



## HILLSBORO ELEMENTARY SCHOOLS

713 S.E. 6th Ave.  
HILLSBORO, OR 97123

## MATERIAL SAFETY DATA SHEET

OT 0043

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## SECTION I - GENERAL INFORMATION

|   |   |
|---|---|
| CHEMICAL NAME & SYNONYMS<br>N/A   | TRADE NAME & SYNONYMS<br>4 IN 1 FUEL OIL ADDITIVE |
| CHEMICAL FAMILY<br>FUEL OIL ADDITIVE  | FORMULA<br>X<--MIXTURE                            |
| MANUFACTURERS NAME<br>NATIONAL CHEMSEARCH DIV. OF NCH CORP.                           |   |
| ADDRESS (NUMBER, STREET, CITY, STATE & ZIP CODE)<br>BOX 152170<br>IRVING, TEXAS 75015 |   |
| PREPARED BY:<br>RICHARD STOLLEY, T S CHEM   | PRODUCT CODE NUMBER<br>1978                       |
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## SECTION II - HAZARDOUS INGREDIENTS

| CHEMICAL NAME (INGREDIENTS) | HAZARD    | TLV*      | PEL*       | CAS#      |
|-----------------------------|-----------|-----------|------------|-----------|
| HEAVY AROMATIC NAPHTHA      | SKIN IRR. | 500PPM 1. | 2000MG/M3  | 8030-30-6 |
| O-DICHLORDBENZENE           | SKIN IRR. | 50 PPM 1. | 300MG/M3 1 | 95550L    |
| HEXYLENE GLYCOL             | SKIN IRR. | 25 PPM 1. | 125MG/M3 1 | 107-41-E  |

## SECTION III - PHYSICAL DATA

|                          |     |                      |      |
|--------------------------|-----|----------------------|------|
| BOILING PT. (FAHRENHEIT) | 320 | SPEC GRAVITY (H2O=1) | .975 |
|--------------------------|-----|----------------------|------|

## 4 IN 1 FUEL OIL ADDITIVE

(CONTINUED)

## SECTION III - PHYSICAL DATA

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|                                |             |                              |           |
|--------------------------------|-------------|------------------------------|-----------|
| VAPOR PRESSURE (MM HG).        | < 1         | COLOR                        | AMBER OIL |
| VAPOR DENSITY (AIR=1)          | < 10        | ODOR                         | ODD       |
| PH @ 100%                      | 9           | CLARITY                      | HAZY      |
| PERCENT VOLATILE BY VOLUME (%) | 78          | EVAPORATION RATE (BU AC = 1) | < .01     |
| SOLUBILITY IN WATER            | APPRECIABLE |                              |           |
| VISCOSITY                      | VISCIOUS    |                              |           |

## SECTION IV - FIRE AND EXPLOSION HAZARD

|  |                  |         |              |                |          |
|--|------------------|---------|--------------|----------------|----------|
| FLASH POINT (METHOD USED)<br>150 F. T.C.C. | FLAMMABLE LIMITS | N/A     | LEL          | N/A            | UEL      |
| EXTINGUISHING MEDIA "ALCOHOL"              | DRY              | WATER   |              |                |          |
| <--FOAM                                    | X<--FOAM         | X<--CD2 | X<--CHEMICAL | <--WATER SPRAY | <--OTHER |

SPECIAL FIRE FIGHTING PROCEDURES  
EVACUATE HAZARD AREA OF UNPROTECTED PERSONNEL. WEAR PROPER PROTECTIVE CLOTHING INCLUDING A NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. CDDL FIRE-EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE & EXPLOSION HAZARDS  
VAPORS ARE HEAVIER THAN AIR AND MAY ACCUMULATE IN LOW AREAS OR AREAS INADEQUATELY VENTILATED. VAPORS MAY ALSO TRAVEL ALONG THE GROUND TO BE IGNITED AT LOCATIONS DISTANT FROM THE HANDLING SITE.

## SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE :

NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

EFFECTS OF OVEREXPOSURE

- ACUTE - (SHORT TERM EXPOSURE)  
CAN LEAD TO CENTRAL NERVOUS SYSTEM DEPRESSION WITH EFFECTS OF HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS. EYE IRRITANT DEFATS SKIN WHICH CAN LEAD TO IRRITATION. INHALATION MAY BE SLIGHTLY IRRITATING TO MUCOUS MEMBRANES. INGESTION MAY RESULT IN VOMITING. ASPIRATION MUST BE AVOIDED TO AVOID PNEUMONITIS.

- CHRONIC - (LONG TERM EXPOSURE)  
MARKED IRRITATION OF SKIN AND EYE UPON CHRONIC OVEREXPOSURE AS WELL AS

(CONTINUED)

## SECTION V - HEALTH HAZARD DATA

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LIVER AND KIDNEY DAMAGE.

TARGET ORGANS: LIVER AND KIDNEYS

PRIMARY ROUTE OF ENTRY: X-- INHALATION &lt;-- INGESTION &lt;-- ABSORPTION

EMERGENCY &amp; FIRST AID PROCEDURES

INHALATION:

REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT.

GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET MEDICAL ATTENTION.

EYE CONTACT:

FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT:

WASH WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES: DO NOT

REUSE UNTIL CLEANED. IF PERSISTENT IRRITATION OCCURS, GET MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD

BELOW KNEES TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET

MEDICAL ATTENTION.

NOTES TO PHYSICIAN

N/A

## SECTION VI - TOXICITY INFORMATION

HEAVY AROMATIC NAPHTHA

IVN-MAN LD50: 27MG/KG 2.

IPR-MAN LD50: 2500MG/KG 2.

O-DICHLOROBENZENE

OEL-RAT LD50: 500MG/KG 2.

HEXALENE GLYCOL

RAT-DRL LD50 18.5ML/KG 2.

## SECTION VII - REACTIVITY DATA

| STABILITY | <--STABLE | <--UNSTABLE | CONDITIONS TO AVOID |
|-----------|-----------|-------------|---------------------|
|           |           |             |                     |

N/A

INCOMPATIBILITY (MATERIALS TO AVOID)

OPEN FLAME, STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE, OXIDES OF SULPHUR

## 4 IN 1 FUEL OIL ADDITIVE

(CONTINUED)

## SECTION VII - REACTIVITY DATA

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| HAZARDOUS      | WILL NOT<br>X <--OCCUR | MAY<br><--OCCUR | CONDITIONS TO AVOID |
|----------------|------------------------|-----------------|---------------------|
| POLYMERIZATION | N/A                    |                 |                     |

## SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED  
 ELIMINATE ALL SOURCES OF IGNITION. SMALL SPILLS: TAKE UP WITH ABSORBENT  
 AND PLACE IN LABELED CONTAINER FOR DISPOSAL. LARGE SPILLS: EVACUATE AREA  
 OF UNPROTECTED PERSONNEL. STOP LEAK AND CONTAIN SPILL. REMOVE VIA VACUUM  
 TRUCKS. TAKE UP REMAINDER WITH ABSORBENT AND PLACE IN LABELED CONTAINER  
 FOR DISPOSAL. DO NOT FLUSH TO SEWER.

WASTE DISPOSAL METHOD  
 PLACE IN A DISPOSAL FACILITY APPROVED UNDER RCRA REGULATIONS FOR HAZARDOUS  
 WASTE. USE NON-LEAKING CONTAINERS. SEAL TIGHTLY AND LABEL PROPERLY.

NEUTRALIZING AGENT

N/A

## SECTION IX - SPECIAL PROTECTION INFORMATION

REQUIRED VENTILATION  
 GENERAL EXHAUST IS ADEQUATE UNDER NORMAL CIRCUMSTANCES.

RESPIRATORY PROTECTION  
 TYPICAL USE DOES NOT REQUIRE RESPIRATORS. HOWEVER, IN EMERGENCY  
 SITUATIONS WHERE EXPOSURE EXCEEDS OSHA STANDARDS -  
 IDLH: 1000PPM/CCOVF

PROTECTIVE GLOVES  
 PVC GLOVES

EYE PROTECTION  
 CHEMICAL GOGGLES ARE RECOMMENDED DEPENDING  
 ON SEVERITY OF EXPOSURE.

OTHER PROTECTION  
 SHOES OR BOOTS

## SECTION X - STORAGE AND HANDLING INFORMATION

## 4 IN 1 FUEL OIL ADDITIVE

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## SECTION X - STORAGE AND HANDLING INFORMATION PAGE : 05

|                            |        |        |              |         |
|----------------------------|--------|--------|--------------|---------|
| STORAGE TEMPERATURE        | INDOOR | HEATED | REFRIGERATED | OUTDOOR |
| 120 F. <--MAX 32 F. <--MIN | X      |        |              | X       |

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING  
STORE AT MODERATE TEMPERATURES.

OTHER PRECAUTIONS  
KEEP OUT OF REACH OF CHILDREN. READ ENTIRE LABEL  
BEFORE USING PRODUCT.

## SECTION XI - TRANSPORTATION \* (FOR FUTURE USE)

|                        |           |         |               |         |                            |
|------------------------|-----------|---------|---------------|---------|----------------------------|
| APPLICABLE REGULATIONS | <--49 CFR | <--IMCO | <--TARIFF 6 C | <--IATA | <--MILITARY AIR (AFR 71-4) |
|------------------------|-----------|---------|---------------|---------|----------------------------|

SHIPPING NAME

HAZARD CLASS | ID NUMBER | REPORT QTY

LABELS | LIMITED QTY

UNIT CONTAINER

DOT SPS CONTAINER | NET EXPLOSIVE WT.

AEROSOL PROPPELLANT(S)

## SECTION XII - REFERENCES

1. HANDBOOK OF TOXIC AND HAZARDOUS CHEMICALS AND CARCINOGENS. 2ND EDITION. MARSHALL SITTIG. 1985
2. DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS. 6TH EDITION. N. IRVING SAX.

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