

MATERIAL SAFETY DATA SHEET

OHSPC042

SHERWOOD MEDICAL COMPANY
1915 OLIVE STREET
ST. LOUIS, MO 63103
314-241-5700

EMERGENCY CONTACT:
CHEMTREC 1-800-424-9300

SUBSTANCE IDENTIFICATION

SUBSTANCE: PARAPLAST, EXTRA

TRADE NAMES/SYNONYMS: 8889-503002; OHSPC042

CHEMICAL FAMILY: MIXTURE

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

COMPONENTS AND CONTAMINANTS

COMPONENT: PARAFFIN WAX PERCENT: >90.0
CAS# 8002-74-2

COMPONENT: POLYISOBUTYLENE PERCENT: <5.0
CAS# 9003-27-4

COMPONENT: MICROCRYSTALLINE WAX PERCENT: <5.0
CAS# 63231-60-7

COMPONENT: PETROLEUM HYDROCARBON RESIN PERCENT: <5.0
CAS# 64742-16-1

COMPONENT: 2,6-DI-TERT-BUTYL-P-CRESOL PERCENT: <1.0
CAS# 128-37-0

EXPOSURE LIMITS:
PARAFFIN WAX FUME:
2 MG/M3 OSHA TWA
2 MG/M3 ACGIH TWA
2 MG/M3 NIOSH RECOMMENDED TWA

NUISANCE PARTICULATES (NUISANCE DUST):
5 MG/M3 OSHA TWA (RESPIRABLE DUST); 15 MG/M3 OSHA TWA (TOTAL DUST)
10 MG/M3 ACGIH TWA (TOTAL DUST) (NO ASBESTOS AND <1% CRYSTALLINE SILICA)

NO OCCUPATIONAL EXPOSURE LIMITS ESTABLISHED BY OSHA, ACGIH, OR NIOSH.
NEVILLE CHEMICAL COMPANY RECOMMENDS THIS RESIN BE TREATED AS A NUISANCE PARTICULATE.

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PHYSICAL DATA

DESCRIPTION: SOLID.
MELTING POINT: NOT AVAILABLE
VAPOR PRESSURE: NOT AVAILABLE
PH: NOT AVAILABLE
ODOR THRESHOLD: NOT AVAILABLE
SOLVENT SOLUBILITY: NOT AVAILABLE
BOILING POINT: NOT AVAILABLE
SPECIFIC GRAVITY: NOT AVAILABLE
EVAPORATION RATE: NOT AVAILABLE
SOLUBILITY IN WATER: NOT AVAILABLE
VAPOR DENSITY: NOT AVAILABLE

FIRE AND EXPLOSION DATA

FIRE AND EXPLOSION HAZARD:

SLIGHT FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME.

DUST-AIR MIXTURES MAY IGNITE OR EXPLODE.

FLASH POINT: NOT AVAILABLE UPPER EXPLOSIVE LIMIT: NOT AVAILABLE

LOWER EXPLOSIVE LIMIT: NOT AVAILABLE AUTOIGNITION TEMP.: NOT AVAILABLE

FIREFIGHTING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR REGULAR FOAM
(1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5).

FOR LARGER FIRES, USE WATER SPRAY, FOG OR REGULAR FOAM
(1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5).

FIREFIGHTING:

MOVE CONTAINER FROM FIRE AREA IF YOU CAN DO IT WITHOUT RISK. DO NOT SCATTER
SPILLED MATERIAL WITH HIGH-PRESSURE WATER STREAMS. DIKE FIRE-CONTROL WATER FOR
LATER DISPOSAL (1990 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.5, GUIDE PAGE
31).

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

TOXICITY

PARAFFIN WAX:

IRRITATION DATA: 500 MG/24 HOURS SKIN-RABBIT MILD; 100 MG/24 HOURS EYE-RABBIT
MILD.

TOXICITY DATA: TUMORIGENIC DATA (RTECS).

CARCINOGEN STATUS: NONE.

ACUTE TOXICITY LEVEL: NOT DATA AVAILABLE.

TARGET EFFECTS: POISONING MAY AFFECT THE LUNGS.

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POLYISOBUTYLENE:

CARCINOGEN STATUS: NONE.

ACUTE TOXICITY LEVEL: NO DATA AVAILABLE.

