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N,N-METHYLENEBISACRYLAMIDE
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MATERIAL SAFETY DATA SHEET

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SUBSTANCE IDENTIFICATION

CAS-NUMBER 110-26-9

SUBSTANCE: **N,N-METHYLENEBISACRYLAMIDE**

TRADE NAMES/SYNONYMS:

N,N'-METHYLENEBIS-2-PROPENAMIDE; N,N'-METHYLENEBIS-ACRYLAMIDE;
BISACRYLAMIDE; N,N'-DIACRYLOYLMETHYLENEDIAMINE; METHYLENEBISACRYLAMIDE;
N,N'-METHYLENEBIS(ACRYLAMIDE); METHYLENEDIACRYLAMIDE;
N,N'-METHYLENEDIACRYLAMIDE; O-3586; O-3587; BP-171; BP-200B; BP-201B;
BP-1404; ACC16077

CHEMICAL FAMILY:
AMIDE, ALIPHATIC

MOLECULAR FORMULA: C7-H10-N2-O2

MOLECULAR WEIGHT: 154.19

CERCLA RATINGS (SCALE 0-3): HEALTH=3 FIRE=U REACTIVITY=0 PERSISTENCE=1
NFPA RATINGS (SCALE 0-4): HEALTH=2 FIRE=U REACTIVITY=0

COMPONENTS AND CONTAMINANTS

COMPONENT: N,N-METHYLENEBISACRYLAMIDE PERCENT: 2.0-100

COMPONENT: WATER PERCENT: 0-98.0

OTHER CONTAMINANTS: NONE

EXPOSURE LIMITS:
NO OCCUPATIONAL EXPOSURE LIMITS ESTABLISHED BY OSHA, ACGIH, OR NIOSH.

PHYSICAL DATA

DESCRIPTION: COLORLESS, CRYSTALLINE POWDER

MELTING POINT: 365 F (185 C) DECOMPOSES SPECIFIC GRAVITY: 1.2

SOLUBILITY IN WATER: SOLUBLE VAPOR DENSITY: 5.3

FIRE AND EXPLOSION DATA

FIRE AND EXPLOSION HAZARD:
NEGLECTIBLE FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME.

FIREFIGHTING MEDIA:
DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR FOAM

FOR LARGER FIRES, USE WATER SPRAY, FOG OR ALCOHOL FOAM

FIREFIGHTING:
MOVE CONTAINER FROM FIRE AREA IF POSSIBLE. DO NOT SCATTER SPILLED MATERIAL WITH MORE WATER THAN NEEDED FOR FIRE CONTROL. DIKE FIRE CONTROL WATER FOR LATER DISPOSAL

USE AGENTS SUITABLE FOR TYPE OF SURROUNDING FIRE. AVOID BREATHING HAZARDOUS VAPORS. KEEP UPWIND.

TOXICITY

N,N-METHYLENEBISACRYLAMIDE:
TOXICITY DATA: 390 MG/KG ORAL-RAT LD50; 401 MG/KG ORAL-MOUSE LD50; MUTAGENIC DATA (RTECS); REPRODUCTIVE EFFECTS DATA (RTECS).

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CARCINOGEN STATUS: NONE
ACUTE TOXICITY LEVEL: TOXIC BY INGESTION.
TARGET EFFECTS: NO DATA AVAILABLE.

HEALTH EFFECTS AND FIRST AID

INHALATION:

N,N-METHYLENEBISACRYLAMIDE:
ACUTE EXPOSURE- NO DATA AVAILABLE
CHRONIC EXPOSURE- REPEATED OR PROLONGED EXPOSURE TO UNSATURATED AMIDES MAY CAUSE MUSCULAR WEAKNESS, INCOORDINATION, SKIN RASHES, EXCESSIVE SWEATING OF HEADS AND FEET, COLD HANDS AND PEELING OF THE SKIN.

FIRST AID- REMOVE FROM EXPOSURE AREA TO FRESH AIR IMMEDIATELY. IF BREATHING HAS STOPPED, PERFORM ARTIFICIAL RESPIRATION. KEEP PERSON WARM AND AT REST. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT:

N,N-METHYLENEBISACRYLAMIDE:
ACUTE EXPOSURE- MAY BE IRRITATING. SOME AMIDES MAY BE ABSORBED THROUGH THE SKIN.
CHRONIC EXPOSURE- REPEATED OR PROLONGED EXPOSURE MAY CAUSE EFFECTS DESCRIBED IN CHRONIC INHALATION.

FIRST AID- REMOVE CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH AFFECTED AREA WITH SOAP OR MILD DETERGENT AND LARGE AMOUNTS OF WATER UNTIL NO EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 15-20 MINUTES). GET MEDICAL ATTENTION IMMEDIATELY.

EYE CONTACT:

N,N-METHYLENEBISACRYLAMIDE:
ACUTE EXPOSURE- MAY CAUSE TRANSIENT IRRITATION.
CHRONIC EXPOSURE- NO DATA AVAILABLE.

FIRST AID- WASH EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER OR NORMAL SALINE, OCCASIONALLY LIFTING UPPER AND LOWER LIDS, UNTIL NO EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 15-20 MINUTES). GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:

N,N-METHYLENEBISACRYLAMIDE:
TOXIC.
ACUTE EXPOSURE- THE LETHAL DOSE IN RATS WAS 390 MG/KG. THE SYMPTOMS WERE NOT REPORTED.

CHRONIC EXPOSURE- REPEATED OR PROLONGED EXPOSURE MAY CAUSE EFFECTS DESCRIBED IN CHRONIC INHALATION. MINOR CHANGES IN THE PERIPHERAL MOTOR NERVE ENDINGS WERE REPORTED IN RATS WHICH HAD RECEIVED A CUMULATIVE DOSE OF 3000 MG/KG. REPRODUCTIVE EFFECTS HAVE BEEN REPORTED IN ANIMALS.

