

HERCULES INC -- SMOKELESS POWDER, HPC-96 -- 1376-01-223-0936

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Product Identification  
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Product ID:SMOKELESS POWDER, HPC-96

MSDS Date:12/27/1991

FSC:1376

NIIN:01-223-0936

MSDS Number: CDXCK

=== Responsible Party ===

Company Name:HERCULES INC

Address:HERCULES PLAZA

City:WILMINGTON

State:DE

ZIP:19894

Country:US

Info Phone Num:302-594-5000

Emergency Phone Num:302-594-5000

CAGE:0CF24

=== Cont

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Composition/Information on Ingredients  
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Ingred Name:NITROGLYCERIN (NG); (TRINITROGLYCERIN) (SARA 313) (CERCLA)

CAS:55-63-0

RTECS #:QX2100000

Fraction by Wt: 18-20%

OSHA PEL:0.2 MG/M3, S, C

ACGIH TLV:0.05 PPM, S

EPA Rpt Qty:10 LBS

DOT Rpt Qty:10 LBS

Ingred Name:BARIUM (II) NITRATE (1:2)

CAS:10022-31-8

RTECS #:CQ9

625000

Fraction by Wt: 1.0-1.6%

OSHA PEL:5 MG/M3 BA

ACGIH TLV:2 MG/M3 BA

Ingred Name:NITROCELLULOSE

CAS:9004-70-0

RTECS #:QW0970000

Fraction by Wt: 77-78%

Ingred Name:EFTS OF OVEREXP:FAINTNESS, SKIN FLUSH, PALPITATION, RAPID HEART BEAT, DIZZ, ABDOM PAIN, RETROSTERNAL DISCOMFORT, (ING 5)

Ingred Name:ING 4: MUSC TWITCH, HEINZ BODIES (BLACK SPHERES IN RED BLOOD CELLS), METHEMOGLOBINEMIA, DEPRESS, CONFUSN, SKIN (ING 6)

Ingred Name:ING 5:IRRIT, ALLERGIC SKIN RXN (SENSIT). ING 2:INGEST OF AMTS CNTND IN OUNCE/MORE OF PWDRS MAY CAUSE SALIVATION, (ING 7)

Ingred Name:ING 6: VOMIT, DIARR (POSS BLOODY), ABDOM PAIN, TREMBLING, TWITCH, RINGING IN EARS, DILATED PUPILS, INVOLUNTARY (ING 8)

Ingred Name:ING 7: MUSC SPASMS, IRREGULAR HEART BEAT, LIMB STIFFNESS, LEG CRAMPS, PARALYSIS OF LIMBS, TONGUE & PHARYNX, (ING 9)

Ingred Name:ING 8: EXCITATION FOLLOWED BY DROW & CONVLS & DECR POTASSIUM LEVELS IN BLOOD. CHRONIC INHAL OVEREXP TO BARIUM (ING 10)

Ingred Name:ING 9: SALTS H AS LED TO FORM OF BENIGN RADIO OPAQUE NODULES IN LUNG. ANIMAL EFTS: ING 1:AT MANY TIMES DOSE (ING 11)

Ingred Name:ING 10:RECEIVED FOLLOWING EXPOS @ TLV, METHEMOGLOBINEMIA & FIBROUS TISS FORM IN BILE DUCTS SEEN. TESTICUAL EFTS (ING 12)

Ingred Name:ING 11: SEEN IN RATS DOSED FOR 3 MONTHS @ OVER 20,000 TIMES DOSE WORKER WOULD RECEIVE AT TLV. IN LETHAL DOSE (ING 13)

Ingred Name:ING 12:DETERMINATIONS IN RATS:RAPID BRTHG,POOR MUSC TONE, RAISED HAIR, EXCESS ACTIVITY. ING 2:SEV EYE &

MILD SKIN IRRIT.

Inged Name:MED CNDTNS: INTENSIFY ADVERSE EFTS. NITRATES CAN CAUSE METHEMOGLOBINEMIA WHICH COULD AGGRAVATE SEV UNTREATED ANEMIA.

Inged Name:FIRST AID PROC: CLOTHING. INGEST: INDUCE VOMITING. (NEVER INDUCE VOMITING IN UNCONSCIOUS PERSON). CALL MD.

