



Common Name: R-320 INSULATION ADHESIVE

Manufacturer: NOMACO

MSDS Revision Date: 5/1/2003

Grainger Item Number(s): 3F417

Manufacturer Model Number(s): 1-P-BT

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT AND MANUFACTURER IDENTIFICATION

R-320 INSULATION ADHESIVE

NOMACO INC
100 NOMACO DRIVE
YOUNGSVILLE, NC 27596
1-800-345-7279

EMERGENCY ONLY CONTACT:
CHEM-TEL: 1-800-255-3924

PREPARED: 5/1/03

SECTION II - HMIS

HMIS CODES -
0 = MINIMAL HAZARD
4 = SEVERE HAZARD

HEALTH = 2
FLAMMABILITY = 3
REACTIVITY = 0

SECTION III - PHYSICAL CHEMICAL CHARACTERISTICS

BOILING RANGE - 132 DEG F. - 231 DEG. F.

VAPOR DENSITY: HEAVIER THAN AIR.

SOLUBILITY IN WATER: NO.

APPEARANCE AND ODOR: YELLOW, OFFENSIVE

SPECIFIC GRAVITY ((H2)=1): 0.83

EVAPORATION RATE: SLOWER THAN ETHER

VOC CONTENT: 447 G/L; CALCULATED AND REPORTED, SCAQMD 1168

SECTION IV - HAZARDOUS INGREDIENTS

REPORTABLE COMPONENTS	C.A.S. NO.	WEIGHT %	OSHA PEL	ACGIH TLV
ACETONE	67-64-1	25	750	750
NORMAL HEXANE	110-54-3	18	50 PPM	50 PPM
TOLUENE	108-88-3	16	200	50
METHYL PENTANE	107-83-5	10	500	400
3-METHYL PENTANE	96-14-0	10	500	400

REPORTABLE COMPONENTS	VAPOR PRESSURE MM HG & TEMP	
ACETONE	186	68
NORMAL HEXANE	140	100
TOLUENE	28	77
METHYL PENTANE	320	100
3-METHYL PENTANE	320	100

SECTION V - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT - 20 DEG F.

METHOD USED: TCC

FLAMMABLE LIMITS IN AIR BY VOLUME -

LOWER: 1

UPPER: 13

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL

SPECIAL FIREFIGHTING PROCEDURES - RESPIRATORY EQUIPMENT SHOULD BE WORN TO AVOID INHALATION OF CONCENTRATED VAPORS. WATER SHOULD NOT BE USED EXCEPT AS FOG TO KEEP NEARBY CONTAINERS COOL.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

HANDLE AS FLAMMABLE LIQUID. VAPORS FORM AN EXPLOSIVE MIXTURE IN AIR BETWEEN

THE UPPER AND LOWER EXPLOSIVE LIMITS WHICH CAN BE IGNITED BY MANY SOURCES SUCH AS PILOT LIGHTS, OPEN FLAMES, ELECTRICAL MOTORS AND SWITCHES.

SECTION VI - REACTIVITY DATA

STABILITY - STABLE

CONDITIONS TO AVOID - EXCESSIVE, HEAT POOR VENTILATION, CORROSIVE ATMOSPHERES, EXCESSIVE AGING

INCOMPATIBILITY (MATERIALS TO AVOID):
ALKALINE MATERIALS, STRONG ACIDS AND OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS - CARBON MONOXIDE, CARBON DIOXIDE, OXIDES OF NITROGEN, AND POSSIBLE ACROLEIN.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VII - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE - INHALATION, DIZZINESS, BREATHING DIFFICULTY, HEADACHES, & LOSS OF COORDINATION.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
SKIN CONTACT CAN DRY AND DEFACE SKIN CAUSING CRACKS, IRRITATION, AND DERMATITIS, EYE CONTACT, SEVERE IRRITATION, TEARING REDNESS, AND BLURRED VISION.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE - SEE ABOVE

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE - CAN CAUSE GASTROINTESTINAL IRRITATION, VOMITING, NAUSEA, AND DIARRHEA.

HEALTH HAZARDS (ACUTE AND CHRONIC):
INHALATION DIZZINESS, BREATHING DIFFICULTY, HEADACHES, & LOSS OF COORDINATION.

