**RIBOFLAVINE**

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MATERIAL SAFETY DATA SHEET

FISHER SCIENTIFIC

EMERGENCY NUMBER: (201) 796-7100

CHEMICAL DIVISION

CHEMREC ASSISTANCE: (800) 424-9300

1 REAGENT LANE

FAIR LAWN, NJ 07410

(201) 796-7100

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SUBSTANCE IDENTIFICATION

CAS-NUMBER: 83-88-5

SUBSTANCE: **RIBOFLAVINE**

TRADE NAMES/SYNONYMS:

VITAMIN B2; VITAMIN G; LACTOFLOVIN; OVOLAVIN; RIBAVIN; RIBAVIN; RIBOFLOVIN

6,7-DIMETHYL-8-D-RIBITOL ISOSALICYLIC ACID HYDRAZIDE; FLAVIN B8; HYRE;

LACTO; HYFLAVIN; RIBAVIN; RIBOFLOVIN; NO; QUINONE; O-4426; BP/1/7; ACC20145

CHEMICAL FAMILY:

NITRO

MOLECULAR FORMULA: C17-H2O-N4-O6

MOLECULAR WEIGHT: 376.37

CERCLA RATINGS (SCALE 0-3): HEALTH - 0; FIRE - 0; REACTIVITY - 0; PERSISTENCE - 1

NFPA RATINGS (SCALE 0-4): HEALTH - 0; FIRE - 0; REACTIVITY - 0

COMPONENTS AND CONTAMINANTS

PERCENT: 100

CAS# 83-88-5

OTHER CONTAMINANTS: NONE

EXPOSURE LIMITS:

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

PHYSICAL DATA

DESCRIPTION: YELLOW POWDER OR CLEAR-YELLOW CRYSTALS WITH A BITTER TASTE

BOILING POINT: DECOMPOSES MELTING POINT: 536 F (280 C) DECOMP: PH: 6

SOLUBILITY IN WATER: SOLUBLE

SOLVENT SOLUBILITY: ALCOHOLS, ALKALI, SODIUM CHLORIDE SOL

FIREFIGHTING DATA

FIRE AND EXPLOSION HAZARD:

NEGLECTIBLE FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME.

FLASH POINT: NON-FLAMMABLE

FIREFIGHTING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR REGULAR FOAM

FOR LARGER FIRES, USE WATER SPRAY, FOAM, OR REGULAR FOAM

FIREFIGHTING:

NO ACUTE HAZARD. MOVE CONTAINER FROM FIRE AREA IF POSSIBLE. AVOID BREATHING
VAPORS OR DUSTS, KEEP UPWIND.

TOXICITY

560 MG/KG INTRAPERITONEAL- RAT LD50: 900 MG/KG SUBCUTANEOUS- RAT LD50:
365 MG/KG INTRAVENOUS- MOUSE LD50; CANCER STATUS: NONE

RIBOFLAVINE IS A NUTRIENT WITH NO KNOWN OCCUPATIONAL HEALTH EFFECTS. THE
SUBSTANCE MAY IRITATE THE EYES IN ITS DRY FORM AND THE SKIN IN DRY AND WET
FORMS.

HEALTH EFFECTS AND FIRST AID

INHALATION:

RIBOFLAVINE

ACUTE EXPOSURE: NO DATA AVAILABLE.

CHRONIC EXPOSURE: NO DATA AVAILABLE.

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:

RIBOFLAVINE

IRRITANT

ACUTE EXPOSURE: MAY CAUSE IRRITATION.

CHRONIC EXPOSURE - REPEATED OR PROLONGED CONTACT MAY CAUSE DERMATITIS.

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

EYE CONTACT:

RIBOFLAVINE

IRRITANT

ACUTE EXPOSURE: DIRECT CONTACT MAY CAUSE REDNESS AND IRRITATION.

CHRONIC EXPOSURE: PROLONGED OR REPEATED EXPOSURE MAY CAUSE CONJUNCTIVITIS.

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:

RIBOFLAVINE

ACUTE EXPOSURE: NO DATA AVAILABLE.

CHRONIC EXPOSURE: NO DATA AVAILABLE.

FIRST AID: IF VICTIM IS CONSCIOUS, IMMEDIATELY GIVE 2 TO 4 GLASSES OF WATER.
AND INDUCE VOMITING BY TOUCHING TONGUE TO BACK OF THROAT. GET MEDICAL
ATTENTION IMMEDIATELY.

ANTIDOTE:

NO SPECIFIC ANTIDOTE. TREAT SYMPTOMATICALLY AND SUPPORTIVELY.

REACTIVITY

REACTIVITY:

NON-VIOLENT UNDER NORMAL CONDITIONS. DETERIORATES IN ALKALINE SOLUTION.
IRRADIATION PRODUCES LUMINESCENCE.

INCOMPATIBILITIES:

NONE KNOWN

DECOMPOSITION:

THERMAL DECOMPOSITION PRODUCTS MAY INCLUDE TOXIC OXIDES OF NITROGEN.

POLYMERIZATION:

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

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SPILL AND LEAK PROCEDURES

OCCUPATIONAL SPILL:

NO SPECIAL PRECAUTIONS INDICATED.

PROTECTIVE EQUIPMENT

VENTILATION:

PROVIDE LOCAL EXHAUST OR GENERAL DILUTION VENTILATION SYSTEM.

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 WORKPLACE. 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 WITH A FUL, FACEPIECE.

ANY AIR-PURIFYING FULL FACEPIECE RESPIRATOR WITH A HIGH-EFFICIENCY
PARTICULATE FILTER.
ANY POWERED AIR-PURIFYING RESPIRATOR WITH A TIGHT-FITTING FACEPIECE AND
HIGH-EFFICIENCY PARTICULATE FILTER.
ANY TYPE "C" SUPPLIED-AIR RESPIRATOR WITH A FULL FACEPIECE OPERATED IN
PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE OR WITH A FULL FACEPIECE,
HELMET OR HOOD OPERATED IN CONTINUOUS-FLOW MODE.
ANY SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN
PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.
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:
PROTECTIVE CLOTHING NOT REQUIRED. AVOID REPEATED OR PROLONGED CONTACT WITH
THIS SUBSTANCE.
GLOVES:
PROTECTIVE GLOVES ARE NOT REQUIRED BUT RECOMMENDED.
EYE PROTECTION:
EMPLOYEE MUST WEAR SPLASH-PROOF OR DUST-RESISTANT SAFETY GOGGLES TO PREVENT
EYE CONTACT WITH THIS SUBSTANCE.
EMERGENCY EYE WASH: WHERE THERE IS ANY POSSIBILITY THAT AN EMPLOYEE'S EYES MAY
BE EXPOSED TO THIS SUBSTANCE, THE EMPLOYER SHOULD PROVIDE AN EYE WASH
FOUNTAIN WITHIN THE IMMEDIATE WORK AREA FOR EMERGENCY USE.

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