOMITING - IF THE VICTIM IS CONSCIOUS GIVE HIM/HER A GLASS OF WATER OR MILK - NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY. ALWAYS SEEK MEDICAL ATTENTION WHEN EXPOSED TO THIS OR OTHER CHEMICALS.

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SECTION V – FIRE AND EXPLOSION DATA

FLASHPOINT: >200 DEG F

AUTOIGNITION TEMPERATURE >600 DEG F

EXTINGUISHING MEDIA: SMALL FIRES: USE DRY CHEMICAL POWDER.
LARGE FIRES: USE WATER SPRAY, FOG OR FOAM.
DO NOT USE WATER JET. IF WATER IS USED, VERY
LARGE QUANTITIES ARE REQUIRED. REACTION WITH
WATER MAY BE VIGOROUS. CONTAIN RUNOFF WATER
WITH TEMPORARY BARRIERS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

CONTAINERS ARE EQUIPPED WITH A PRESSURE RELIEF
DEVICE INTENDED TO VENT ANY EXCESSIVE BUILD UP
OF PRESSURE EXERTED BY GASES GENERATED BY
HEAT, THERMAL DECOMPOSITION OR COMBUSTION.
KEEP EXPOSED CONTAINERS COOLED WITH WATER
SPRAY.
KEEP UNNECESSARY PEOPLE AWAY.

FIRE FIGHTING EQUIPMENT: POSITIVE PRESSURE SCBA'S - FULL PROTECTIVE
CHEMICAL OR FIRE FIGHTING CLOTHING SHOULD BE
WORN BY FIREFIGHTERS. ALL EQUIPMENT MUST BE
THOROUGHLY DECONTAMINATED AFTER USE.

SECTION VI ACCIDENTAL RELEASE MEASURES

PERSONS DEALING WITH MAJOR SPILLS SHOULD WEAR FULL PROTECTIVE
CLOTHING INCLUDING APPROPRIATE RESPIRATORY PROTECTION. EVACUATE THE
AREA. PREVENT FURTHER LEAKAGE SPILLAGE OR ENTRY INTO DRAINS.

CONTAIN AND ABSORB LARGE SPILLAGES ONTO AN INERT, NON FLAMMABLE
ABSORBENT CARRIER SUCH AS EARTH, SAND OR CLAY ABSORBENT. SHOVEL INTO
OPEN TOP DRUMS OR PLASTIC BAGS FOR FURTHER DECONTAMINATION, IF
NECESSARY. WASH SPILLAGE ARE WITH LIQUID DECONTAMINANT. PROPERLY
DISPOSE OF RESIDUES.

NOTIFY APPLICABLE GOVERNMENT AUTHORITIES IF RELEASE IS REPORTABLE.
THE CERCLA RQ FOR 4,4 MDI IS 5000 LBS.

PREPARATION OF DECONTAMINATION SOLUTION: PREPARE A SOLUTION OF
0.2-0.5% LIQUID DETERGENT AND 3-8% CONCENTRATED HOUSEHOLD AMMONIA IN
WATER.

USE OF DECONTAMINATION SOLUTION: ALLOW DEACTIVATED MATERIAL TO STAND
FOR 30 MINUTES BEFORE SHOVELING INTO DRUMS. DO NOT TIGHTEN BUNGS AS
CO2 GAS MAY BE GENERATED.

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SECTION VII - HANDLING - STORAGE - REACTIVITY DATA

STORAGE TEMPERATURE (MIN/MAX) 60°F TO 100°F

AVERAGE SHELF LIFE: 18 MONTHS

SPECIAL SENSITIVITY: IF CONTAINER IS EXPOSED TO HIGH HEAT 400°F OR HIGHER, OR CONTAMINATED WITH WATER, PRESSURE CAN BE GENERATED. CONTAINERS ARE EQUIPPED WITH A PRESSURE RELIEF VALVE INTENDED TO VENT ANY EXCESSIVE BUILDUP OF PRESSURE EXERTED BY GASES GENERATED BY HEAT OR MOISTURE.