EYE CONTACT: SEVERE IRRITATION, TEARING, REDNESS, AND BLURRED VISION.

SKIN CONTACT:
CAN DRY AND DEFAT SKIN CAUSING CRACKS, IRRITATION, AND DERMATITIS.

INGESTION:
CAN CAUSE GASTROINTESTINAL IRRITATION, VOMITING, NAUSEA, & DIARRHEA.

CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS.

CARCINOGENICITY:
NTP CARCINOGEN: NO
IARC MONOGRAPHS: NO

OSHA REGULATED: NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
ANESTHESIA, RESPIRATORY TRACT IRRITATION DERMATITIS, NAUSEA, VOMITING.

EMERGENCY AND FIRST AID PROCEDURES - INHALATION OVEREXPOSURE; MOVE PERSON TO FRESH AIR. IF BREATHING STOPS, APPLY ARTIFICIAL RESPIRATION AND SEEK IMMEDIATE MEDICAL ATTENTION.

EYE CONTACT: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES.

SKIN CONTACT: WASH THOROUGHLY WITH SOAP AND WATER AND SEE A DOCTOR.

INGESTION:
DO NOT INDUCE VOMITING, CAN CAUSE CHEMICAL PNEUMONITIS EDEMA. CONTACT A PHYSICIAN IMMEDIATELY.

SECTION VIII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED - ELIMINATE IGNITION SOURCES, PROVIDE GOOD VENTILATION, DIKE SPILL AREA AND USE ABSORBENT MATERIAL TO CLEANUP.

WASTE DISPOSAL METHOD - COLLECT ABSORBANT/SPILLED LIQUID MIXTURE AND PLACE INTO METAL CONTAINERS. CONSULT LOCAL, STATE & FEDERAL HAZARDOUS WASTE REGULATIONS BEFORE DISPOSING INTO APPROVED HAZARDOUS WASTE LANDFILLS. OBEY RELEVANT LAWS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
USE NON-SPARKING UTENSILS WHEN HANDLING THIS MATERIAL. AVOID HOT METAL SURFACES, USE IN COOL WELL-VENTILATED AREAS. KEEP CONTAINERS CLOSED WHEN NOT IN USE. KEEP AWAY FROM EXCESSIVE HEAT AND OPEN FLAMES.

OTHER PRECAUTIONS - SMOKING IN AREAS WHERE THIS MATERIAL IS USED SHOULD BE STRICTLY PROHIBITED. TOOLS USED WITH THIS MATERIAL SHOULD BE MADE OF ALUMINUM, BRASS, OR COPPER. PLASTIC UTENSILS SHOULD NOT BE USED.

SECTION IX - CONTROL MEASURES

RESPIRATORY PROTECTION - WHEN SPRAYING THIS ADHESIVE USE A NIOSH APPROVED CARTRIDGE RESPIRATOR OR GAS MASK SUITABLE TO KEEP AIRBORNE MISTS AND CONCENTRATIONS BELOW THE TIME-WEIGHTED THRESHOLD LIMIT VALUES. WHEN USING IN POORLY VENTILATED AND CONFINED SPACES, USE A FRESH-AIR SUPPLYING RESPIRATOR ON A SELF-CONTAINED BREATHING APPARATUS.

VENTILATION - GENERAL MECHANICAL VENTILATION OR LOCAL EXHAUST SHOULD BE SUITABLE TO KEEP VAPOR CONCENTRATIONS BELOW TLV. VENTILATION EQUIPMENT MUST BE EXPLOSION PROOF.

PROTECTIVE GLOVES:
IMPERMEABLE CHEMICAL HANDLING GLOVES FOR SKIN PROTECTION.

EYE PROTECTION - USE CHEMICAL SAFETY GLASSES, GOGGLES, AND FACE SHIELDS FOR EYE PROTECTION.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT - USE PERMEABLE APRONS AND PROTECTIVE CLOTHING WHENEVER POSSIBLE TO PREVENT SKIN CONTACT. THE USE OF HEAD CAPS WHENEVER POSSIBLE IS STRONGLY RECOMMENDED.

WORK/HYGIENIC PRACTICES - EYE WASHES AND A SAFETY SHOWER IN THE WORKPLACE IS RECOMMENDED.

SECTION X - DISCLAIMER

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