

MATERIAL SAFETY DATA SHEET: CHEMSEARCH 777

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DATE OF ISSUE
1/23/2003

SUPERSEDES
7/19/2002

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms
N/A

Trade Name & Synonyms
CHEMSEARCH 777

Chemical Family:
ALKALINE MIXTURE

Formula Mixture --> X

Manufacturer's Name:
CHEMSEARCH DIV. OF NCH CORP.

Address:
BOX 152170
IRVING, TX 75015

Prepared By:
L. Boynton/Chemist

Product Code Number
0182

Emergency Phone Number
800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
SODIUM HYDROXIDE	CORROSIVE	2 MG/M3 C1	N/E	2	1310-73-2
SODIUM NITRITE	*	N/E	N/E	2	7532-00-0
SODIUM METABORATE TETRAHYDRATE	IRRITANT	N/E	N/E	2	10555-76-7
PHENOLPHTHALEIN	IRR/CARC	N/E	N/E	2	77-09-8
* IRRITANT/TOXIC/OXIDIZER					
C CEILING LIMIT					

SECTION IIa - NON-HAZARDOUS INGREDIENTS

(NON-HAZARDOUS INGREDIENT NAMES AND CAS NUMBERS ARE PROTECTED UNDER NJ TRADE)

Secret Registry #: 409363-5033P

SECTION III - PHYSICAL DATA

Boiling Point (F):	212°	Specific Gravity (H2O=1):	1.10
Vapor Pressure (MM HG):	17.5	Color:	DARK VIOLET
Vapor Density (Air=1):	0.6	Odor:	ODORLESS
PH @ 100% :	12.4	Clarity:	OPAQUE
% Volatile by Volume:	83	Evaporation Rate (BU A/C=1):	0.10
H2O Solubility:	COMPLETE	Viscosity:	NON-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point >200°F / SETAFLASH	Flammable Limits HYDROGEN GAS	LEL 4%	UEL 75%
Extinguishing Media X ---Foam X ---Alcohol Foam X ---CO2 X ---Dry Chemical X ---Water Spray Y ---Other			
Special Fire Fighting Procedures: FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. EXTINGUISHING MEDIA SHOULD BE CHOSEN BASED ON THE NATURE OF THE SURROUNDING FIRE. USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS.			
Unusual Fire and Explosion Hazards: IF DRIED RESIDUES OF THIS PRODUCT ARE HEATED, THEY MAY RELEASE HYDROGEN GAS WHICH COULD CREATE AN EXPLOSION HAZARD.			
Aerosol Level (NFPA 308):	N/A		
NFPA 704 Hazard Rating 2 ---Health 1 ---Flammability 0 ---Reactivity	(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)		
	---Special		

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:
2 MG/M3 AS SODIUM HYDROXIDE CEILING LIMIT 1.

SECTION V - HEALTH HAZARD DATA (Continued)

Effects of Overexposure:

-Acute (Short Term Exposure)

EYE CONTACT: CAUSES SEVERE IRRITATION SEEN AS STINGING, TEARING, REDNESS AND A BURNING SENSATION AND MAY CAUSE EYE DAMAGE.

SKIN CONTACT: CAUSES SEVERE IRRITATION SEEN AS REDNESS, ITCHING AND A BURNING SENSATION.

INHALATION: MAY CAUSE RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING. INHALATION OF LARGE AMOUNTS MAY CAUSE SYSTEMIC EFFECTS DUE TO ABSORPTION OF NITRITE BY LUNG TISSUE, CAUSING EFFECTS SIMILAR TO THOSE FROM INGESTION.

INGESTION: MAY CAUSE IRRITATION SEEN AS NAUSEA, VOMITING AND DIARRHEA; MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS HEADACHE, WEAKNESS, PAINTING, NAUSEA AND LOW BLOOD PRESSURE. INGESTION OF LARGE AMOUNTS MAY CAUSE EFFECTS SUCH AS METHEMOGLOBINEMIA, CYANOSIS, MARKED DECREASE IN BLOOD PRESSURE LEADING TO COLLAPSE, COMA AND POSSIBLE DEATH.