Inged Name:WASTE DISP: BURN OF EXPLO WASTES IN PERMITTED FACILITIES. METH OF DISP IS TO BURN IN OPEN, ISOLATED LOCATION IN (ING 17)

Inged Name:ING 16:SM, SHALLOW PILES NOT >1 INCH DEEP. DO NOT BURN >1LB @ ONE TIME  
. USE IGNIT TRAIN OF SLOW-BURNING COMBUST (ING 18)

Inged Name:ING 17: MATL TO PERMIT RETREAT TO SAFE DIST BEFORE PWDR IGNITED. STAY UPWIND. DO NOT BREATHE COMBUST PRODS. (ING 19)

Inged Name:ING 18: STATE/LOCAL REGS MAY BE MORE STRINGENT THAN FEDERAL REGS. RCRA INFO: D001 (IGNITABILITY) & D003 (REACTIVITY).

Inged Name:HNDLG/STOR PRECS:PUB BY SAAMI. DO NOT STORE SMOKELESS PWDR IN AREA W/SOLVS, FLAM GASES OR HIGHLY COMBUST MATLS. (ING 21)

Inged Name:ING 20:PROD MAY REACT W/ACIDS/ALKALIES/AMINES; DO NOT STORE NEAR SUCH MATLS. AVOID EXPOS TO SUN/UV LIGHT. DO NOT(ING 22)

Inged Name:ING 21:KEEP DETERIORATED/SALVAGED PWDRS. CHECK OLD PWDRS FOR DETERIORATION REGULARLY. DESTROY DETERIORATED PWDRS IMMED.

Inged Name:OTHER PRECS:STATIC ELEC CHARGES. REMOVE PROPELLANT EXPLO. REC PERMIT SYS TO CTL CLEANUP & PREPARATION ESP BEFORE(ING 24)

Inged Name:ING 23:WORK PERFORMED THAT PRDCES IMPACT, FRICTION OR HEAT. WETTING AREA W/WATER BEFORE WORK, IF POSS, WILL REDUCE HAZS.

Inged Name:HYGIENE PRACT: CONTAM OF FOOD, BEVERAGES OR SMKNG MATLS. REMOVE CONTAM CLTHG PROMPTLY & CLEAN THOROUGHLY BEFORE REUSE.

===== Hazards Identification =====

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:INHAL/SKIN: SEV HDCH, NAUS, VOMIT, FATG. INGEST: SEV HDCH, NAUS, VOMIT, ABDOM PAIN, DIAR

R (MAY BE BLOODY), TREMBLING, RINGING IN EARS, SALIVATION. CANCER INFO, ING 1:NOT LISTED AS CARCIN. RATS DOSED F OR LIFETIME @ 5,000 TIMES MAX AMT THAT WOULD BE RECEIVED BY EXPOS @ TLV HAD INCR IN LIVER & TESTICULAR (EFTS OF OVEREXP)

Explanation of Carcinogenicity:NOT RELEVANT

Effects of Overexposure:HLTH HAZ:TUMORS. FEMALE RATS DOSED @ THIS SAME HIGH LEVEL FOR LIFETIME SHOWED DECR IN NUMBER OF MAMMARY & PITUITARY TUMORS THAT USUALLY OCCUR. ING 2:NOT LISTED AS CARCIN.

REPORTED HUMAN EFTS: ING 1:AB OVE EFTS ARE ONLY ONES REPORTED FOLLOWING WORKPLACE EXPOS. FOLLOWING ADDNL EFTS FOLLOWING MEDICINAL USE/OVERUSE:(ING 4)

Medical Cond Aggravated by Exposure:SEV UNTREATED ANEMIA & GLAUCOMA BY EXTREME OVEREXP TO ING 1. AGGRAVATION NOT REPORTED AS CONSEQUENCE OF WORKPLACE EXPOS BUT HAS BEEN REPORTED AFTER PROTRACTED MEDICINAL OVERDOSE; ALCOHOL MAY (ING 14)

===== First Aid Measures =====

First Aid:EYES: IMMED

FLUSH W/POTABLE WATER FOR A MINIMUM OF 15

MINUTES, SEEK ASSISTANCE FROM MD . INHAL: REMOVE TO FRESH AIR. IF BRTHG HAS STOPPED, GIVE ARTF RESP. IF BRTHG IS DFCLT, GIVE OXYGEN. CALL MD . SKIN: PROMPTLY WASH W/SOAP & COOL RUNNING WATER. REMOVE CONTAMD CLTHG. WASH LIGHTLY CONTAMD CLTHG W/ALKALINE DETERGENT BEFORE REUSE. DISCARD CONTAMD LEATHER ARTICLES OR HIGHLY CONTAMD (ING 15)

===== Fire Fighting Measures =====

Extinguishing Media:DELUGE

W/LG QTYS OF WATER AS QUICKLY AS POSS BY

AUTOMATIC SPRINKLERS OR FIRE HOSE FROM A PROTECTED LOCATION. (SUPDAT)

Fire Fighting Procedures:USE NIOSH APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT . EVACUATE THE AREA.