TARGET EFFECTS: NO DATA AVAILABLE.

MICROCRYSTALLINE WAX:

CARCINOGEN STATUS: NONE.

LOCAL EFFECTS: IRRITANT - INHALATION, EYE.

ACUTE TOXICITY LEVEL: NO DATA AVAILABLE.

TARGET EFFECTS: POISONING MAY AFFECT THE LUNGS.

PETROLEUM HYDROCARBON RESIN:

TOXICITY DATA: 7 GM/KG ORAL-MAMMAL LC50.

CARCINOGEN STATUS: NONE.

ACUTE TOXICITY LEVEL: SLIGHTLY TOXIC BY INGESTION.

TARGET EFFECTS: NO DATA AVAILABLE.

HEALTH EFFECTS AND FIRST AID

INHALATION:

PARAFFIN WAX:

ACUTE EXPOSURE - FUMES FROM HEATED PARAFFIN WAX MAY CAUSE MILD NOSE AND THROAT
IRRITATION WITH NAUSEA. ANIMALS EXPOSED TO PARAFFIN VAPORS IN A CONCENTRATION
SUFFICIENT TO CAUSE DEATH WITHIN 2 HOURS BECAME HYPERACTIVE AND DEVELOPED
CLONIC SPASMS AND LIMB FLEXOR MUSCLE TETANIC CONTRACTIONS WHICH PERSISTED UNTIL
DEATH.

CHRONIC EXPOSURE - A 5 YEAR OCCUPATIONAL EXPOSURE TO HIGH CONCENTRATIONS OF
AEROSOLIZED PARAFFIN WAX CAUSED DYSPNEA AND HYPOXEMIA, PROGRESSING TO LIPOID

PNEUMONIA CHARACTERIZED PATHOLOGICALLY BY ALVEOLITIS INVOLVING LARGE LIPID-LADEN MACROPHAGES AND INTERSTITIAL FIBROSIS.

POLYISOBUTYLENE:

ACUTE EXPOSURE - NO DATA AVAILABLE.

CHRONIC EXPOSURE - IRRITABILITY, INSOMNIA, HEADACHE, FATIGUE, ANOSMIA, BRONCHITIS, EMPHYSEMA AND SUBATROPHIC CHANGES OF THE NASAL MUCOSA WERE REPORTED IN WORKERS EXPOSED TO ETHYLENE AND ISOBUTYLENE DURING PRODUCTION OF POLYISOBUTYLENE.

MICROCRYSTALLINE WAX:

IRRITANT.

ACUTE EXPOSURE - HIGH CONCENTRATIONS OF PARAFFIN WAX FUMES MAY CAUSE RESPIRATORY TRACT IRRITATION AND NAUSEA.

CHRONIC EXPOSURE - REPEATED OR PROLONGED EXPOSURE TO PARAFFIN WAX FUMES MAY CAUSE PNEUMONITIS.

PETROLEUM HYDROCARBON RESIN:

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.

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SKIN CONTACT:

PARAFFIN WAX:

ACUTE EXPOSURE - MAY CAUSE MILD IRRITATION. HEATED LIQUID MAY BURN SKIN. SENSITIZATION REACTIONS HAVE BEEN REPORTED.

CHRONIC EXPOSURE - DEVELOPMENT OF FOREIGN BODY SKIN GRANULOMAS HAS BEEN REPORTED FOLLOWING OCCUPATIONAL EXPOSURE. PARAFFIN WAX, POSSIBLY IMPURE, IN THE OIL REFINING INDUSTRY HAS BEEN REPORTED TO ACT AS A SKIN CANCER PROMOTER WITH A LATENT PERIOD OF 20 YEARS.

POLYISOBUTYLENE:

ACUTE EXPOSURE - NO DATA AVAILABLE.

CHRONIC EXPOSURE - SKIN DISORDERS WERE REPORTED IN WORKERS EXPOSED TO ETHYLENE AND ISOBUTYLENE DURING PRODUCTION OF POLYISOBUTYLENE.

MICROCRYSTALLINE WAX:

ACUTE EXPOSURE - MOLTEN WAX MAY CLING TO FLESH AND RESULT IN THERMAL BURNS.

