

**MSDS for: FRP-310****Revised: 12-Feb-2009****SECTION 1:**

PRODUCT IDENTIFIER: FRP-310 LATEX ADHESIVE FOR FRP  
DATE OF PREPARATION: DECEMBER 2, 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: ACRYLIC RESIN COMMON NAME: ACRYLIC RESIN CAS NUMBER: CONFIDENTIAL	10-20
CHEMICAL NAME: ETHANOL, 2,2'-OXYBIS-, DIBENZOATE COMMON NAME: DIETHYLENE GLYCOL DIBENZOATE CAS NUMBER: 120-55-8	1-5
CHEMICAL NAME: LIMESTONE COMMON NAME: LIMESTONE CAS NUMBER: 1317-65-3	30-40
CHEMICAL NAME: KAOLIN COMMON NAME: CLAY CAS NUMBER: 1332-58-7	10-20
CHEMICAL NAME: TITANIUM OXIDE COMMON NAME: TITANIUM DIOXIDE CAS NUMBER: 13463-67-7	0.1-1.0
CHEMICAL NAME: CRISTOBALITE COMMON NAME: CRYSTALLINE SILICA, CRISTOBALITE CAS NUMBER: 14464-46-1	0.1-1.0
CHEMICAL NAME: QUARTZ COMMON NAME: QUARTZ CAS NUMBER: 14808-60-7	1-5

CHEMICAL NAME: 2-PROPANONE 1-5  
COMMON NAME: ACETONE  
CAS NUMBER: 67-64-1

CHEMICAL NAME: WATER 30-40  
COMMON NAME: WATER  
CAS NUMBER: 7732-18-5

### **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 MUCOUS MEMBRANE IRRITATION, FATIGUE, DROWSINESS, DIZZINESS AND/OR LIGHTHEADEDNESS, HEADACHE, UNCOORDINATION, NAUSEA, VOMITING, ABDOMINAL PAIN, COUGHING, DIFFICULTY WITH SPEECH, CENTRAL NERVOUS SYSTEM DEPRESSION, DIFFICULTY OF BREATHING, BLOOD ABNORMALITIES, LIVER DAMAGE, KIDNEY DAMAGE, PNEUMOCONIOSIS.

SKIN CONTACT: IRRITATION OF SKIN. PROLONGED OR REPEATED CONTACT CAN CAUSE DERMATITIS, DEFATTING.

EYE CONTACT: IRRITATION OF EYES. PROLONGED OR REPEATED CONTACT CAN CAUSE CONJUNCTIVITIS, TEARING OF EYES, REDNESS OF EYES.

INGESTION: INGESTION MAY CAUSE MOUTH AND THROAT IRRITATION, MUCOUS MEMBRANE IRRITATION, HEADACHE, NAUSEA, VOMITING, DIARRHEA, GASTRO-INTESTINAL DISTURBANCES, ABDOMINAL PAIN, INTOXICATION, DIFFICULTY OF BREATHING, CARDIAC ABNORMALITIES, BLOOD ABNORMALITIES, KIDNEY DAMAGE, CONVULSIONS, CYANOSIS, BRAIN DAMAGE, CHEST EFFECTS.

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

EYE, SKIN, RESPIRATORY DISORDERS, LUNG 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.

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.

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): ABOVE 200F/93C LOWER EXPLOSIVE LIMIT: NOT AVAILABLE  
UPPER EXPLOSIVE LIMIT: 13.0 %

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

#### **UNUSUAL FIRE AND EXPLOSION HAZARDS**

VAPORS MAY IGNITE EXPLOSIVELY AT AMBIENT TEMPERATURES. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL LONG DISTANCES TO A SOURCE OF IGNITION AND FLASH BACK. CLOSED CONTAINERS MAY BURST IF EXPOSED TO EXTREME HEAT OR FIRE. 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, ACRYLIC MONOMERS,  
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. EVACUATE ALL UNNECESSARY PERSONNEL. PLACE COLLECTED MATERIAL IN PROPER CONTAINER. SPILLED MATERIAL IS EXTREMELY SLIPPERY. 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 FROM FREEZING.

## 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. GROUND EQUIPMENT WHEN TRANSFERRING TO PREVENT ACCUMULATION OF STATIC CHARGE.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

COMMON NAME:	LIMESTONE		
CAS NUMBER:	1317-65-3		
ACGIH(TWA):	10 MG/M3	OSHA(TWA):	5 MG/M3
COMMON NAME:	CLAY		
CAS NUMBER:	1332-58-7		
ACGIH(TWA):	2 MG/M3	OSHA(TWA):	5 MG/M3
COMMON NAME:	TITANIUM DIOXIDE		
CAS NUMBER:	13463-67-7		
ACGIH(TWA):	10 MG/M3	OSHA(TWA):	10 MG/M3
COMMON NAME:	CRYSTALLINE SILICA, CRISTOBALITE		
CAS NUMBER:	14464-46-1		
ACGIH(TWA):	0.025 MG/M3	OSHA(TWA):	0.05 MG/M3
COMMON NAME:	QUARTZ		
CAS NUMBER:	14808-60-7		
ACGIH(TWA):	0.025 MG/M3	OSHA(TWA):	0.1 MG/M3
COMMON NAME:	ACETONE		
CAS NUMBER:	67-64-1		
ACGIH(TWA):	500 PPM	OSHA(TWA):	1000 PPM
ACGIH(STEL):	750 PPM		

