

**MSDS for: LN-933**

**Revised: 12-Feb-2009**

**SECTION 1:**

PRODUCT IDENTIFIER: LN-933 GRANITE AND MARBLE ADHESIVE

DATE OF PREPARATION: MARCH 11, 2008  
PRODUCT USE: ADHESIVE

MANUFACTURED BY: AKZO NOBEL  
15885 WEST SPRAGUE ROAD  
STRONGSVILLE, OHIO 44136, U.S.A.

AKZO NOBEL (CANADA)  
8200 KEELE STREET  
CONCORD, ONTARIO L4K 2A5, CANADA

EMERGENCY AND MSDS TELEPHONE NUMBER: 1-800-545-2643

MSDS PREPARED BY: PRODUCT SAFETY AND COMPLIANCE DEPARTMENT  
AKZO NOBEL NORTH AMERICA

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

<b>INGREDIENT</b>	<b>WT. %</b>
CHEMICAL NAME: POLYURETHANE RESIN COMMON NAME: POLYURETHANE RESIN CAS NUMBER: CONFIDENTIAL	10-20
CHEMICAL NAME: BENZENE, 1,1'-METHYLENEBIS(4-ISOCYANATO- COMMON NAME: METHYLENE BISPHENYL ISOCYANATE CAS NUMBER: 101-68-8	0.1-1.0
CHEMICAL NAME: LIMESTONE COMMON NAME: LIMESTONE CAS NUMBER: 1317-65-3	20-30
CHEMICAL NAME: QUARTZ COMMON NAME: QUARTZ CAS NUMBER: 14808-60-7	40-50
CHEMICAL NAME: PROPANOL, (2-METHOXYMETHYLETHOXY)- COMMON NAME: DPG MONOMETHYL ETHER CAS NUMBER: 34590-94-8	1-5
CHEMICAL NAME: STODDARD SOLVENT COMMON NAME: MINERAL SPIRITS CAS NUMBER: 8052-41-3	5-10

### **SECTION 3: HAZARDS IDENTIFICATION**

PRIMARY ROUTE(S) OF EXPOSURE: INHALATION, SKIN CONTACT, EYE CONTACT, INGESTION

#### **EFFECTS OF OVEREXPOSURE**

- INHALATION:** IRRITATION OF RESPIRATORY TRACT. PROLONGED INHALATION MAY LEAD TO DROWSINESS, DIZZINESS AND/OR LIGHTHEADEDNESS, HEADACHE, UNCOORDINATION, NAUSEA, VOMITING, CENTRAL NERVOUS SYSTEM DEPRESSION, ANESTHETIC EFFECT OR NARCOSIS, DIFFICULTY OF BREATHING, SEVERE LUNG IRRITATION OR DAMAGE, LIVER DAMAGE, KIDNEY DAMAGE, LOSS OF CONSCIOUSNESS. POSSIBLE SENSITIZATION TO RESPIRATORY TRACT.
- SKIN CONTACT:** IRRITATION OF SKIN. PROLONGED OR REPEATED CONTACT CAN CAUSE DERMATITIS, DEFATTING. POSSIBLE SENSITIZATION TO SKIN. SKIN CONTACT MAY RESULT IN DERMAL ABSORPTION OF COMPONENT(S) OF THIS PRODUCT WHICH MAY CAUSE DROWSINESS, DIZZINESS AND/OR LIGHTHEADEDNESS, HEADACHE, UNCOORDINATION, CENTRAL NERVOUS SYSTEM DEPRESSION.
- EYE CONTACT:** IRRITATION OF EYES. PROLONGED OR REPEATED CONTACT CAN CAUSE CONJUNCTIVITIS, TEARING OF EYES, REDNESS OF EYES.
- INGESTION:** INGESTION MAY CAUSE LUNG INFLAMMATION AND DAMAGE DUE TO ASPIRATION OF MATERIAL INTO LUNGS, MOUTH AND THROAT IRRITATION, DROWSINESS, DIZZINESS AND/OR LIGHTHEADEDNESS, HEADACHE, UNCOORDINATION, NAUSEA, VOMITING, GASTRO-INTESTINAL DISTURBANCES, ABDOMINAL PAIN, CENTRAL NERVOUS SYSTEM DEPRESSION, DIFFICULTY OF BREATHING, CONVULSIONS, LOSS OF CONSCIOUSNESS.