CHRONIC EXPOSURE - PROLONGED OR REPEATED EXPOSURE TO PARAFFIN WAX MAY CAUSE DERMATITIS AND VARIOUS SKIN DISORDERS. PRIOR TO THE 1950'S, SOME WORKERS WHOSE SKIN AND CLOTHING WAS SOAKED WITH OILY WAX IN THE PROCESSING OF PETROLEUM WAXES DEVELOPED SCROTAL CANCER AFTER 10 YEARS. DUE TO CHANGES IN THE PROCESSING AND REFINING. THE WAXES ARE NOW BELIEVED TO BE NON-CARCINOGENIC AND ARE APPROVED BY THE FOOD AND DRUG ADMINISTRATION FOR USE IN FOOD PACKAGING.

PETROLEUM HYDROCARBON RESIN:

ACUTE EXPOSURE - MAY CAUSE SKIN IRRITATION IN ALLERGIC PERSONS.

CHRONIC EXPOSURE - NO DATA AVAILABLE.

FIRST AID - IF CONTACT IS NOT WITH MOLTEN MATERIAL, 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. BURNS FROM CONTACT WITH MOLTEN MATERIAL SHOULD BE TREATED LIKE THERMAL BURNS. COOL AFFECTED AREA AS QUICKLY AS POSSIBLE BY DRENCHING OR IMMERSING IN WATER UNTIL MATERIAL SOLIDIFIES. DO NOT ATTEMPT TO REMOVE SOLIDIFIED MATERIAL. COVER AREA WITH STERILE, DRY DRESSING. GET MEDICAL ATTENTION IMMEDIATELY.

EYE CONTACT:

PARAFFIN WAX:

ACUTE EXPOSURE - FUMES MAY CAUSE MILD IRRITATION. HEATED WAX MAY BURN EYES.

CHRONIC EXPOSURE - NO DATA AVAILABLE.

POLYISOBUTYLENE:

ACUTE EXPOSURE - NO DATA AVAILABLE.

CHRONIC EXPOSURE - NO DATA AVAILABLE.

MICROCRYSTALLINE WAX:

IRRITANT.

ACUTE EXPOSURE - HIGH CONCENTRATIONS OF WAX FUMES MAY CAUSE IRRITATION. MOLTEN WAX IN CONTACT WITH EYES MAY CAUSE THERMAL BURNS.

CHRONIC EXPOSURE - PROLONGED OR REPEATED EXPOSURE MAY CAUSE CONJUNCTIVITIS.

PETROLEUM HYDROCARBON RESIN:

ACUTE EXPOSURE - NO DATA AVAILABLE.

CHRONIC EXPOSURE - NO DATA AVAILABLE.

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FIRST AID - WASH EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER, OCCASIONALLY LIFTING UPPER AND LOWER LIDS, UNTIL NO EVIDENCE OF CHEMICAL REMAINS (AT LEAST 15-20 MINUTES). CONTINUE IRRIGATING WITH NORMAL SALINE UNTIL THE PH HAS RETURNED TO NORMAL (30-60 MINUTES). COVER WITH STERILE BANDAGES. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:

PARAFFIN WAX:

ACUTE EXPOSURE - PARAFFIN WAX IS NOT DIGESTED OR ABSORBED.

CHRONIC EXPOSURE - NO DATA AVAILABLE.

POLYISOBUTYLENE:

ACUTE EXPOSURE - NO DATA AVAILABLE.

CHRONIC EXPOSURE - NO DATA AVAILABLE.

MICROCRYSTALLINE WAX:

ACUTE EXPOSURE - PARAFFIN WAX IS NOT DIGESTED OR ABSORBED AND IS BELIEVED TO BE ESSENTIALLY NONTOXIC.

CHRONIC EXPOSURE - NO DATA AVAILABLE.

PETROLEUM HYDROCARBON RESIN:

ACUTE EXPOSURE - NO DATA AVAILABLE.

CHRONIC EXPOSURE - NO DATA AVAILABLE.

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

REACTIVITY

REACTIVITY:

STABLE UNDER NORMAL TEMPERATURES AND PRESSURES.

INCOMPATIBILITIES:

PARAFFIN WAX:

OXIDIZERS (STRONG): FIRE AND EXPLOSION HAZARD.

POLYISOBUTYLENE:

OXIDIZERS (STRONG): FIRE AND EXPLOSION HAZARD.