-Chronic (Long Term Exposure)

OVEREXPOSURE MAY CAUSE METHEMOGLOBINEMIA (REDUCED OXYGEN-CARRYING CAPACITY OF BLOOD) WITH CYANOSIS (BLuish DISCOLORATION OF SKIN) PROGRESSING TO DIZZINESS, INCOORDINATION, LOSS OF CONSCIOUSNESS, SHORTNESS OF BREATH AND INCREASED PULSE RATE. LONG-TERM INGESTION PRODUCED UNSPECIFIED PATHOLOGICAL CHANGES IN THE ADRENALS, BRAIN, HEART, KIDNEYS, LIVER, LUNGS AND SPLEEN. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA AND DERMATITIS. TARGET ORGANS: CENTRAL NERVOUS SYSTEM, HEART, LIVER, LUNGS, KIDNEYS, SPLEEN AND BLOOD-FORMING ORGANS.

Primary Routes of Entry: X <--Inhalation <--Ingestion X <--Absorption

Emergency and First Aid Procedures:

-Inhalation:

REMOVE FROM THE AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

-Eye Contact:

IMMEDIATELY RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING FOR AT LEAST 15 MINUTES. HOLD THE EYELIDS APART TO ENSURE RINSING OF THE ENTIRE SURFACE OF THE EYES AND LIDS WITH WATER. GET IMMEDIATE MEDICAL ATTENTION.

-Skin Contact:

WASH AFFECTED AREAS WITH LARGE AMOUNTS OF SOAP AND WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. GET IMMEDIATE MEDICAL ATTENTION. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

-Ingestion:

GIVE 1 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-Notes to Physician:

ABSORPTION OF THIS PRODUCT MAY LEAD TO THE FORMATION OF METHEMOGLOBIN WHICH, IN SUFFICIENT CONCENTRATION, CAUSES CYANOSIS. SINCE REVERSION OF METHEMOGLOBIN TO HEMOGLOBIN OCCURS SPONTANEOUSLY AFTER TERMINATION OF EXPOSURE, MODERATE DEGREES OF CYANOSIS NEED TO BE TREATED ONLY BY SUPPORTIVE MEASURES SUCH AS BED REST AND OXYGEN INHALATION. THOROUGH CLEANSING OF THE ENTIRE CONTAMINATED AREA OF THE BODY INCLUDING SCALP AND NAILS IS OF UTMOST IMPORTANCE. IF CYANOSIS IS SEVERE, INTRAVENOUS INJECTION OF METHYLENE BLUE, 1 MG/KG OF BODY WEIGHT, MAY BE OF VALUE. CYANOCOBALAMIN (VITAMIN B-12), 1 MG INTRAMUSCULARLY, WILL SPEED RECOVERY. INTRAVENOUS FLUIDS AND BLOOD TRANSFUSIONS MAY BE INDICATED IN VERY SEVERE EXPOSURES.

TREAT AS A MODERATELY STRONG ALKALI EXPOSURE. FOR INGESTION OF LARGE AMOUNTS (GREATER THAN 8 GRAMS), MAINTAIN ADEQUATE KIDNEY FUNCTION AND FORCE FLUIDS. GASTRIC LAVAGE IS RECOMMENDED FOR SYMPTOMATIC PATIENTS ONLY. HEMODIALYSIS SHOULD BE RESERVED FOR MASSIVE ACUTE INGESTION OR PATIENTS WITH RENAL FAILURE. BORON ANALYSIS OF URINE OR BLOOD ARE ONLY USEFUL FOR DOCUMENTING EXPOSURE AND SHOULD NOT BE USED TO EVALUATE SEVERITY OF POISONING OR TO GUIDE TREATMENT.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC--> Yes NTP--> Yes OSHA--> No ACGIH--> No OTHER--> Yes

SODIUM HYDROXIDE

SKN-RBT LD50: 1350 MG/KG 3.
 ORL-RAT LD50: 300-500 MG/KG 3.
 SKN-RBT: 500 MG/24H SEVERE 4.
 EYE-RBT: 1 MG/24H SEVERE 4.

SODIUM NITRITE

ORL-HMN TDLo: 14 MG/KG 3.
 ORL-HMN LDLo: 71 MG/KG 3.
 ORL-RAT LD50: 120 MG/KG 4.
 IHL-RAT LC50: 1.45 MG/L/4HR 4.
 EYE-RBT SDT: 500 MG/24H MILD 3.

SODIUM METABORATE TETRAHYDRATE

ORL-RAT LD50: 2330 MG/KG 4.
 SKN LD50: >2000 MG/KG (ESTIMATED) 4.

ANIMAL FEEDING STUDIES IN RATS, MICE AND DOGS DEMONSTRATED EFFECTS ON FERTILITY AND TESTES. STUDIES WITH THE CHEMICALLY RELATED BORIC ACID IN THE RAT, MOUSE AND RABBIT DEMONSTRATED DEVELOPMENTAL EFFECTS ON THE FETUS, INCLUDING PETAL WEIGHT LOSS AND MINOR SKELETAL VARIATIONS. 4.