#### **MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**

EYE, SKIN, RESPIRATORY DISORDERS, LIVER DISORDERS, RESPIRATORY DISORDERS

### **SECTION 4: FIRST-AID MEASURES**

- INHALATION:** REMOVE TO FRESH AIR. RESTORE AND SUPPORT CONTINUED BREATHING. GET EMERGENCY MEDICAL ATTENTION. HAVE TRAINED PERSON GIVE OXYGEN IF NECESSARY. GET MEDICAL HELP FOR ANY BREATHING DIFFICULTY. GET MEDICAL ATTENTION IF DISCOMFORT OR IRRITATION PERSISTS.
- SKIN CONTACT:** WASH THOROUGHLY WITH SOAP AND WATER. IF ANY PRODUCT REMAINS, GENTLY RUB PETROLEUM JELLY, VEGETABLE OR MINERAL/BABY OIL ONTO SKIN. REPEATED APPLICATIONS MAY BE NEEDED. REMOVE CONTAMINATED CLOTHING. WASH CONTAMINATED CLOTHING BEFORE RE-USE. IF IRRITATION OCCURS, CONSULT A PHYSICIAN.

EYE CONTACT: FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER, ESPECIALLY UNDER LIDS FOR AT LEAST 15 MINUTES. IF IRRITATION OR OTHER EFFECTS PERSIST, OBTAIN MEDICAL TREATMENT.

INGESTION: IF SWALLOWED, OBTAIN MEDICAL TREATMENT IMMEDIATELY.

#### **SECTION 5: FIRE-FIGHTING MEASURES**

FLASH POINT (SETA): 135 F./ 57 C. LOWER EXPLOSIVE LIMIT: NOT AVAILABLE  
UPPER EXPLOSIVE LIMIT: NOT AVAILABLE

FIRE EXTINGUISHING MEDIA: DRY CHEMICAL OR FOAM, WATER FOG, CARBON DIOXIDE

#### UNUSUAL FIRE AND EXPLOSION HAZARDS

CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT OR FIRE. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL LONG DISTANCES TO A SOURCE OF IGNITION AND FLASH BACK. VAPORS CAN FORM EXPLOSIVE MIXTURES IN AIR AT ELEVATED TEMPERATURES. MAY DECOMPOSE UNDER FIRE CONDITIONS EMITTING IRRITANT AND/OR TOXIC GASES.

#### FIRE FIGHTING PROCEDURES

WATER MAY BE USED TO COOL AND PROTECT EXPOSED CONTAINERS. FIREFIGHTERS SHOULD USE FULL PROTECTIVE CLOTHING, EYE PROTECTION, AND SELF-CONTAINED BREATHING APPARATUS.

#### HAZARDOUS DECOMPOSITION OR COMBUSTION PRODUCTS

CARBON MONOXIDE, CARBON DIOXIDE, OXIDES OF CALCIUM

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

##### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

COMPLY WITH ALL APPLICABLE HEALTH AND ENVIRONMENTAL REGULATIONS. ELIMINATE ALL SOURCES OF IGNITION. VENTILATE AREA. SPILLS MAY BE COLLECTED WITH ABSORBENT MATERIALS. EVACUATE ALL UNNECESSARY PERSONNEL. COMPLETE PERSONAL PROTECTIVE EQUIPMENT MUST BE USED DURING CLEANUP.

LARGE SPILLS: SHUT OFF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN SPILL. PUMP TO STORAGE OR SALVAGE VESSELS. USE ABSORBENT TO PICK UP EXCESS RESIDUE. KEEP SALVAGEABLE MATERIAL AND RINSE WATER OUT OF SEWERS AND WATER COURSES.

SMALL SPILLS: USE ABSORBENT TO PICK UP RESIDUE AND DISPOSE OF PROPERLY.

#### **SECTION 7: HANDLING AND STORAGE**

STORE BELOW 100F (38C). KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME.