SILVER PEROXIDE: MIXTURE MAY BE EXPLOSIVE.

MICROCRYSTALLINE WAX:

OXIDIZERS (STRONG): FIRE AND EXPLOSION HAZARD.

PETROLEUM HYDROCARBON RESIN:

NONE KNOWN.

DECOMPOSITION:

THERMAL DECOMPOSITION MAY RELEASE TOXIC AND/OR HAZARDOUS GASES.

POLYMERIZATION:

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

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STORAGE AND DISPOSAL

OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS WHEN STORING OR DISPOSING OF THIS SUBSTANCE. FOR ASSISTANCE, CONTACT THE DISTRICT DIRECTOR OF THE ENVIRONMENTAL PROTECTION AGENCY.

STORAGE

STORE AWAY FROM INCOMPATIBLE SUBSTANCES.

SPILL AND LEAK PROCEDURES

OCCUPATIONAL SPILL:
SWEEP UP AND PLACE IN SUITABLE CLEAN, DRY CONTAINERS FOR RECLAMATION OR LATER DISPOSAL. DO NOT FLUSH SPILLED MATERIAL INTO SEWER. KEEP UNNECESSARY PEOPLE AWAY.

PROTECTIVE EQUIPMENT

VENTILATION:
PROVIDE LOCAL EXHAUST VENTILATION TO MEET PUBLISHED EXPOSURE LIMITS. 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.

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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:
WEAR PROTECTIVE CLOTHING. PREVENT ANY POSSIBILITY OF CONTACT WITH LIQUID AND REPEATED OR PROLONGED VAPOR CONTACT WITH SKIN.

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 AND EYE WASH FOUNTAIN
AND QUICK DRENCH SHOWER WITHIN THE IMMEDIATE WORK AREA FOR EMERGENCY USE.

AUTHORIZED BY: SHERWOOD MEDICAL COMPANY

CREATION DATE: 06/28/91

REVISION DATE: 08/06/91

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8889-503002

SHERWOOD MEDICAL

MATERIAL SAFETY DATA SHEET
PARAPLAST, EXTRA

SHERWOOD MEDICAL COMPANY
1915 OLIVE STREET
SAINT LOUIS, MISSOURI 63103
GENERAL TELEPHONE NO.: 314-241-5700
CHEMTREC (R) FOR CHEMICAL EMERGENCIES: 800-424-9300

PREPARATION DATE: 05/28/1993

REVISION DATE: 01/13/1995

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 PRODUCT NAME: PARAPLAST, EXTRA

1.2 USE/SIZE: TISSUE EMBEDDING MEDIUM/8-10 BAGS PER CASE (1 KG/BAG)

1.3 PRODUCT NO.: 8889-503002

1.4 CAS NO.: ----

1.5 SYNONYMS: ----

1.6 TRADE NAMES: ----

2. COMPOSITION/INFORMATION ON INGREDIENTS

NO.	INGREDIENT NAME	SYNONYMS	CAS NO.	% WEIGHT
1	PARAFFIN	PARAFFIN WAX	8002-74-2	>90
2	POLYISOBUTYLENE	2-METHYLPROPENE POLYMER	9003-27-4	<5
3	MICROCRYSTALLINE WAX	MICROWAX	63231-60-7	<5
4	HYDROCARBON RESIN	HYDROCARBONS, PETROLEUM RESINS	64742-16-1	<5
5	BUTYLATED HYDROXYTOLUENE	P-CRESOL, 2,6-DI-TERT-BUTYL	128-37-0	<1

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

THIS PRODUCT IS SUPPLIED AS ODORLESS WAXY PELLETS. IT CONTAINS PRIMARILY
PARAFFIN (>90%), WHICH IS NOT EXPECTED TO PRESENT ANY PHYSICAL OR ENVIRONMENTAL
CONCERNS FOR EMERGENCY PERSONNEL. THE ACUTE HEALTH EFFECTS ASSOCIATED WITH
PARAFFIN INCLUDE SKIN AND EYE IRRITATION.

