

SHELL CHEMICALS CANADA LIMITED -- I.P.A. 99, ISOPROPYL ALCOHOL -- 6810-00-586-6647  
===== Product Identification =====

Product ID:I.P.A. 99, ISOPROPYL ALCOHOL  
MSDS Date:09/10/1997  
FSC:6810  
NIIN:00-586-6647  
Status Code:A  
MSDS Number: CJLSN  
=== Responsible Party ===  
Company Name:SHELL CHEMICALS CANADA LIMITED  
Address:400 4TH AVE SW SECTION C  
Box:4280  
City:CALGARY, ALBERTA CANADA  
Info Phone Num  
:403-691-3111  
Emergency Phone Num:403-691-2638/800-661-7378  
Resp. Party Other MSDS Num.:721-100  
CAGE:36131  
=== Contractor Identification ===  
Company Name:HOC INDUSTRIES, INC  
Address:3511 N. OHIO  
Box:2609  
City:WICHITA  
State:KS  
ZIP:67219  
Country:US  
Phone:316-838-4663  
Contract Num:SP0450-99-M-NE14  
CAGE:0A9L8  
Company Name:HOC INDUSTRIES, INC  
Address:3511 N. OHIO  
Box:2609  
City:WICHITA  
State:KS  
ZIP:67219  
Country:US  
Phone:316-838-4663  
Contract Num:SP0450-99-M-NJ12  
CAGE:0A9L8  
Company Name:SHELL CHEMICA

LS CANADA LIMITED  
Address:400 4TH AVE SW STATION C  
Box:4280  
City:CALGARY, ALBERTA CANADA  
Phone:403-691-2638/800-567-8860  
CAGE:36131

=====  
Composition/Information on Ingredients  
=====

Ingred Name:IPA 99  
CAS:67-63-0  
RTECS #:NT8050000  
= Wt:100.  
OSHA PEL:980 MG/M3;400 PPM  
ACGIH TLV:983 MG/M3;400 PPM  
ACGIH STEL:1230 MG/M3;500 PPM

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

LD50 LC50 Mixture:ORAL LD50(RAT):>4720 MG/KG  
Routes of Entry: Inhalation:YES Sk  
in:YES Ingestion:YES  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Health Hazards Acute and Chronic:PROLONGED AND REPEATED CONTACT WITH  
SKIN CAN CAUSE DEFATTING AND DRYING OF THE SKIN RESULTING IN SKIN  
IRRITATION AND DERMATITIS. EXPOSURE TO HIGH VAPOR CONCENTRATIONS  
MAY CAUSE EYE AND RESPIRATORY TRA CT IRRITATION, HEADACHE,  
DIZZINESS, NAUSEA, INCOORDINATION, DROWSINESS AND LOSS OF  
CONSCIOUSNESS. ALTHOUGH INGESTION IS UNLIKELY, LIQUID WOULD  
IRRITATE UPPER DIGESTIVE  
TRACT IF SWALLOWED.  
Effects of Overexposure:INGESTION OF THIS PRODUCT MAY CAUSE HEADACHE,  
DIZZINESS, FATIGUE AND CENTRAL NERVOUS SYSTEM DEPRESSION.  
Medical Cond Aggravated by Exposure:MEDICAL CONDITIONS:PRE-EXISTING  
EYE, SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE  
TO THIS PRODUCT

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

First Aid:EYES-FLUSH WITH WATER FOR 15 MIN. OBTAIN MEDICAL ATTENTION AS  
SOON AS POSSIBLE AFTER FIRST AID HAS BEEN

INITIATED & COMPLETED.