## OTHER PRECAUTIONS

USE ONLY WITH ADEQUATE VENTILATION. DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. AVOID CONTACT WITH SKIN AND EYES, AND BREATHING OF VAPORS. WASH HANDS THOROUGHLY AFTER HANDLING, ESPECIALLY BEFORE EATING OR SMOKING. KEEP CONTAINERS TIGHTLY CLOSED AND UPRIGHT WHEN NOT IN USE. AVOID CONDITIONS WHICH RESULT IN FORMATION OF INHALABLE PARTICLES SUCH AS SPRAYING OR ABRADING (SANDING) PAINTED SURFACES. IF SUCH CONDITIONS CANNOT BE AVOIDED, USE APPROPRIATE RESPIRATORY PROTECTION AS DIRECTED UNDER EXPOSURE CONTROLS/PERSONAL PROTECTION. EMPTY CONTAINERS MAY CONTAIN HAZARDOUS RESIDUES. GROUND EQUIPMENT WHEN TRANSFERRING TO PREVENT ACCUMULATION OF STATIC CHARGE.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

COMMON NAME: METHYLENE BISPHENYL ISOCYANATE  
CAS NUMBER: 101-68-8  
ACGIH(TWA): 0.005 PPM  
OSHA( (SKIN): CEILING: 0.02PPM SUPP REC STD.: NOT AVAILABLE

COMMON NAME: LIMESTONE  
CAS NUMBER: 1317-65-3  
ACGIH(TWA): 10 MG/M3 OSHA(TWA): 5 MG/M3

COMMON NAME: QUARTZ  
CAS NUMBER: 14808-60-7  
ACGIH(TWA): 0.025 MG/M3 OSHA(TWA): 0.1 MG/M3

COMMON NAME: DPG MONOMETHYL ETHER  
CAS NUMBER: 34590-94-8  
ACGIH(TWA): SKIN 100 PPM OSHA(TWA): 100 PPM  
ACGIH(STEL): 150 PPM  
OSHA( (SKIN): SKIN CEILING: SUPP REC STD.: NOT AVAILABLE

COMMON NAME: MINERAL SPIRITS  
CAS NUMBER: 8052-41-3  
ACGIH(TWA): 100 PPM OSHA(TWA): 500 PPM

SKIN - DENOTES THAT ADDITIONAL EXPOSURE, OVER AND ABOVE AIRBORNE EXPOSURE, MAY RESULT FROM SKIN ABSORPTION.

## RESPIRATORY PROTECTION

RESPIRATORY PROTECTION IS REQUIRED FOR USE IN ISOCYANATE CONTAINING ENVIRONMENTS. CONSIDER TYPE OF APPLICATION AND ENVIRONMENTAL CONCENTRATIONS WHEN SELECTING RESPIRATORY PROTECTION. OBSERVE GOVERNMENTAL REGULATIONS FOR RESPIRATOR USE. (29 CFR 910.134(OSHA))(CANADIAN Z94.4) THE USE OF POSITIVE PRESSURE SUPPLIED AIR RESPIRATOR IS MANDATORY WHEN THE AIRBORNE ISOCYANATE CONCENTRATIONS ARE NOT KNOWN.

NOTE: ISOCYANATE BASED MATERIALS HAVE BEEN DETERMINED TO CAUSE ALLERGIC SENSITIZATION IN HUMANS. AVOID INHALATION AND DERMAL (SKIN) CONTACT WITH THE UNCURED MATERIAL.

VENTILATION: PROVIDE DILUTION VENTILATION OR LOCAL EXHAUST TO PREVENT BUILD-UP OF VAPORS.

PERSONAL PROTECTIVE EQUIPMENT

EYE WASH, SAFETY SHOWER, SAFETY GLASSES OR GOGGLES, IMPERVIOUS GLOVES, IMPERVIOUS CLOTHING

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

VAPOR PRESSURE:	NOT AVAILABLE	SPECIFIC GRAVITY:	1.777
BOILING RANGE (F/C):	NOT AVAILABLE	WEIGHT PER GALLON:	14.80/17.77 IMP
APPEARANCE:	GREEN	%VOLATILE BY VOLUME:	NOT DETERMINED
PHYSICAL STATE:	PASTE	SOLUBLE IN WATER:	NO
		PH:	N/A

**SECTION 10: STABILITY AND REACTIVITY**

UNDER NORMAL CONDITIONS: STABLE (SEE SECTION 5 FIRE FIGHTING MEASURES)

MATERIALS TO AVOID: OXIDIZERS, ACIDS, BASES, AMMONIUM SALTS, COMBUSTIBLE MATERIALS

CONDITIONS TO AVOID: ELEVATED TEMPERATURES, CONTACT WITH OXIDIZING AGENT, SPARKS, OPEN FLAME, IGNITION SOURCES

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

**SECTION 11: TOXICOLOGICAL INFORMATION**

COMMON NAME: POLYURETHANE RESIN  
CAS NUMBER: CONFIDENTIAL  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO

COMMON NAME: METHYLENE BISPHENYL ISOCYANATE  
CAS NUMBER: 101-68-8  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: 2200.00 MG/KG ORL MOU

