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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	31540
NAME:	Ethyl diazoacetate solution, 15% in toluene
SYNONYMS:	2-Diazoacetic acid ethyl ester solution
24 HOUR EMERGENCY TELEPHONE:	(800) 535-5053(USA) 352-323-3500 (INTERNATIONAL)
TO REQUEST AN MSDS:	(800) 869-9290
CUSTOMER SERVICE:	(630) 766-2112

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)
FLAMMABLE LIQUIDS (CATEGORY 2), H225
SKIN IRRITATION (CATEGORY 2), H315
CARCINOGENICITY (CATEGORY 2), H351
REPRODUCTIVE TOXICITY (CATEGORY 2), H361

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (CATEGORY 3), CENTRAL NERVOUS SYSTEM, H336
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (CATEGORY 2), H373
ASPIRATION HAZARD (CATEGORY 1), H304
ACUTE AQUATIC TOXICITY (CATEGORY 2), H401
FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS
PICTOGRAM



SIGNAL WORD

DANGER

HAZARD STATEMENT(S)

H225 HIGHLY FLAMMABLE LIQUID AND VAPOUR.
H304 MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.
H315 CAUSES SKIN IRRITATION.
H336 MAY CAUSE DROWSINESS OR DIZZINESS.
H351 SUSPECTED OF CAUSING CANCER.
H361 SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD.
H373 MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.
H401 TOXIC TO AQUATIC LIFE.

PRECAUTIONARY STATEMENT(S)

P201 OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.
P202 DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD.
P210 KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES. NO SMOKING.
P233 KEEP CONTAINER TIGHTLY CLOSED.
P240 GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT.
P241 USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/ LIGHTING/ EQUIPMENT.
P242 USE ONLY NON-SPARKING TOOLS.
P243 TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE.
P260 DO NOT BREATHE DUST/ FUME/ GAS/ MIST/ VAPOURS/ SPRAY.
P264 WASH SKIN THOROUGHLY AFTER HANDLING.
P271 USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.
P273 AVOID RELEASE TO THE ENVIRONMENT.
P280 WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE PROTECTION/ FACE PROTECTION.
P301 + P310 IF SWALLOWED: IMMEDIATELY CALL A POISON CENTER/DOCTOR.
P303 + P361 + P353 IF ON SKIN (OR HAIR): TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/SHOWER.
P304 + P340 + P312 IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING. CALL A POISON CENTER/DOCTOR IF YOU FEEL UNWELL.

P308 + P313 IF EXPOSED OR CONCERNED: GET MEDICAL ADVICE/ ATTENTION.

P331 DO NOT INDUCE VOMITING.

P332 + P313 IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE/ ATTENTION.

P362 TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE REUSE.

P370 + P378 IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR ALCOHOL-RESISTANT FOAM TO EXTINGUISH.

P403 + P233 STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED.

P403 + P235 STORE IN A WELL-VENTILATED PLACE. KEEP COOL.

P405 STORE LOCKED UP.

P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS HEATING MAY CAUSE AN EXPLOSION.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: $C_4H_6N_2O_2$

MW: 114.10

CAS-NO. 623-73-4

PURITY:

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
TOLUENE		
108-88-3	FLAM. LIQ. 2; SKIN IRRIT. 2; REPR. 2; STOT SE 3; STOT RE 2; ASP. TOX. 1; AQUATIC ACUTE 2; H225, H304, H315, H336, H361, H373, H401	>= 70 - < 90 %
ETHYL DIAZOACETATE		
623-73-4	FLAM. LIQ. 3; ACUTE TOX. 4; H226, H302	>= 10 - < 20 %
METHYLENE CHLORIDE		
75-09-2	SKIN IRRIT. 2; EYE IRRIT. 2A; CARC. 2; STOT SE 3; STOT RE 2; H315, H319, H335, H336, H351, H373, H373	>= 1 - < 5 %

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE	CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT OF DANGEROUS AREA.
IF INHALED	IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN.
IN CASE OF SKIN CONTACT	WASH OFF WITH SOAP AND PLENTY OF WATER. CONSULT A PHYSICIAN.
IN CASE OF EYE CONTACT	RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.
IF SWALLOWED	DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN.
MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED	THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11
INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED	NO DATA AVAILABLE

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA	USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	NO DATA AVAILABLE
ADVICE FOR FIREFIGHTERS	WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY.