PRECAUTIONARY MEASURES: STORE IN TIGHTLY CLOSED CONTAINERS TO PREVENT MOISTURE CONTAMINATION. AVOID CONTACT WITH SKIN AND EYES. DO NOT BREATHE AEROSOLS OR VAPORS. THIS MATERIAL CAN PRODUCE ASTHMATIC SENSITIZATION UPON EITHER SINGLE INHALATION EXPOSURE TO A RELATIVELY HIGH CONCENTRATION OR UPON REPEATED INHALATION TO LOWER EXPOSURES TO LOWER CONCENTRATIONS.

EXPOSURES TO VAPORS OR HEATED TITSET® COMPONENT A CAN BE EXTREMELY DANGEROUS.

SECTION VIII - EXPOSURE - HEALTH DATA - PERSONAL PROTECTION

LIKELY ROUTES OF EXPOSURE - EYE - SKIN - INHALATION

FOR EYES - LIQUID CHEMICAL GOGGLES OR FULL FACE SHIELD. VAPOR RESISTANT GOGGLES SHOULD BE WORN WHEN CONTACT LENSES ARE IN USE. IN A SPLASH HAZARD ENVIRONMENT, CHEMICAL GOGGLES SHOULD BE USED ALONG WITH A FULL FACE SHIELD.

FOR SKIN - PERMEATION RESISTANT GLOVES (BUTYL RUBBER, NITRILE RUBBER). COVER AS MUCH OF THE EXPOSED SKIN AREA AS POSSIBLE WITH APPROPRIATE CLOTHING.

RESPIRATORY PROTECTION: CONCENTRATIONS GREATER THAN THE 4,4 MDI TLV CAN OCCUR DURING SPRAYING HEATING, OR USE IN A POORLY VENTILATED AREA. IN SUCH CASES WHENEVER THE CONCENTRATION OF 4,4 MDI EXCEED THE TLV, RESPIRATORY PROTECTION MUST BE WORN. AN AIR SUPPLIED RESPIRATOR OR SELF CONTAINED BREATHING APPARATUS IS RECOMMENDED. IN SITUATIONS WHERE MATERIAL IS NOT HEATED OR SPRAYED AN AIR PURIFYING RESPIRATOR EQUIPPED WITH AN ORGANIC CARTRIDGE AND PARTICULATE FILTER MUST BE WORN.

HOWEVER, THIS SHOULD BE PERMITTED ONLY FOR SHORT PERIODS OF TIME (LESS THAN ONE HOUR) AT RELATIVELY LOW CONCENTRATIONS AT OR NEAR THE TLV. OBSERVE OSHA REGULATIONS FOR RESPIRATOR USE. 929 CFR 1910.134)

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SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

FORM: LIQUID AND GAS UNDER PRESSURE. LIQUID WILL BECOME FOAMY IS RELEASED FROM CONTAINER.

ODOR: SLIGHT MUSTY ODOR

SOLUBILITY IN WATER: INSOLUBLE. WILL REACT SLOWLY WITH WATER TO FORM CO2 GAS.

SPECIFIC GRAVITY: 1.23 @ 77°F

VISCOSITY: 130 CPS @ 77°F

% VOLATILES: <20%

SECTION X – STABILITY AND REACTIVITY

STABILITY: STABLE AT AMBIENT TEMPERATURES

CONDITIONS TO AVOID: HIGH TEMPERATURES OR FREEZING

INCOMPATIBILITY: REACTS SLOWLY WITH MOISTURE

HAZARDOUS DECOMPOSITION:

MAY PRODUCES CARBON MONOXIDE, CARBON DIOXIDE, AND OTHER ASPHYXIANTS

SECTION XI – TOXICOLOGICAL INFORMATION

AVOID EXPOSURE WITHOUT PROTECTIVE GEAR - REPEATED EXPOSURE TO SKIN OR EYES MAY HAVE HARMFUL - INGESTION HARMFUL - IF INGESTED SEEK IMMEDIATE MEDICAL ATTENTION

EXPOSURE GUIDELINES:

ACGIH	TLV	0.05	mg/M ³
OSHA	PEL	0.20	mg/M ³

HARMFUL EFFECTS VARY DEPENDING ON LEVEL OF EXPOSURE - ALWAYS SEEK MEDICAL ATTENTION AFTER EXPOSURE TO CHEMICALS IN ACCORDANCE WITH YOUR COMPANY HEALTH AND SAFETY PROCEDURES.