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3.1 POTENTIAL HEALTH EFFECTS

THIS PRODUCT IS A MIXTURE FOR WHICH NO HEALTH EFFECTS DATA EXISTS. THE
INFORMATION PROVIDED BELOW REPRESENTS A COMPREHENSIVE OVERVIEW OF THE EFFECTS

OF THE INDIVIDUAL INGREDIENTS; THEREFORE, THE ACTUAL HAZARDS OF THE PRODUCT MAY BE OVERESTIMATED. THE INGREDIENT(S) ASSOCIATED WITH THE HEALTH EFFECTS DESCRIBED IS INDICATED [IN BRACKETS! BY INGREDIENT NUMBER (SEE SECTION 2 FOR A LISTING OF INGREDIENTS AND THEIR RESPECTIVE NUMBERS). FOR SUPPORTING TOXICOLOGICAL DATA REFER TO SECTION 11.

SINCE NO HEALTH EFFECTS INFORMATION WAS AVAILABLE FOR POLYISOBUTYLENE, MICROCRYSTALLINE WAX, OR HYDROCARBON RESIN, THE HAZARDS DESCRIBED BELOW REPRESENT THE HEALTH EFFECTS ASSOCIATED WITH PARAFFIN, THE PRODUCT'S PRIMARY INGREDIENT.

3.1.1 ACUTE EFFECTS:

INHALATION: INHALATION OF PARAFFIN WAX FUMES (FOR EXAMPLE, WHEN THE WAX IS HEATED) MAY IRRITATE THE EYES, NOSE, AND THROAT [1!.

INGESTION: THE PRODUCT IS NOT EXPECTED TO PRESENT A HAZARD FROM INGESTION. NO DATA WERE AVAILABLE ON THE HEALTH EFFECTS OF PARAFFIN FROM THIS ROUTE OF EXPOSURE [1!.

SKIN: MAY CAUSE MILD SKIN IRRITATION [1!.

EYE: MAY CAUSE MILD EYE IRRITATION [1!.

3.1.2 TARGET ORGAN EFFECTS (SUBCHRONIC/CHRONIC):

CHRONIC EXPOSURE MAY CAUSE DERMATITIS WITH SKIN IRRITATION AND RASH [1!.

3.1.3 CARCINOGENIC EFFECTS:

NO HUMAN OR ANIMAL DATA WERE AVAILABLE ON THE CARCINOGENIC EFFECTS FOLLOWING ORAL OR INHALATION EXPOSURE. HOWEVER, WHEN IMPLANTED IN EXPERIMENTAL ANIMALS, PARAFFIN CAUSED TREMORS OF THE BLADDER AND OF THE RESPIRATORY SYSTEM [1!.

3.1.4 REPRODUCTIVE/TERATOGENIC EFFECTS:

NO HUMAN OR ANIMAL DATA WERE AVAILABLE FOR THE PRODUCT.

3.2 CARCINOGENICITY STATUS:

THIS PRODUCT AND ITS PRIMARY INGREDIENT [1! ARE NOT LISTED AS A CARCINOGEN BY IARC, NTP, OR OSHA.

3.3 MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

NO DATA ARE AVAILABLE ON THE MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE TO THIS PRODUCT OR ITS PRIMARY INGREDIENT [1!.

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4. FIRST AID MEASURES

INHALATION: REMOVE EXPOSED SUBJECT TO FRESH AIR. IF NOT BREATHING, PERFORM ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN (BY TRAINED PERSONNEL ONLY). KEEP SUBJECT WARM. GET IMMEDIATE MEDICAL ATTENTION.

INGESTION: IF SWALLOWED, DO NOT INDUCE VOMITING. IF THE SUBJECT IS CONSCIOUS, GIVE THEM 1 OR 2 GLASSES OF WATER TO DILUTE THE CHEMICAL. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF THE VICTIM IS UNCONSCIOUS, KEEP THEIR AIRWAY OPEN AND LAY THE VICTIM ON THEIR SIDE WITH THE HEAD LOWER THAN THE BODY. GET IMMEDIATE MEDICAL ATTENTION.

SKIN: REMOVE AND ISOLATE CONTAMINATED CLOTHING. WASH SKIN WITH SOAP AND FLUSH THOROUGHLY WITH PLENTY OF WATER. OBTAIN MEDICAL ATTENTION IF IRRITATION DEVELOPS, OR OTHER SYMPTOMS OCCUR. CLEAN CONTAMINATED CLOTHING BEFORE REUSE, OR DISPOSE OF PROPERLY.

