

# MATERIAL SAFETY DATA SHEET

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PRODUCT NAME: INTAKE UPPER ENGINE CLEANER  
PRODUCT CODE No.: 17020

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ISSUE DATE: April 2006

## HMIS HAZARD INDEX:

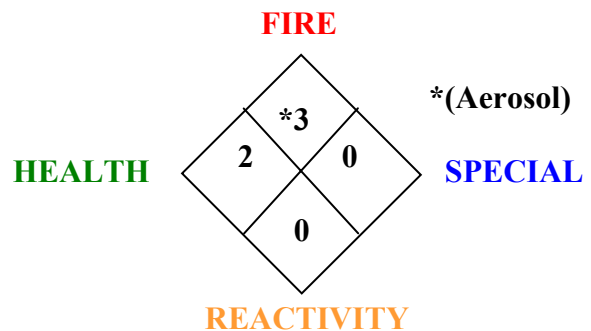
HAZARDOUS 4-SEVERE  
MATERIALS 3-SERIOUS  
IDENTIFICATION 2-MODERATE  
SYSTEM 1-SLIGHT  
0-MINIMAL

## HMIS RATINGS:

HEALTH 2  
FLAMMABILITY 3  
REACTIVITY 0  
PERSONAL PROTECTION\*  
\*SEE SECTION VII

## NFPA HAZARD RATINGS:

4-EXTREME  
3-HIGH  
2-MODERATE  
1-SLIGHT  
0-INSIGNIFICANT



## SECTION I

### COMPONENTS

## PRODUCT IDENTIFICATION

CAS No.      TLV OSHA      %

### COMPLEX BLEND OF:

HETEROCYCLIC AMINES AZEOTROPED WITH  
PRIMARY ALKYL AMINE, ACETRONILRILE, AND  
DEIONIZED WATER.      (N/A)      40 ppm      100% A.I.

DIMETHYL ETHER (DME)      115-10-6      1000ppm (DuPont)      70/30

## SECTION II

## PHYSICAL PROPERTIES

BOILING POINT      VAPOR DENSITY (AIR+1)      % VOLATILE      ODOR  
WIDE RANGE      > 3.0      100      AMMONIACAL

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<b>% SOL. IN WATER</b>	<b>SPECIFIC GRAVITY</b>	<b>Ph RANGE</b>	<b>APPEARANCE</b>
100% conc.	0.963 Conc.	12.2 TO 12.8	STRAW – YELLOW
<b>EVAPORATION RATE (N BUTYL ACETATE=1)</b>	<b>VAPOR PRESSURE (mm Hg OR PSIG)</b>		
N/A	AEROSOL – 60 PSIG @ 70 Deg. F.		

**SECTION III**

**FLASHPOINT (METHOD USED):**

-41 C TOC (DME)

**FIRE AND EXPLOSION DATA**

**FLAMABLE LIMITS:**

3.4 L.E.L. 18.0 U.E.L.

**SPECIAL FIRE FIGHTING PROCEDURES:**

**EVACUATE ALL PERSONNEL FROM DANGER AREA. COOL SURROUNDING AREA WITH WATER SPRAY. WEAR SELF-CONTAINED BREATHING APPARATUS. WEAR FULL PROTECTIVE EQUIPMENT. EXPLODING AEROSOL UNITS, CAN BECOME DANGEROUS MISSILES.**

**UNUSUAL FIRE AND EXPLOSION HAZARD:**

**FIRE FIGHTERS SHOULD WEAR SPECIAL PROTECTIVE EQUIPMENT AND WEAR A SELF-CONTAINED BREATHING APPARATUS. SMOKE OF UNBURNED MATERIALS CAN CONTAIN OXIDES OF NITROGEN.**