SECTION XII – ECOLOGICAL INFORMATION

IT IS UNLIKELY THAT SIGNIFICANT ENVIRONMENTAL EXPOSURE IN THE AIR OR WATER WILL ARISE BASED ON CONSIDERATION OF THE USE OF THIS SUBSTANCE.

THIS MATERIAL IS IMMISCIBLE WITH WATER, BUT WILL REACT WITH WATER TO PRODUCE INERT AND NON-BIODEGRADABLE SOLIDS.

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SECTION XIII - DISPOSAL INFORMATION

DISPOSAL SHOULD BE IN ACCORDANCE WITH LOCAL, STATE, PROVINCIAL OR NATIONAL REGULATIONS. THIS MATERIAL IS NOT A HAZARDOUS WASTE UNDER RCRA 40 CFR 261. SMALL QUANTITIES SHOULD BE TREATED WITH A DECONTAMINATE SOLUTION. THE TREATED WASTE IS NOT A HAZARDOUS MATERIAL UNDER RCRA 40 CFR 261.

SECTION XIV - TRANSPORTATION INFORMATION

UN OR ID NUMBER: UN 1956

PROPER SHIPPING NAME: COMPRESSED GAS N.O.S.
TETRAFLUOROETHANE MIXTURE

HAZARD CLASS: CLASS 2.2

REPORTABLE QUANTITY: 5000 LBS.

TRADE NAME: TITASET® COMPONENT A

SECTION XV - REGULATORY INFORMATION

THIS PRODUCT IS CLASSIFIED AS HAZARDOUS UNDER OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

TSCA INVENTORY: ALL INGREDIENTS LISTED

EPCRA SECTION 313: DIISOCYANATE COMPOUND CODE N120

SECTION XVI OTHER

CAN CAUSE DAMAGE TO LUNGS, RESPIRATORY TRACT, SKIN, EYES.
MAY CAUSE ALLERGIC RESPIRATORY OR SKIN REACTION.

HMIS: HEALTH=2 FIRE=1 REACTIVITY=1

NFPA: HEALTH=2 FIRE=1 REACTIVITY=1 SPECIFIC HAZARD= N/A

THIS DOCUMENT PREPARED BY:

PATRICK M. DONAHUE
PRODUCT MANAGER

DATE PREPARED: 3/2/2006

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SECTION VI ACCIDENTAL RELEASE MEASURES

PERSONS DEALING WITH MAJOR SPILLS SHOULD WEAR FULL PROTECTIVE CLOTHING INCLUDING APPROPRIATE RESPIRATORY PROTECTION. EVACUATE THE AREA. PREVENT FURTHER LEAKAGE SPILLAGE OR ENTRY INTO DRAINS.

CONTAIN AND ABSORB LARGE SPILLAGES ONTO AN INERT, NON FLAMMABLE ABSORBENT CARRIER SUCH AS EARTH, SAND OR CLAY ABSORBENT. SHOVEL ABSORBED MATERIAL INTO OPEN TOP DRUMS OR PLASTIC BAGS FOR DISPOSAL IN ACCORDANCE WITH LOCAL REGULATIONS. WASH SPILLAGE ARE WITH SOAP AND WATER. PROPERLY DISPOSE OF RESIDUES.

SECTION VII - HANDLING - STORAGE - REACTIVITY DATA

STORAGE TEMPERATURE (MIN/MAX) 60°F TO 100°F

AVERAGE SHELF LIFE: 18 MONTHS

SPECIAL SENSITIVITY: IF CONTAINER IS EXPOSED TO HIGH HEAT 400°F OR HIGHER, PRESSURE CAN BE GENERATED. CONTAINERS ARE EQUIPPED WITH A PRESSURE RELIEF VALVE INTENDED TO VENT ANY EXCESSIVE BUILDUP OF PRESSURE EXERTED BY GASES GENERATED BY HEAT.