FIRST AID- IF EXTENSIVE VOMITING HAS NOT OCCURRED, THE SUBSTANCE SHOULD BE REMOVED BY EMESIS OR GASTRIC LAVAGE PROVIDED THAT THE PATIENT IS CONSCIOUS AND CONVULSIONS ARE NOT PRESENT. KEEP HEAD BELOW HIPS DURING VOMITING TO PREVENT ASPIRATION. DO NOT ATTEMPT TO MAKE AN UNCONSCIOUS PERSON VOMIT. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. GET MEDICAL ATTENTION IMMEDIATELY (DREISBACH, HANDBOOK OF POISONING, 12TH ED.). TREATMENT SHOULD BE PERFORMED BY QUALIFIED MEDICAL PERSONNEL.

ANTIDOTE:

NO SPECIFIC ANTIDOTE. TREAT SYMPTOMATICALLY AND SUPPORTIVELY.

REACTIVITY

REACTIVITY:

STABLE UNDER NORMAL TEMPERATURES AND PRESSURES.

INCOMPATIBILITIES:

N,N-METHYLENEBISACRYLAMIDE:
OXIDIZERS (STRONG): FIRE AND EXPLOSION HAZARD.

DECOMPOSITION:

THERMAL DECOMPOSITION PRODUCTS MAY INCLUDE TOXIC OXIDES OF NITROGEN.

POLYMERIZATION:

HAZARDOUS POLYMERIZATION HAS NOT BEEN REPORTED TO OCCUR UNDER NORMAL TEMPERATURES AND PRESSURES.

STORAGE AND DISPOSAL

OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS WHEN STORING OR DISPOSING OF THIS SUBSTANCE.

STORAGE

STORE IN SEALED CONTAINER IN EXPLOSION PROOF REFRIGERATOR.

STORE AWAY FROM INCOMPATIBLE SUBSTANCES.

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CONDITIONS TO AVOID

NONE REPORTED.

SPILL AND LEAK PROCEDURES

OCCUPATIONAL SPILL:
NO SPECIAL PRECAUTIONS INDICATED.

PROTECTIVE EQUIPMENT

VENTILATION:
PROVIDE LOCAL EXHAUST OR PROCESS ENCLOSURE VENTILATION. VENTILATION EQUIPMENT
MUST BE EXPLOSION-PROOF.

RESPIRATOR:
THE FOLLOWING RESPIRATORS ARE RECOMMENDED BASED ON INFORMATION FOUND IN THE
PHYSICAL DATA, TOXICITY AND HEALTH EFFECTS SECTIONS. THEY ARE RANKED IN
ORDER FROM MINIMUM TO MAXIMUM RESPIRATORY PROTECTION.
THE SPECIFIC RESPIRATOR SELECTED MUST BE BASED ON CONTAMINATION LEVELS FOUND
IN THE WORK PLACE. MUST BE BASED ON THE SPECIFIC OPERATION. MUST NOT EXCEED
THE WORKING LIMITS OF THE RESPIRATOR AND MUST BE JOINTLY APPROVED BY THE
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH AND THE MINE SAFETY
AND HEALTH ADMINISTRATION (NIOSH-MSHA).

ANY DUST AND MIST RESPIRATOR.

ANY AIR-PURIFYING RESPIRATOR WITH A HIGH-EFFICIENCY PARTICULATE FILTER.

ANY POWERED AIR-PURIFYING RESPIRATOR WITH A DUST AND MIST FILTER.

ANY POWERED AIR-PURIFYING RESPIRATOR WITH A HIGH-EFFICIENCY PARTICULATE
FILTER.

ANY TYPE 'C' SUPPLIED-AIR RESPIRATOR OPERATED IN THE PRESSURE-DEMAND OR
OTHER POSITIVE PRESSURE OR CONTINUOUS-FLOW MODE.

ANY SELF-CONTAINED BREATHING APPARATUS.

FOR FIREFIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS:

ANY SELF-CONTAINED BREATHING APPARATUS THAT HAS A FULL FACEPIECE AND IS
OPERATED IN A PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE.

ANY SUPPLIED-AIR RESPIRATOR THAT HAS A FULL FACEPIECE AND IS OPERATED IN A
PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE IN COMBINATION WITH AN
AUXILIARY SELF-CONTAINED BREATHING APPARATUS OPERATED IN PRESSURE-DEMAND
OR OTHER POSITIVE-PRESSURE MODE.

CLOTHING:
EMPLOYEE MUST WEAR APPROPRIATE PROTECTIVE (IMPERVIOUS) CLOTHING AND EQUIPMENT
TO PREVENT ANY POSSIBILITY OF SKIN CONTACT WITH THIS SUBSTANCE.

GLOVES:
EMPLOYEE MUST WEAR APPROPRIATE PROTECTIVE GLOVES TO PREVENT CONTACT WITH THIS
SUBSTANCE.

EYE PROTECTION:
EMPLOYEE MUST WEAR SPLASH-PROOF OR DUST-RESISTANT SAFETY GOGGLES AND A
FACESHIELD TO PREVENT CONTACT WITH THIS SUBSTANCE.

EMERGENCY WASH FACILITIES:
WHERE THERE IS ANY POSSIBILITY THAT AN EMPLOYEE'S EYES AND/OR SKIN MAY BE
EXPOSED TO THIS SUBSTANCE, THE EMPLOYER SHOULD PROVIDE AN EYE WASH FOUNTAIN
AND QUICK DRENCH SHOWER WITHIN THE IMMEDIATE WORK AREA FOR EMERGENCY USE.

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