EYE: FIRST CHECK THE VICTIM FOR CONTACT LENSES AND REMOVE IF PRESENT. IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER OR NORMAL SALINE FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. IF SYMPTOMS SUCH AS REDNESS OR IRRITATION DEVELOP OR PERSIST, GET IMMEDIATE MEDICAL ATTENTION. DO NOT PUT ANY MEDICATION IN THE VICTIM'S EYES UNLESS INSTRUCTED BY A PHYSICIAN.

5. FIRE FIGHTING MEASURES

5.1 FLASH POINT: 400 F (204 C) METHOD: CLOSED CUP

5.2 AUTOIGNITION TEMPERATURE: 473 F(245 C) (FOR 100% PARAFFIN).

5.3 FLAMMABILITY LIMITS:
LOWER LIMIT: NO DATA AVAILABLE.
UPPER LIMIT: NO DATA AVAILABLE.

5.4 UNUSUAL FIRE AND EXPLOSION HAZARDS: FIRES OF PARAFFIN WAX MAY PRODUCE TOXIC FUMES.

5.5 COMMON EXTINGUISHING METHODS: FOR FIRES INVOLVING THIS PRODUCT OR ITS PACKAGING MATERIAL, USE AN EXTINGUISHER WHICH IS APPROPRIATE FOR COMBUSTIBLES AND SURROUNDING CLASS(ES) OF FIRE.

5.6 FIRE FIGHTING PROCEDURES: KEEP UNNECESSARY PEOPLE AWAY; ISOLATE HAZARD AREA AND DENY ENTRY. REMOVE CONTAINERS EXPOSED TO FIRE IF POSSIBLE, OTHERWISE COOL THEM FROM THE SIDE WITH WATER SPRAY. EMERGENCY EQUIPMENT INCLUDING SELF-CONTAINED BREATHING APPARATUS (SCBA) AND FULL FIRE FIGHTING TURNOUT GEAR SHOULD BE WORN BY FIRE FIGHTERS.

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6. ACCIDENTAL RELEASE MEASURES

FOLLOW FACILITY-SPECIFIC PROCEDURES FOR SPILL RESPONSE. ISOLATE THE SPILL AREA. WHEN CLEANING SPILLS, WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT INCLUDING SAFETY GLASSES AND CHEMICAL RESISTANT GLOVES (SEE SECTION 8). PRACTICE CONTAMINATION AVOIDANCE.

CONFINE AND CONTAIN SMALL SPILLS USING INERT MATERIAL (E.G., PAPER TOWELS, SPILL CONTROL PILLOWS). IF THE WAX IS HOT, LET COOL BEFORE INITIATING CLEAN-UP. TO CLEAN-UP SPILLS OF COOLED WAX, USE NON SPARKING TOOLS TO SCRAPE THE WAX INTO CONTAINERS SUITABLE FOR DISPOSAL.

7. HANDLING AND STORAGE

KEEP CONTAINERS CLOSED WHEN NOT IN USE. STORE IN A COOL, DRY, WELL-VENTILATED AREA.

8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 EXPOSURE GUIDELINES:
THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND THE AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH) HAVE NOT ESTABLISHED EXPOSURE LIMITS FOR THIS PRODUCT. HOWEVER, EXPOSURE LIMITS DO NOT EXIST FOR THE PRIMARY HAZARDOUS INGREDIENT, WHICH IS PRESENT AT GREATER THAN 90%.

INGREDIENT NAME	OSHA PEL/STEL	ACGIH TLV/STEL
PARAFFIN	2 MG/M3 (FUME)	2 MG/M3 (FUME)

8.2 VENTILATION:
NO SPECIFIC CONTROLS ARE NEEDED; GOOD GENERAL ROOM VENTILATION EXPECTED TO BE ADEQUATE TO CONTROL AIRBORNE LEVELS. IF CERTAIN OPERATIONS GENERATE VAPORS OR FUMES (I.E., HEATING THE PARAFFIN), USE ADEQUATE GENERAL OR LOCAL VENTILATION TO KEEP AIRBORNE CONCENTRATIONS BELOW EXPOSURE LIMITS (SEE SECTION 8.1).