**EXTINGUISHING AGENTS:**

**WATER SPRAY, CARBON DIOXIDE, DRY CHEMICAL OR FOAM.**

**SECTION IV**

**ROUTES OF ENTRY: INHALATION ( X ) SKIN ( X ) EYES ( X ) INGESTION ( X )**

**INHALATION:**

**OVER EXPOSURE BY INHALATION MAY CAUSE CHEST TIGHTNESS OR PAIN, NAUSEA, VOMITING, FLUSHING CONFUSION, DROWSINESS, UNCONSCIOUS, CONVULSIONS AND GROSS OVER EXPOSURE MAY CAUSE DEATH.**

**SKIN CONTACT:**

**MAY CAUSE BURNING, IRRITATION, REDNESS AND SWELLING.**

**EYE CONTACT:**

**EYE IRRITANT AND CAUSES TEARING, BLURRING OF VISION AND PAIN.**

**INGESTION:**

**RESPIRATORY TRACT (TRACHEA AND ESOPHAGUS) IRRITANT WITH THE SAME SYMPTOMS AS OVER EXPOSURE OR BREATHING.**

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**SECTION V**

**EMERGENCY AND FIRST AID PROCEDURES**

**INHALATION:**

IMMEDIATELY REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN.

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**SKIN CONTACT:**

IMMEDIATELY FLUSH WITH PLENTY OF WATER. REMOVE CONTAMINATED CLOTHING AND WASH. GET MEDICAL ATTENTION IF NEEDED.

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**EYE CONTACT:**

IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN.

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**INGESTION:**

IMMEDIATELY GIVE TWO (2) GLASSES OF WATER AND INDUCE VOMITING. DO NOT GIVE SYRUP OF IPECAC. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL A PHYSICIAN.

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**COMMENTS:**

**SEE CAUTION UNDER VENTILATION.**

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**SECTION VI:**

**REACTIVITY DATA**

**STABILITY:** STABLE ( X )

UNSTABLE ( )

**MATERIALS TO AVOID:**

OXYGEN, OXIDIZERS, ACIDS, CARBON DIOXIDE, AND UV.

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**HAZARDOUS POLYMERIZATION:**

MAY OCCUR ( ) WILL NOT OCCUR ( X )

**HAZARDOUS DECOMPOSITION PRODUCTS:**

CARBON DIOXIDE, CARBON MONOXIDE, AMMONIA, NITROGEN OXIDES.

**CONDITIONS TO AVOID:**

HIGH TEMPERATURES, SPARKS AND OPEN FLAME. AUTOIGNITION AT 350 Deg. C. AEROSOL CONTAINERS MAY RUPTURE ABOVE 150 Deg. F.

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**SECTION VII**

**SPECIAL PROTECTION INFORMATION**

**VENTILATION:** **“CAUTION EXHAUST HAZARD”**

TESTS SHOW THAT A SERIES OF TOXIC CHEMICALS FORM, FROM UNBURNED FUELS, ADDITIVES, AND ENGINE FOG AND ARE FOUND IN THE EXHAUST DURING THE

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**ENGINE – RUNNING CHEMICAL CLEANING PROCEDURE. MAKE SURE THE EMISSION VAPORS ARE EXHAUSTED OUTSIDE THE WORK PLACE AND THE WIND IS NOT CARRYING VAPORS TOWARD ANY PEOPLE. VAPORS CONTAIN HIGH LEVELS OF NITROGEN OXIDES.**

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**RESPIRATORY PROTECTION:**

**IF VENTILATION PRECAUTIONS ARE NOT POSSIBLE, THEN USE A NIOH/MSHA APPROVED RESPIRATOR FOR THE REMOVAL OF AMMONIA, NITROGEN OXIDES, CARBON MONOXIDE, AND CARBON DIOXIDE.**

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**PROTECTIVE GLOVES:**

**WEAR THIN LATEX GLOVES. USE CARE WHEN USING.**

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**EYE PROTECTION:**

**WEAR CHEMICAL SPLASH GOGGLES.**

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**OTHER PROTECTIVE EQUIPMENT:**