Unusual Fire/Explosion Hazard:SMOKELESS PROPELLANTS ARE EXTREMELY FLAM & READILY IGNITED. PROTECT FROM IMPACT, FRICTION, HEAT, SPARKS OR FLAME. HAZ PRODS OF COMBUST: VARY DEPENDING (SUPDAT)

===== Accidental Release Measures =====

Spill Rel

ease Procedures:CLEAN UP SPILLS IMMEDIATELY USING SOFT BRISTLE BRUSH AND CONDUCTIVE RUBBER OR PLASTIC SHOVEL. USE CAUTION, MATERIAL IS SENSITIVE TO INITIATION FROM SOURCES SUCH AS HEAT, FLAME, SHOCK, FRICTION OR SPARKS.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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===== Handling and Storage =====

Handling and Storage Precautions:RECD STOR:21C(70F). STORE ONLY IN DOT APPRVD CNTNRS. FOR HNDLG/STOR REQ SEE 29CFR 1910.109. ALSO SEE "PRO

PERTIES & STORAGE OF SMOKELESS PWDR" (ING 20)

Other Precautions:DO NOT SMOKE IN AREAS WHERE PWDR IS STORED/USED. AVOID FRICTION OR ROUGH HNDLG BECAUSE OF FIRE & EXPLO HAZS. ELIM IGNIT SOURCES & PVNT BUILD-UP OF STATIC ELEC CHARGES. DURING REPAIR & MAINT: ELIM IGNIT SOURCES & PVNT BUILD-UP OF (ING 23)

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===== Exposure Controls/Personal Protection =====

Respiratory Protection:APPROPRIATE NIOSH APPROVED RESPIRATORY PROTECTION REQUIRED WHEN EXPOSURE TO AIRBORNE CONTAMINANT IS LIKELY TO EXCEED ACCEPTABLE LIMITS. RESPIRATORS SHOULD BE SELECTED AND USED I/A/W OSHA SUBPART 1 (29 CFR 1910.134) & MFR'S RECOMMENDATIONS.

Ventilation:ADEQ VENT TO KEEP DUST CONCS BELOW EXPOS LIMS. DISCHARGE FROM VENT SYS SHOULD COMPLY W/APPLIC AIR POLLUTION CTL REGS.

Protective Gloves:IMPERVIOUS GLOVES.

Eye Protection:ANSI APPRVD CHEM WORKERS GOGGLES .

Other Protective Equipment:ANSI APPROVED EYE WASH & DELUGE SHOWER . FLAME-RETARDANT COVERALLS.

Work Hygienic P

ractices:DO NOT ALLOW EYE/SKIN CNTCT. AVOID BRTHG DUST. WASH THOROUGHLY AFTER HNDLG & BEFORE EATING/DRINKING/SMKNG. AVOID(ING 25)

Supplemental Safety and Health

EXTING MEDIA: MATLS ARE SELF-OXIDIZING. EXPLO HAZ: ON FIRE CNDTNS & OTHER COMBUSTS PRESENT IN FIRE. PREDOMINANT PRODS WILL BE CARBON MONOXIDE, CARBON DIOXIDE & NITROGEN OXIDES. UNDER SOME CNDTNS, METHANE, SMALL AMTS OF IRRITATING ALDEHYDES & CARBOXYLIC ACIDS OR HYDROGEN CYANIDE MAY BE FORMED.

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===== Ph

ysical/Chemical Properties =====

Vapor Pres:NEGLIGIBLE

Spec Gravity:1.64

Solubility in Water:NEGLIGIBLE

Appearance and Odor:GRAY TO BLACK, GRANULAR SOLID; ODORLESS.

Percent Volatiles by Volume:NEGLIG

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

ACIDS, ALKALIES OR AMINES; STRONG SUNLIGHT OR ULTRAVIOLET LIGHT.

Stability Condition to Avoid:STORE IN A COOL, DRY PLACE. LONG TERM

STORAGE AT TEMPERATURES GREATER THAN

52C (125F) WILL ACCELERATE

DECOMPOSITION.

Hazardous Decomposition Products:NONE.

===== Disposal Considerations =====

Waste Disposal Methods:DISP MUST BE I/A/W FED, STATE & LOC REG.

DISP/DESTRUCTION OF EXCESS, DMGD OR DETERIORATED EXPLOSIVES SHOULD

BE CARRIED OUT UNDER DIRECT SUPERVISION OF QUALIFIED PERSON. CALL

MFR FOR ASSISTANCE I F NEEDED. FED HAZ WASTE REGS ALLOW OPEN(ING

16)

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