8.3 RESPIRATORY PROTECTION:

A RESPIRATOR IS NOT REQUIRED UNDER NORMAL CONDITIONS OF USE IF EXPOSURE LIMITS ARE KEPT BELOW THOSE LISTED IN SECTION 8.1.

8.4 PROTECTIVE GLOVES:

WEAR IMPERVIOUS GLOVES TO PREVENT SKIN CONTACT. SELECTION OF APPROPRIATE PROTECTIVE GLOVES FOR A PARTICULAR USE DEPENDS ON THE PROPERTIES OF THE COMPOUND AND THE SPECIFIC CONDITIONS OF USE, INCLUDING THE LEVEL OF DEXTERITY AND DURABILITY NEEDED, AND THE SEVERITY AND DURATION OF CHEMICAL CONTACT.

8.5 EYE PROTECTION:

EITHER SAFETY GLASSES WITH SIDE SHIELDS OR GOGGLES SHOULD BE WORN WHEN HANDLING THIS MATERIAL.

8.6 OTHER:

DEPENDING ON THE OPERATION, LABCOAT, APRON OR OTHER IMPERMEABLE CLOTHING MAY BE APPROPRIATE.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 APPEARANCE AND ODOR: A COLORLESS OR WHITE, TRANSLUCENT, SOLID PELLET WITH NO ODOR.

9.2 MELTING POINT: 117-149 F (47-65 C), DEPENDING ON THE GRADE.

9.3 BOILING POINT: NO DATA AVAILABLE.

9.4 SPECIFIC GRAVITY/DENSITY: 0.82

9.5 VAPOR DENSITY: NO DATA AVAILABLE.

9.6 VAPOR PRESSURE: NO DATA AVAILABLE.

9.7 SOLUBILITY:

WATER: INSOLUBLE.

OTHER SOLVENTS: INSOLUBLE IN ALCOHOL; SOLUBLE IN BENZENE, CHLOROFORM, ETHER, CARBON DISULFIDE, AND OILS; MISCIBLE WITH FATS.

9.8 DECOMPOSITION TEMPERATURE: NO DATA AVAILABLE.

9.9 VISCOSITY: NO DATA AVAILABLE.

9.10 PH: NO DATA AVAILABLE.

10. STABILITY AND REACTIVITY

10.1 STABILITY:

PRODUCT IS STABLE UNDER NORMAL CONDITIONS OF USE AND WHEN STORED AT ROOM TEMPERATURE. HAZARDOUS POLYMERIZATION CANNOT OCCUR.

10.2 HAZARDOUS DECOMPOSITION PRODUCTS:

THERMAL OXIDATIVE DECOMPOSITION OF PARAFFIN WAX EMITS TOXIC FUMES.

10.3 CONDITIONS TO AVOID:

AVOID HEAT, HIGH TEMPERATURES, PRESSURE, MECHANICAL SHOCK OR OTHER CONDITIONS THAT MIGHT RESULT IN A HAZARDOUS SITUATION.

10.4 MATERIALS AND SUBSTANCES TO AVOID (INCOMPATIBILITY):

THERE ARE NO KNOWN MATERIALS WHICH ARE INCOMPATIBLE WITH THIS PRODUCT. PARAFFIN IS INCOMPATIBLE WITH STRONG REDUCING AGENTS AND STRONG ACIDS.

11. TOXICOLOGICAL INFORMATION

THIS PRODUCT IS A MIXTURE FOR WHICH NO TOXICOLOGICAL DATA EXISTS. WHEN AVAILABLE, TOXICOLOGICAL DATA FOR THE PRODUCT'S HAZARDOUS INGREDIENTS ARE PROVIDED BELOW. REFER TO SECTION 3.2 FOR HEALTH EFFECTS INFORMATION.

11.1 ACUTE DATA:

INHALATION:
NO DATA AVAILABLE.

INGESTION:
HYDROCARBON RESIN: LD50 = 7 GM/KG (MAMMAL).

EYES:
PARAFFIN: A 100 MG DOSE APPLIED TO THE RABBIT EYE FOR 24 HOURS CAUSED MILD IRRITATION.

SKIN:
PARAFFIN: A 500 MG DOSE APPLIED TO RABBIT SKIN FOR 24 HOURS CAUSED MILD IRRITATION.