PRECAUTIONARY MEASURES: STORE IN TIGHTLY CLOSED CONTAINERS. AVOID CONTACT WITH SKIN AND EYES. DO NOT BREATH AEROSOLS OR VAPORS.

SECTION VIII - EXPOSURE - HEALTH DATA - PERSONAL PROTECTION

LIKELY ROUTES OF EXPOSURE - EYE - SKIN - INHALATION

FOR EYES - LIQUID CHEMICAL GOGGLES OR FULL FACE SHIELD. VAPOR RESISTANT GOGGLES SHOULD BE WORN WHEN CONTACT LENSES ARE IN USE. IN A SPLASH HAZARD ENVIRONMENT, CHEMICAL GOGGLES SHOULD BE USED ALONG WITH A FULL FACE SHIELD.

FOR SKIN - PERMEATION RESISTANT GLOVES (BUTYL RUBBER, NITRILE RUBBER). COVER AS MUCH OF THE EXPOSED SKIN AREA AS POSSIBLE WITH APPROPRIATE CLOTHING.

RESPIRATORY PROTECTION: IF MATERIAL IS HEATED OR SPRAYED, USE AN AIR PURIFYING RESPIRATOR

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SECTION IX — PHYSICAL AND CHEMICAL PROPERTIES

FORM: LIQUID AND GAS UNDER PRESSURE. LIQUID WILL BECOME FOAMY IF RELEASED FROM CONTAINER.

ODOR: SLIGHT SWEET ODOR

SOLUBILITY IN WATER: SLIGHT TO MODERATE SOLUBILITY.

SPECIFIC GRAVITY: 1.10 @ 77°F

VISCOSITY: 150 CPS @ 77°F

% VOLATILES: <30%

SECTION X — STABILITY AND REACTIVITY

STABILITY: STABLE AT AMBIENT TEMPERATURES

CONDITIONS TO AVOID: HIGH TEMPERATURES OR FREEZING

INCOMPATIBILITY: INCOMPATIBLE WITH ISOCYANATES, STRONG ACIDS OR OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION:

MAY PRODUCES CARBON MONOXIDE, CARBON DIOXIDE, AND OTHER ASPHYXIANTS

SECTION XI – TOXICOLOGICAL INFORMATION

MIXTURE CONTAINS HFC 134A

EXPOSURE GUIDELINES FOR HFC 134A:

ACGIH	WEEL TWA	1000 PPM
OSHA	PEL	NONE ESTABLISHED

SECTION XII – ECOLOGICAL INFORMATION

IT IS UNLIKELY THAT SIGNIFICANT ENVIRONMENTAL EXPOSURE IN THE AIR OR WATER WILL ARISE BASED ON CONSIDERATION OF THE USE OF THIS SUBSTANCE.

THIS MATERIAL IS SLIGHTLY TO MODERATELY SOLUBLE WITH WATER.

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SECTION XIII - DISPOSAL INFORMATION

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. FOR UNUSED AND CONTAMINATED PRODUCT, THE PREFERRED OPTIONS INCLUDE SENDING TO A LICENSED, PERMITTED RECYCLER, RECLAIMER, INCINERATOR OR OTHER THERMAL DESTRUCTIVE DEVICE.

SECTION XIV - TRANSPORTATION INFORMATION

UN OR ID NUMBER: UN 1956
BILL OF LADING DESCRIPTION: COMPRESSED GAS N.O.S.
TETRAFLUOROETHANE MIXTURE
PROPER SHIPPING NAME: COMPRESSED GAS N.O.S.
HAZARD CLASS: CLASS 2.2
TRADE NAME: TITASET® COMPONENT B

SECTION XV - REGULATORY INFORMATION

THIS PRODUCT IS NOT CLASSIFIED AS HAZARDOUS UNDER OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

TSCA INVENTORY: ALL INGREDIENTS LISTED

EPCRA SECTION 313: THIS PRODUCT CONTAINS NO CHEMICAL SUBJECT TO SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION REQUIREMENTS.

SECTION XVI OTHER

NFPA: HEALTH=1 FIRE=1 REACTIVITY=0

THIS DOCUMENT PREPARED BY:

PATRICK M. DONAHUE
PRODUCT MANAGER

DATE PREPARED: 3/2/2006