**POLYXETHYLENE (20) SORBITAN MONOLARAT**
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MATERIAL SAFETY DATA SHEET

FISHER SCIENTIFIC

EMERGENCY NUMBER: (201) 796-7100

CHEMICAL DIVISION

CHEMREC ASSISTANCE: (600) 424-9300

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SUBSTANCE IDENTIFICATION

SUBSTANCE: **POLYXETHYLENE (20) SORBITAN MONOLARAT**

CAS NUMBER: 9605-64-5

TRADE NAMES/SYNONYMS:

OXIDIZED SORBITAN MONOLARATE, POLYXETHYLENE SORBITAN LAURATE;
SORBITAN POLYETHOXY MONOLARATE, ETHOXYLATED SORBITAN MONOLARATE;
SORBITAN MONOGLUCONATE, POLY(12-2 ETHANOL) DERIVATIVES;
POLYSORBATE 20, POLYXETHYLENE (20) SORBITAN MONOLARATE; TWEEN R20;
BP-337; ACC30107

CHEMICAL FAMILY

Sorbitan fatty acid ester

ETHOXYLATED FATTY ACID

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

NFPA RATINGS (SCALE 0-4): HEALTH-U FIRE-1 REACTIVITY-0

COMPONENTS AND CONTAMINANTS

COMPONENT: POLYXETHYLENE (20) SORBITAN MONOLARATE PERCENT: 97-98

COMPONENT: WATER PERCENT: 2-3

CASE # 9605-64-5

PHYSICAL DATA

DESCRIPTION: LEMON YELLOW TO AMBER COLORED, OILY LIQUID WITH A FAINT
CHARACTERISTIC ODOR AND WARM, BITTER TASTE. BOILING POINT: 212 F (100 C)
MELTING POINT: 14 F (-10 C) SPECIFIC GRAVITY: 1.04 @ 45 C
VISCOSITY: 400 CPS VOLATILITY: 2-3% VAPOR PRESSURE: 1.0 MMHG @ 20 C
SOLUBILITY IN WATER: SOLUBLE VAPOR DENSITY: 1
SOLVENT SOLUBILITY: SOLUBLE IN METHANOL, ETHANOL, ISOPROPAOL, PROPYLENE
GLYCOL, ETHYLENE GLYCOL, ETHYL ACETATE, DIOXANE, COTTONSEED OIL, IN SOLUBLE
IN MINERAL OIL, MINERAL SPIRITS

FIRE AND EXPLOSION DATA

SLIGHT FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME

FLASH POINT: 300 F (140 C) (OC) FLAMMABILITY CLASS(OSHA): IIB

FIREFIGHTING MEDIA: WATER, ANY OTHER WATER MEDIUM, DRY CHEMICAL, CARBON DIOXIDE
WATER SPRAY OR REGULAR FOAM

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

FIREFIGHTING: MOVES CONTAINER FROM FIRE AREA IF YOU CAN DO IT WITHOUT RISK. DO NOT SCATTER
SPILLED MATERIAL WITH HIGH-PRESSURE WATER STREAMS. DISS WATER CONTROL WATER FOR
LATER DISPOSAL (1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.S.

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

VAPORS, KEEP UPWIND

TOXICITY

POLYXETHYLENE (20) SORBITAN MONOLARATE (ETHOXYLATED SORBITAN MONOLARATE);
IRRITATION: 20 MG/3 DATES INTERMITTENTLY SKIN HUMAN MILD
DRY-CORR. DATA: 37 MG/KG ORAL - RAT LD50, 18 MG/KG ORAL - HAMSTER LD50;
1420 MG/KG IV INTRAVENOUS - MOUSE LD50, 2070 MG/KG IV INTRAVENOUS - MOUSE LD50;
770 MG/KG IV INTRAPERITONEAL - MOUSE LD50, 2400 MG/KG IV INTRAPERITONEAL - MOUSE LD50;
3850 MG/KG IV INTRAPERITONEAL - RAT LD50, REPRODUCTIVE EFFECTS DATA (TERC)
CARCINOGEN STATUS: NONE
ACUTE TOXICITY LEVEL: RELATIVELY NONTOXIC BY INGESTION.
TARGET EFFECTS: NO DATA AVAILABLE.

HEALTH EFFECTS AND FIRST AID

INHALATION:

POLYXETHYLENE (20) SORBITAN MONOLARATE (ETHOXYLATED SORBITAN MONOLARATE);
ACUTE EXPOSURE - DUE TO THE LOW VAPOR PRESSURE, NO SIGNIFICANT HEALTH HAZARD
FROM INHALATION IS LIKELY TO OCCUR AT NORMAL ROOM TEMPERATURES. INHALATION
OF GENERATED MIST OR VAPORS PRODUCED FROM ELEVATED TEMPERATURES MAY CAUSE
IRRITATION OF THE MUCOUS MEMBRANES. INHALATION OF HIGH LEVELS OF SOME
POLYSORBATES MAY CAUSE A CHEMICAL PNEUMONITIS.

CHRONIC EXPOSURE: NO DATA AVAILABLE.