11.2 TARGET ORGAN EFFECTS DATA (SUBCHRONIC/CHRONIC)
NO DATA AVAILABLE.

11.3 CARCINOGENIC EFFECTS DATA:
PARAFFIN: WHEN IMPLANTED IN RATS (120 MG/KG) AND MICE (480-660 MG/KG), CAUSED TUMORS OF THE BLADDER, LUNGS, AND THORAX.

11.4 MUTAGENIC EFFECTS DATA:
NO DATA AVAILABLE.

11.5 REPRODUCTIVE/TERATOGENIC EFFECTS DATA:
NO DATA AVAILABLE.

12. ECOLOGICAL INFORMATION

12.1 ECOTOXICOLOGICAL INFORMATION:
NO DATA AVAILABLE FOR THE PRODUCT OR ITS HAZARDOUS INGREDIENTS.

12.2 CHEMICAL FATE INFORMATION:
NO DATA AVAILABLE FOR THE PRODUCT OR ITS HAZARDOUS INGREDIENTS.

13. DISPOSAL CONSIDERATIONS

DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS (SEE SECTION 15).

14. TRANSPORT INFORMATION

14.1 U.S. DEPARTMENT OF TRANSPORTATION (DOT):
THIS PRODUCT IS NOT REGULATED BY DOT.

14.2 INTERNATIONAL TRANSPORTATION REGULATIONS:
THIS PRODUCT IS NOT REGULATED UNDER INTERNATIONAL TRANSPORTATION REGULATIONS.

15. REGULATORY INFORMATION

15.1 FEDERAL REGULATIONS:
THIS PRODUCT IS NOT REGULATED BY THE FEDERAL GOVERNMENT; HOWEVER, SPECIFIC

REGULATIONS EXIST FOR THE FOLLOWING INGREDIENTS:

PARAFFIN: EPA TSCA CHEMICAL INVENTORY.
HYDROCARBON RESIN: EPA TSCA CHEMICAL INVENTORY.

15.2 STATE REGULATIONS:
THIS PRODUCT IS NOT REGULATED BY ANY STATE GOVERNMENT; HOWEVER, SPECIFIC STATE REGULATIONS EXIST FOR THE FOLLOWING INGREDIENTS:

PARAFFIN: MASSACHUSETTS HAZARDOUS SUBSTANCE LIST; PENNSYLVANIA HAZARDOUS SUBSTANCE LIST.

16. OTHER INFORMATION

16.1 HAZARD RATINGS*

HEALTH	FLAMMABILITY	REACTIVITY	NFPA:
	SPECIAL		HEALTH- 1
	HAZARDS		FLAMMABILITY- 1
			REACTIVITY- 0
			SPECIAL HAZARDS- NONE

HEALTH		HMIS:
FLAMMABILITY		HEALTH- 1
REACTIVITY		FLAMMABILITY- 1
PERSONAL PROTECTION		REACTIVITY- 0
		PERSONAL PROTECTION- SEE SECTION 8.

* A HAZARD RATING HAS NOT BEEN DEVELOPED BY NFPA OR HMIS FOR THIS PRODUCT. THE HAZARD RATINGS PROVIDED IN THIS MSDS ARE BASED ON NFPA AND HMIS HAZARD EVALUATION CRITERIA, AS WELL AS PROFESSIONAL JUDGEMENT. THIS INFORMATION IS INTENDED SOLELY FOR THE USE OF INDIVIDUALS TRAINED IN THESE HAZARD RATING SYSTEMS.

16.2 PREPARATION AND REVISION INFORMATION

MSDS REVISION 1 (9/93): NO NEW DATA ADDED.

MSDS REVISION 2 (1/94): PHYSICAL AND CHEMICAL PROPERTIES INFORMATION REVISED (SECTION 9.1).

MSDS REVISION 3 (1/95): ECOLOGICAL INFORMATION (SECTION 12) AND DISPOSAL CONSIDERATIONS (SECTION 13) ADDED).

THE INFORMATION AND RECOMMENDATIONS PRESENTED IN THIS MSDS ARE BASED ON SOURCES BELIEVED TO BE ACCURATE, THEREFORE, SHERWOOD MEDICAL COMPANY ASSUMES NO LIABILITY FOR THE ACCURACY OR COMPLETENESS OF THIS INFORMATION. IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES.
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