INHALATION-REMOVE FROM FURTHER EXPOSURE AND RESTORE BREATHING, IF REQUIRED. OBTAIN MEDICAL ATTENTION. INGESTION-DONOT INDUCE VOMITING. DO NOT GIVE ANYTHING BY MOUTH IF UNCONSCIOUS. GUARD AGAINST ASPIRATION INTO LUNGS BY TURNING INDIVIDUAL ON THEIR LEFT SIDE. IF VOMITING OCCURS SPONTANEOUSLY KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. OBTAIN MEDICAL ATTENTION IMMEDIATELY. SKIN-START RINSING AND REMOVE CONTAMINATED CLO

THES WHILE RISING. IF IRRITATION PERSISTS OBTAIN MEDICAL ATTENTION.

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

Flash Point Method:TCC

Flash Point:=-14.C, 57.2F

Autoignition Temp:=-399.C, 750.2F

Lower Limits:2.0

Upper Limits:12.0

Extinguishing Media:DRY CHEMICAL, CARBON DIOXIDE, ALCOHOL FOAM, WATER FOG.

Fire Fighting Procedures:FLAMMABLE. DO NOT ENTER CONFINED FIRE SPACE WITHOUT ADEQUATE PROTECTIVE CLOTHING AND AN APPROVED POSITIVE PRESSURE SELF-CONTAINED

BREATHING APPARATUS. EVACUATE HAZARD AREA.

USE WATER TO COOL FIRE EXPOSED CONTAINERS. CONTAINERS MAY EXPLODE IN HEAT OF FIRE. VAPOURS MAY CONCENTRATE IN CONFINED AREAS.

Unusual Fire/Explosion Hazard:CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOUR PRESSURE BUILDUP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING

OF CONTAINER STRUCTURE.

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

Spill Release Procedures:ISSUE WARNING "FLAMMABLE". ELIMINATE ALL IGNITION SOURCES. ISOLATE HAZARD AREA AND RESTRICT ACCESS. TRY TO WORK UP WIND OF SPILL. AVOID DIRECT CONTACT WITH MATERIAL. REMOVE SATURATED CLOTHING IMMEDIATELY TO AVOID FLAMMABILITY HAZARD. WEAR APPROPRIATE BREATHING APPARATUS (IF APPLICABLE) & PROTECTIVE CLOTHING. STOP LEAK ONLY IF SAFE TO DO SO. DIKE/CONTAIN

N LAND

SPILLS; CONTAIN WATER SPILLS BY BOOMING.

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

Handling and Storage Precautions:FLAMMABLE. STORE IN A COOL, DRY, WELL VENTILATED AREA AWAY FROM HEAT AND IGNITION SOURCES. DO NOT CUT, DRILL, GRIND, WELD OR PERFORM SIMILIAR OPERATIONS ON OR NEAR CONTAINERS. VAPOURS MAY ACCUMULATE A ND TRAVEL TO DISTANT IGNITION SOURCE ANDFLASHBACK. USE EXPLOSION PROOF VENTILATION.

Other Precautions:EMPTY CONTAINERS MAY CONTA  
IN HAZARDOUS PRODUCT

RESIDUES. FIXED EQUIPMENT AS WELL AS TRANSFER CONTAINERS AND EQUIPMENT SHOULD BE GROUNDED TO PREVENT ACCUMULATION OR STATIC CHARGE. HOT SURFACES MAY BE S UFFICIENT TO IGNITE LIQUID EVEN IN THE ABSENCE OF SPARKS OR FLAMES. EXTINGUISH PILOT LIGHTS, CIGARET TES.

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

Respiratory Protection:IF EXPOSURE EXCEEDS OCCUPATIONAL EXPOSURE LIMITS, WEAR A NIOSH-APPROVED RESPIRATOR. USE EITHER AN

ATMOSPHERE-SUPPLYING RESPIRATOR OR AND AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPOURS. PROPER EQUIPMENT FOR HIGH CONCENTRATIONS INCLUDES AN ATMOSPHERE SUPPLIED, POSITIVE PRESSURE DEMAND, SELF-CONTAINED OR AIRLINE BREATHING APPARATUS.