FIRST AID: REMOVE FROM EXPOSED 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

POLYXETHYLENE (20) SORBITAN MONOLARATE (ETHOXYLATED SORBITAN MONOLARATE);
ACUTE EXPOSURE, THE HUMAN SUBJECT PASTE TOS THE PRIMARY INJECTOR OF THE UNLITED MATERIAL WAS FOUND TO BE 0.34 TO
0.42 FOLLOWING A 24-HOUR APPLICATION TO INTEG. AND ABRABED SKIN OF
HUMANS. CHRONIC EXPOSURE - PROLONGED OR REPEATED EXPOSURE MAY CAUSE IRRITATION
OF THE SKIN BY REMOVING NATURAL OILS, CAUSING REDNESS, SORENESS, AND
PAPULAR DERMATITIS.

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

POLYXETHYLENE (20) SORBITAN MONOLARATE (ETHOXYLATED SORBITAN MONOLARATE);
ACUTE EXPOSURE - APPLICATION OF THE UNLITED MATERIAL TO RABBIT EYES WAS
RESULTED IN MINIMAL TO MODERATE CONJUNCTIVAL IRRITATION. RINSE WITHIN
LITTLE CHANCE TO COMPLETE PREVENTION. DRAIZE EYE IRRITATION SCORE WAS 5.3 OUT OF A POSSIBLE 110.
CHRONIC EXPOSURE: NO DATA AVAILABLE.

FIRST AID: WASH EYES IMMEDIATELY WITH LARGEMOUNTS 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:

POLYXETHYLENE (20) SORBITAN MONOLARATE (ETHOXYLATED SORBITAN MONOLARATE);
ACUTE EXPOSURE - INGESTION OF HIGH LEVELS CAUSE DIARRHEA AND OTHER EFFECTS
SECONDARY TO LAXATION. INGESTION OF 103 CC/KG WAS LETHAL TO RATS
INGESTION OF HIGH LEVELS OF SOME POLYSORBATES MAY CAUSE INTESTINAL
OBSTRUCTION.
CHRONIC EXPOSURE - REPEATED OR PROLONGED INGESTION OF HIGH CONCENTRATIONS
OF THIS MATERIAL CAUSE DIARRHEA AND OTHER EFFECTS SECONDARY TO LAXATION
IN RATS AND HAMSTERS.

FIRST AID: TREAT SYMPTOMATICALLY AND SUPPORTIVELY. GET MEDICAL ATTENTION
IMMEDIATELY. IF VOMITING OCCURS, KEEP HEAD LOWER THAN HIPS TO PREVENT
ASPIRATION.

ANTIDOTE:

NO SPECIFIC ANTIDOTE. TREAT SYMPTOMATICALLY AND SUPPORTIVELY.

REACTIVITY

STABLE UNDER NORMAL TEMPERATURES AND PRESSURES.

INCOMPATIBILITIES:

POLYXETHYLENE (20) SORBITAN MONOLARATE (ETHOXYLATED SORBITAN MONOLARATE); OXIDIZING MATERIALS INCOMPATIBLE.

DECOMPOSITION:

THERMAL DECOMPOSITION PRODUCTS MAY INCLUDE TOXIC OXIDES OF CARBON.

POLYMORPHISM:

HAZARDOUS POLYMERIZATION HAS NOT BEEN REPORTED TO OCCUR UNDER NORMAL
STORAGE AND DISPOSAL

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

**STORAGE**

STORE AWAY FROM INCOMPATIBLE SUBSTANCES.

MAY BURN BUT DOES NOT IGNITE READILY. AVOID CONTACT WITH STRONG OXIDIZERS,
EXCESSIVE HEAT, SPARKS, OR OPEN FLAME.

SPILL AND LEAK PROCEDURES

OCCUPATIONAL SPILL:
STOP LEAK IF YOU CAN DO IT WITHOUT RISK. FOR SMALL SPILLS, TAKE UP WITH SAND
OR OTHER ABSORBENT MATERIAL AND PLACE INTO CLEAN, DRY CONTAINERS FOR LATER
DISPOSAL. KEEP UNNECESSARY PEOPLE AWAY. ISOLATE HAZARD AREA AND DENY ENTRY.

VENTILATION:

PROTECTIVE EQUIPMENT

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 NOT BE BASED ON THE SPECIFIC OPERATION. MUST NOT EXCEED
THE WORKING LIMITS OF THE RESPIRATOR AND MUST BE CORRECTLY APPROVED BY THE
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH AND THE MINERAL
SAFETY AND HEALTH ADMINISTRATION (NIOSH-MSHA).

ANY CHEMICAL CARTRIDGE RESPIRATOR WITH ORGANIC VAPOR CARTRIDGE(S) AND A
FULL FACEPIECE.

ANY GAS MASK WITH ORGANIC VAPOR CANISTER (CHIN-STYLE OR FRONT- OR
BACK-MOUNTED CANISTER), WITH A FULL FACEPIECE.

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 A 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:
EMPLOYEE MUST WEAR APPROPRIATE PROTECTIVE (IMPERVIOUS) CLOTHING AND EQUIPMENT
TO PREVENT REPEATED OR PROLONGED 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 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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