FURTHER INFORMATION USE WATER SPRAY TO COOL UNOPENED CONTAINERS.

SECTION 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL
PRECAUTIONS,
PROTECTIVE
EQUIPMENT AND
EMERGENCY
PROCEDURES**

USE PERSONAL PROTECTIVE EQUIPMENT. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. REMOVE ALL SOURCES OF IGNITION. EVACUATE PERSONNEL TO SAFE AREAS. BEWARE OF VAPOURS ACCUMULATING TO FORM EXPLOSIVE CONCENTRATIONS. VAPOURS CAN ACCUMULATE IN LOW AREAS.

FOR PERSONAL PROTECTION SEE SECTION 8.

**ENVIRONMENTAL
PRECAUTIONS**

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

**METHODS AND
MATERIALS FOR
CONTAINMENT AND
CLEANING UP**

CONTAIN SPILLAGE, AND THEN COLLECT WITH AN ELECTRICALLY PROTECTED VACUUM CLEANER OR BY WET-BRUSHING AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS (SEE SECTION 13).

**REFERENCE TO OTHER
SECTIONS**

FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE
HANDLING**

AVOID CONTACT WITH SKIN AND EYES. AVOID INHALATION OF VAPOUR OR MIST. USE EXPLOSION-PROOF EQUIPMENT. KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING. TAKE MEASURES TO PREVENT THE BUILD UP OF ELECTROSTATIC CHARGE. FOR PRECAUTIONS SEE SECTION 2.2.

**CONDITIONS FOR SAFE
STORAGE, INCLUDING
ANY INCOMPATIBILITIES**

KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE.

HANDLE UNDER NITROGEN, PROTECT FROM MOISTURE. STORE UNDER NITROGEN. HEAT SENSITIVE. DO NOT PACK IN METAL CONTAINERS.

Store at 2-8 °C

SPECIFIC END USE(S)

APART FROM THE USES MENTIONED IN SECTION 1.2
NO OTHER SPECIFIC USES ARE STIPULATED

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

COMPONENT	CAS-NO.	VALUE	CONTROL PARAMETERS	BASIS
TOLUENE	108-88-3	TWA	100 PPM 375 MG/M3	USA. OSHA - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS - 1910.1000
		STEL	150 PPM 560 MG/M3	USA. OSHA - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS - 1910.1000
		TWA	200 PPM	USA. OCCUPATIONAL EXPOSURE LIMITS (OSHA) - TABLE Z-2
	REMARKS	Z37.12-1967		
		CEIL	300 PPM	USA. OCCUPATIONAL EXPOSURE LIMITS (OSHA) - TABLE Z-2
		Z37.12-1967		
		PEAK	500 PPM	USA. OCCUPATIONAL EXPOSURE LIMITS (OSHA) - TABLE Z-2
		Z37.12-1967		
		TWA	20 PPM	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)
		VISUAL IMPAIRMENT FEMALE REPRODUCTIVE PREGNANCY LOSS 2015 ADOPTION SUBSTANCES FOR WHICH THERE IS A BIOLOGICAL EXPOSURE INDEX OR INDICES (SEE BEI SECTION) NOT CLASSIFIABLE AS A HUMAN CARCINOGEN		
		TWA	100 PPM 375 MG/M3	USA. NIOSH RECOMMENDED EXPOSURE LIMITS
		ST	150 PPM 560 MG/M3	USA. NIOSH RECOMMENDED EXPOSURE LIMITS
		POTENTIAL OCCUPATIONAL CARCINOGEN SEE APPENDIX A		
METHYLENE CHLORIDE	75-09-2	TWA	50.000000 PPM	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)