## RESPIRATORY PROTECTION

CONTROL ENVIRONMENTAL CONCENTRATIONS BELOW APPLICABLE EXPOSURE STANDARDS WHEN USING THIS MATERIAL. WHEN RESPIRATORY PROTECTION IS DETERMINED TO BE NECESSARY, USE A NIOSH/MSHA (CANADIAN Z94.4) APPROVED ELASTOMERIC SEALING-SURFACE FACEPIECE RESPIRATOR OUTFITTED WITH ORGANIC VAPOR CARTRIDGES AND PAINT SPRAY (DUST/MIST) PREFILTERS. DETERMINE THE PROPER LEVEL OF PROTECTION BY CONDUCTING APPROPRIATE AIR MONITORING. CONSULT 29CFR1910.134 FOR SELECTION OF RESPIRATORS (CANADIAN Z94.4).

## VENTILATION

PROVIDE DILUTION VENTILATION OR LOCAL EXHAUST TO PREVENT BUILD-UP OF VAPORS. USE EXPLOSION-PROOF EQUIPMENT.

## 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:	1.440
BOILING RANGE (F/C):	133-460/ 56-238	WEIGHT PER GALLON:	12.00/14.41 IMP
APPEARANCE:	TAN	%VOLATILE BY VOLUME:	59.65
PHYSICAL STATE:	PASTE	SOLUBLE IN WATER:	Y
PH:	8.40		

**SECTION 10: STABILITY AND REACTIVITY**

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

MATERIALS TO AVOID: OXIDIZERS, ACIDS, AMINES, AMMONIUM SALTS, NITRIC ACID, STYRENE MONOMER

CONDITIONS TO AVOID: ELEVATED TEMPERATURES, FREEZING, SPARKS, OPEN FLAME, IGNITION SOURCES

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

**SECTION 11: TOXICOLOGICAL INFORMATION**

COMMON NAME: DIETHYLENE GLYCOL DIBENZOATE  
CAS NUMBER: 120-55-8  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: 2830.00 MG/KG ORL RAT

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: CLAY  
CAS NUMBER: 1332-58-7  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO

COMMON NAME: TITANIUM DIOXIDE  
CAS NUMBER: 13463-67-7  
CARCINOGENICITY LISTED BY: NTP YES 2B IARC YES 2B OSHA NO ACGIH NO  
LD50: 24.00 GM/KG ORL RAT  
LC50: 6820.00 MG/M3/4HR IHL RAT

COMMON NAME: CRYSTALLINE SILICA, CRISTOBALITE  
CAS NUMBER: 14464-46-1  
CARCINOGENICITY LISTED BY: NTP YES IARC YES 1 OSHA NO ACGIH YES A2

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

COMMON NAME: ACETONE  
CAS NUMBER: 67-64-1  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: 5800.00 MG/KG ORL RAT  
LD50: > 9400.00 MG/KG SKN GPG

## 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.

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. IN A LIFETIME INHALATION STUDY, EXPOSURE TO 250 MG/M3 TITANIUM DIOXIDE RESULTED IN THE DEVELOPMENT OF LUNG TUMORS IN RATS. THESE TUMORS OCCURRED ONLY AT DUST LEVELS THAT OVERWHELMED THE ANIMALS' LUNG CLEARANCE MECHANISMS AND WERE DIFFERENT FROM COMMON HUMAN LUNG TUMORS IN BOTH TYPE AND LOCATION. THE RELEVANCE OF THESE FINDINGS TO HUMANS IS UNKNOWN BUT QUESTIONABLE. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CLASSIFIED TITANIUM DIOXIDE AS POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B) BASED ON INADEQUATE EVIDENCE OF CARCINOGENICITY IN HUMANS AND SUFFICIENT EVIDENCE OF CARCINOGENICITY IN EXPERIMENTAL ANIMALS.

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.

## SECTION 14: TRANSPORT INFORMATION

DOT: ADHESIVE  
IMDG: NOT AVAILABLE  
IATA: NOT AVAILABLE  
TDG: NOT AVAILABLE

**SECTION 15: REGULATORY INFORMATION**

	SARA 302	SARA 313	CERCLA 302.4	HAZ AIR POLLUTANT	MARINE POLTNT
CAS NUMBER: 67-64-1 COMMON NAME: ACETONE	NO	NO	YES	NO	NO

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.