**WIPE SHIN DRY WITH CLEAN SHOP TOWEL AND WASH WITH WATER BEFORE EATING OR LEAVING WORK AREA.**

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**SECTION VIII**

**SPILL AND LEAK PROCEDURES**

**PRECAUTIONS IN CASE OF A LEAK OR SPILL:**

**REMOVE SOURCE OF SPARKS OR FLAME. EVACUATE PERSONNEL. DIKE SPILL. THOROUGHLY VENTILATE AREA. USE SELF-CONTAINED BREATHING APPARATUS DURING CLEAN UP. REMOVE FREE LIQUID FOR RE-USE OR RECLAMATION.**

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**PRECAUTIONS IN CASE OF A LEAK OR SPILL:**

**REMOVE SOURCE OF SPARKS OR FLAME. EVACUATE PERSONNEL. DIKE SPILL. THOROUGHLY VENTILATE AREA. USE SELF-CONTAINED BREATHING APPARATUS DURING CLEAN UP. REMOVE FREE LIQUID FOR RE-USE OR RECLAMATION.**

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**WASTE DISPOSAL METHOD:**

**PRODUCT IS VERY WATER SOLUBLE AND NOT SUITABLE TO DISPOSE IN WASTE OIL. WHEN DELUTED WITH HIGH VOLUMES OF WATER THE PRODUCT IS NONTOXIC. HOWEVER, DISPOSE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.**

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**SECTION IX**

**STORAGE AND SPECIAL PRECAUTIONS**

**HANDLING AND STORAGE PRECAUTIONS:**

**STORE IN A VENTILATED AREA. STORE AWAY FROM SPARKS AND FLAME. DO NOT  
STORE ABOVE 120 Deg. F.**

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**OTHER PRECAUTIONS:**

**KEEP OUT OF REACH OF CHILDREN. NO SMOKING OR EATING IN HANDLING OR USE  
AREA. INHALING PARTIALLY OXIDIZED VAPORS THROUGH CIGARETTES COULD BE  
LETHAL.**

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**NOTES TO PHYSICIAN FOR SYMPTOMATIC TREATMENT:**

**PHYSICIANS TREAT SYMPTOMS OBSERVED.**

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**SECTION X**

**TRANSPORTATION INFORMATION**

**Hazard Class: ORM-D SUB CLASS III**  
**UN/NA Code:**  
**Packing Group:**  
**Bill of Lading Description:**  
**Labels Required:**  
**Placards Required:**

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**SECTION XI**

**REGULATORY INFORMATION**

**Listed below are the hazard categories for SARA Section 311/312 (40 CFR 370):**

**Immediate Hazard: -                      Delayed Hazard: -                      Fire Hazard: -**  
**Pressure Hazard: -                      Reactivity Hazard: -**

**Reporting Requirements of SARA Section 313 (40 CFR 372): The reportable quantity for this material is 5,000 pounds. Any spill or other release, or substantial treat of release, of this material to air, water, or land (unless entirely contained in the workplace) equal to or in excess of the reportable quantity must be reported immediately to the National Response Center (800- 424-8802) as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies.**

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**Alkyl Nitriles and Methylpyrrolidone are listed with the Toxic Substance Control Act (TSCA).**

**State Regulations: Neither the product or its components are listed with the States of California, Massachusetts, or Pennsylvania.**

**Canadian Environmental Protection Act: This product is not listed on the Domestic Substance List.**

**Canadian Workplace Hazardous Materials Information Systems (WHMIS):**

**The following Canadian Workplace Hazardous Information System (WHMIS) categories apply to this product:**

<b>Compressed Gas:</b>	-	<b>Flammable/Combustible:</b>		<b>Oxidizer:</b>	-
<b>Acutely Toxic:</b>	-	<b>Other Toxic Effects:</b>	-	<b>Biohazardous:</b>	-
<b>Corrosive:</b>	-	<b>Dangerously Reactive:</b>	-		

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