		CENTRAL NERVOUS SYSTEM IMPAIRMENT CARBOXYHEMOGLOBINEMIA SUBSTANCES FOR WHICH THERE IS A BIOLOGICAL EXPOSURE INDEX OR INDICES (SEE BEI SECTION) CONFIRMED ANIMAL CARCINOGEN WITH UNKNOWN RELEVANCE TO HUMANS		
		TWA	50 PPM	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)
		CENTRAL NERVOUS SYSTEM IMPAIRMENT CARBOXYHEMOGLOBINEMIA SUBSTANCES FOR WHICH THERE IS A BIOLOGICAL EXPOSURE INDEX OR INDICES (SEE BEI SECTION) CONFIRMED ANIMAL CARCINOGEN WITH UNKNOWN RELEVANCE TO HUMANS		
		SUBSTANCE LISTED; FOR MORE INFORMATION SEE OSHA DOCUMENT 1910.1052		
		SUBSTANCE LISTED; FOR MORE INFORMATION SEE OSHA DOCUMENT 1910.1052		
		SEE TABLE Z-2		
		PEL	25.000000 PPM	OSHA SPECIFICALLY REGULATED CHEMICALS/CARCINOGENS
		1910.1052 THIS SECTION APPLIES TO ALL OCCUPATIONAL EXPOSURES TO METHYLENE CHLORIDE (MC), CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER 75-09- 2, IN GENERAL INDUSTRY, CONSTRUCTION AND SHIPYARD EMPLOYMENT. METHYLENE CHLORIDE (MC) MEANS AN ORGANIC COMPOUND WITH CHEMICAL FORMULA, CH ₂ CL ₂ . ITS CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER IS 75-09-2. ITS MOLECULAR WEIGHT IS 84.9 G/MOLE OSHA SPECIFICALLY REGULATED CARCINOGEN		
		STEL	125.000000 PPM	OSHA SPECIFICALLY REGULATED CHEMICALS/CARCINOGENS
		1910.1052 THIS SECTION APPLIES TO ALL OCCUPATIONAL EXPOSURES TO METHYLENE CHLORIDE (MC), CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER 75-09- 2, IN GENERAL INDUSTRY, CONSTRUCTION AND SHIPYARD EMPLOYMENT. METHYLENE CHLORIDE (MC) MEANS AN ORGANIC COMPOUND WITH CHEMICAL FORMULA, CH ₂ CL ₂ . ITS CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER IS 75-09-2. ITS MOLECULAR WEIGHT IS 84.9 G/MOLE OSHA SPECIFICALLY REGULATED CARCINOGEN		
		PEL	25 PPM 87 MG/M3	CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS (TITLE 8, ARTICLE 107)
		SEE SECTION 5202		

		STEL	125 PPM 435 MG/M3	CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS (TITLE 8, ARTICLE 107)
		SEE SECTION 5202		

BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS

COMPONENT	CAS-NO.	PARAMETERS	VALUE	BIOLOGICAL SPECIMEN	BASIS
TOLUENE	108-88-3	TOLUENE	0.0200 MG/L	IN BLOOD	ACGIH - BIOLOGICAL EXPOSURE INDICES (BEI)
	REMARKS	PRIOR TO LAST SHIFT OF WORKWEEK			
		TOLUENE	0.0300 MG/L	URINE	ACGIH - BIOLOGICAL EXPOSURE INDICES (BEI)
		END OF SHIFT (AS SOON AS POSSIBLE AFTER EXPOSURE CEASES)			
		O-CRESOL	0.3000 MG/G	URINE	ACGIH - BIOLOGICAL EXPOSURE INDICES (BEI)
		END OF SHIFT (AS SOON AS POSSIBLE AFTER EXPOSURE CEASES)			
METHYLENE CHLORIDE	75-09-2	DICHLOROMETHANE	0.3000 MG/L	URINE	ACGIH - BIOLOGICAL EXPOSURE INDICES (BEI)
		END OF SHIFT (AS SOON AS POSSIBLE AFTER EXPOSURE CEASES)			

EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE. WASH HANDS BEFORE BREAKS AND AT THE END OF WORKDAY.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION

FACE SHIELD AND SAFETY GLASSES USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).