PHENOLPHTHALEIN

ORL-HMN(MAN) TDLo: 29 MG/KG 3.
 ORL-RAT LD50: >1 G/KG 3.

RECENT STUDIES PERFORMED BY NTP HAVE SHOWN THAT RATS FED EXTREMELY HIGH DOSES DURING A PERIOD OF 6 MONTHS TO 2 YEARS HAVE DEVELOPED LIVER, KIDNEY AND LYMPH SYSTEM TUMORS. NTP CONCLUDED THAT PHENOLPHTHALEIN IS REASONABLY ANTICIPATED TO BE A HUMAN CARCINOGEN. GIVEN THE USE PATTERN OF THIS PRODUCT, THE RISK TO HUMANS IS INSIGNIFICANT IF STANDARD, WORK-HYGIENE PRACTICES ARE FOLLOWED. 5.

THERE IS INADEQUATE EVIDENCE IN HUMANS FOR THE CARCINOGENICITY OF PHENOLPHTHALEIN. THERE IS SUFFICIENT EVIDENCE IN EXPERIMENTAL ANIMALS FOR THE CARCINOGENICITY OF PHENOLPHTHALEIN. PHENOLPHTHALEIN IS POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B). 6.

SECTION VI - TOXICITY INFORMATION (Continued)

SECTION VII - REACTIVITY DATA

Stability: X <--Stable <--Unstable
Conditions to Avoid:
NONE KNOWN.

Incompatibility (Materials to Avoid):

STRONG REDUCERS SUCH AS METAL HYDRIDES OR ALKALI METALS, ACIDS, ACTIVATED CARBON, AMMONIUM SALTS, CYANIDES AND AMINES.
UNDER CERTAIN CONDITIONS, NITRITES MAY REACT WITH SECONDARY AMINES TO FORM CARCINOGENIC NITROSAMINES.

Hazardous Decomposition Products:

OXIDES OF CARBON AND NITROGEN.

Hazardous Polymerization:

<--May Occur X <--Will Not Occur

Conditions to Avoid:

N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:

WEAR APPROPRIATE PROTECTIVE CLOTHING. VENTILATE THE AREA. USE CARE AS SPILLS MAY BE SLIPPERY. DIKE AND CONTAIN SPILL.
ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. PREVENT PRODUCT
FROM CONTAMINATING SOIL OR FROM ENTERING SEWAGE AND DRAINAGE SYSTEMS AND BODIES OF WATER. FLUSH AREA WITH WATER.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

Neutralizing Agent:

USE DILUTE ACIDS SUCH AS HYDROCHLORIC ACID OR VINEGAR. ADD CAUTIOUSLY WHILE MIXING. WEAR APPROPRIATE PROTECTIVE
CLOTHING.

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:

GENERAL VENTILATION IS NORMALLY ADEQUATE.

Respiratory Protection:

A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS OR WHERE MISTING EXISTS.

Glove Protection:

NEOPRENE OR NITRILE RUBBER GLOVES WHEN HANDLING.

Eye Protection:

CHEMICAL GOGGLES SHOULD BE WORN.

Other Protection:

WEAR PROTECTIVE CLOTHING WHEN HANDLING.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors--> X Outdoors--> Heated--> Refrigerated-->
Minimum Temperature: 35°F Maximum Temperature: 120°F

Precautions to be Taken in Handling and Storing:

ALWAYS STORE MATERIAL IN ITS ORIGINAL CONTAINER. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. KEEP FROM FREEZING. IF
PRODUCT FREEZES ALLOW IT TO SLOWLY WARM TO ROOM TEMPERATURE AND STIR THOROUGHLY BEFORE USING.

Other Precautions:

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper & Limit
SODIUM NITRITE	7632-00-0	10

Those ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund
Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Please call 1-800-527-9919 for additional information if you are a California customer.
This MSDS is not intended for users in the state of California.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2002.
2. OSHA PEL.
3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODISC, 2002.
4. VENDOR'S MSDS.
5. NTP.
6. IARC.

ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY.

IRR:IRRITANT, PLAM/PLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE,
N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP,
LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL
AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION,
ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE
LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD,
MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIAN, PPOS: PARTICULATES (INSOLUBLE) NOT OTHERWISE SPECIFIED,
SDT:STANDARD DRAIZE TEST, ORL: ORAL, HMN: HUMAN, IHL:INHALATION

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO
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