COMMON NAME: LIMESTONE  
CAS NUMBER: 1317-65-3  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: 6450.00 MG/KG ORL RAT

COMMON NAME: QUARTZ  
CAS NUMBER: 14808-60-7  
CARCINOGENICITY LISTED BY: NTP YES IARC YES 1 OSHA NO ACGIH YES A2

COMMON NAME: DPG MONOMETHYL ETHER  
CAS NUMBER: 34590-94-8  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: 5.40 ML/KG ORL RAT  
LD50: 10.00 ML/KG SKN RBT

COMMON NAME: MINERAL SPIRITS  
CAS NUMBER: 8052-41-3  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: > 3.00 GM/KG SKN RBT  
LD50: > 5.00 GM/KG ORL RAT

#### SUPPLEMENTAL HEALTH INFORMATION

CONTAINS A CHEMICAL THAT MAY BE ABSORBED THROUGH SKIN.

NOTICE - REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL. OTHER EFFECTS OF OVEREXPOSURE MAY INCLUDE TOXICITY TO LIVER, KIDNEY.

CARCINOGENICITY: CONTAINS CRYSTALLINE SILICA WHICH IS CONSIDERED A HAZARD BY INHALATION. IARC HAS CLASSIFIED CRYSTALLINE SILICA AS CARCINOGENIC TO HUMANS (GROUP 1). CRYSTALLINE SILICA IS ALSO A KNOWN CAUSE OF SILICOSIS, A NONCANCEROUS LUNG DISEASE. THE NATIONAL TOXICOLOGY PROGRAM (NTP) HAS CLASSIFIED CRYSTALLINE SILICA AS A KNOWN HUMAN CARCINOGEN.

REPRODUCTIVE EFFECTS: NO REPRODUCTIVE EFFECTS ARE ANTICIPATED

MUTAGENICITY: NO MUTAGENIC EFFECTS ARE ANTICIPATED

TERATOGENICITY: NO TERATOGENIC EFFECTS ARE ANTICIPATED

#### SECTION 12: ECOLOGICAL INFORMATION

NO ECOLOGICAL TESTING HAS BEEN DONE BY AKZO NOBEL ON THIS PRODUCT AS A WHOLE.

#### SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. AVOID DISCHARGE TO NATURAL WATERS.

#### SECTION 14: TRANSPORT INFORMATION

DOT: UN1133, ADHESIVE, COMBUSTIBLE LIQUID, PGIII, ERG 128

IMDG: UN1133, ADHESIVES, CLASS 3, PG III, LTD QTY, (IMDG 3.4.7,2.3.2.3) ERG128

IATA: NOT AVAILABLE

TDG: NOT AVAILABLE

**SECTION 15: REGULATORY INFORMATION**

	SARA 302	SARA 313	CERCLA 302.4	HAZ AIR POLLUTANT	MARINE POLTNT
CAS NUMBER: 101-68-8	NO	YES	YES	YES	NO
COMMON NAME: METHYLENE BISPHENYL ISOCYANATE					

AS OF THE DATE OF THIS MSDS, ALL OF THE COMPONENTS IN THIS PRODUCT ARE LISTED (OR ARE OTHERWISE EXEMPT FROM LISTING) ON THE TSCA INVENTORY. THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR (CONTROLLED PRODUCTS REGULATIONS) AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

**SECTION 16: OTHER INFORMATION**

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE AT THE TIME OF PREPARATION OF THIS DATA SHEET AND WHICH AKZO NOBEL BELIEVES TO BE RELIABLE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA. AKZO NOBEL SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS INFORMATION, OR OF ANY PRODUCT, METHOD OR APPARATUS MENTIONED AND YOU MUST MAKE YOUR OWN DETERMINATION OF ITS SUITABILITY AND COMPLETENESS FOR YOUR OWN USE, FOR THE PROTECTION OF THE ENVIRONMENT, AND THE HEALTH AND SAFETY OF YOUR EMPLOYEES AND USERS OF THIS MATERIAL. COMPLIES WITH OSHA HAZARD COMMUNICATION STANDARD 29CFR1910.1200.