Ventilation:MECHANICAL VENTILATION IS RECOMMENDED FOR ALL INDOOR SITUATIONS TO CONTROL FUGITIVE EMISSIONS. ELECTRICAL AND MECHANICAL SHOULD BE EXPLOSION PROOF.

Protective Gloves:IMPERVIOUS GLOVES (VITON, NITRILE) SHOULD BE WORN.

Eye Protection:CHE

MICAL SAFETY GOGGLES SHOULD BE WORN.

Other Protective Equipment:PROVIDE AN EYEWASH STATION IN THE AREA.

SAFETY SHOWER SHOULD BE AVAILABLE FOR EMERGENCY USE.IMPERVIOUS CLOTHING(APRON,COVERALLS) SHOULD BE WORN IN CONFINED WORKSPACES

Work Hygienic Practices:WASH THOROUGHLY AFTER HANDLING.

Supplemental Safety and Health

=====  
===== Physical/Chemical Properties =====

HCC:F2

Boiling Pt:>82.C, 179.6F

B.P. Text:82-83

Melt/Freeze Pt:>-86.C, -122.8F

M.P/F.P Text:-86 THRU -8

9R  
Vapor Pres:>33.0 @ 20C  
Vapor Density:2.1  
Spec Gravity:0.79  
Evaporation Rate & Reference:1.44(NBUAC=1)  
Solubility in Water:COMPLETE  
Appearance and Odor:MOBILE LIQUID, COLOURLESS CLEAR ALCOHOL ODOUR.

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

Stability Indicator/Materials to Avoid:YES  
AVOID CONTACT WITH STRONG OXIDIZING AGENTS AND ACIDS. ALUMINUM AT HIGH TEMPERATURES.  
Stability Condition to Avoid:AVOID EXCESSIVE HEAT, IPEN FLAMES AND ALL IGNITION SOURCES.  
SESITIVITY TO STATIC DISCHARGE.  
Hazardous Decomposition Products:VAPOUR FORMS A FLAMMABLE/EXPLOSIVE MIXTURE WITH AIR BETWEEN UPPER AND LOWER FLAMMABLE LIMITS. CARBON MONOXIDE AND CARBON DIOXIDE ARE PRODUCED ON COMBUSTION.

===== Toxicological Information =====

Toxicological Information::ISOPROPANOL TESTED NEGATIVE IN TWO MUTAGENICITY ASSAYS; THE MOUSE MICRONUCLEUS AND CHINESE HAMSTER OVARY ASSAYS. ISOPROPANOL, WHEN ADMINISTERED ORALLY TO RATS AND RABBITS, PRODUCES REDUCED FETAL BODY WEIGHTS IN RATS ONLY AT DOSES WHICH RESULTS IN TREATMENT RELATED MATERNAL DEATH.

===== Ecological Information =====

Ecological:ECOLOGICAL:DO NOT ALLOW PRODUCT OR RUNOFF FROM FIRE CONTROL TO ENTER STORM OR SANITARY SEWERS, LAKES, RIVERS, STREAMS, OR PUBLIC WATERWAYS. MAY BE HARMFUL TO AQUATIC LIFE. AQUATIC TOXICITY RATING (TLM 96)=10 TO 100 PPM. NO FOOD CHAIN CONCENTRATION POTENTIAL.

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

Waste Disposal Methods:WASTE MANAGEMENT PRIORITIES ARE: 1.RECYCLING, 2. ENERGY RECOVERY, 3. INCINERATION, 4. DISPOSAL AT A LICENSED WASTE DISPOSAL FACILITY. DO NOT ATTEMPT TO COMBUST WASTE ON-SITE. INCINERATION AT A LICENSE D WASTE DISPOSAL SITE WITH APPROVAL OF ENVIRONMENTAL AUTHORITY.

===== MSDS Transport Information =====

Transport Information:ISOPROPANOL, CLASS 3, FLAMMABLE LIQUID, PG II, UN

===== Other Information =====

Disclaimer (provided with this information by the compiling agencies):  
This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.