

MINNESOTA MINING & MFG CO INDUSTRIAL CHEM PRODUCTS -- FC-77 FLUORINERT BRAND
ELECTRONIC LIQUID -- 6850-00-905-9098

===== Product Identification =====

Product ID:FC-77 FLUORINERT BRAND ELECTRONIC LIQUID

MSDS Date:08/21/1997

FSC:6850

NIIN:00-905-9098

MSDS Number: BXFRD

=== Responsible Party ===

Company Name:MINNESOTA MINING & MFG CO INDUSTRIAL CHEM PRODUCTS

Address:3M CTR

City:SAINT PAUL

State:MN

Z

IP:55144

Country:US

Info Phone Num:800-364-3577/612-737-6501

Emergency Phone Num:800-364-3577/612-737-6501

CAGE:28112

=== Contractor Identification ===

Company Name:BALKAMP INC

Address:2601 S HOLT ROAD

Box:City:INDIANAPOLIS

State:IN

ZIP:46241

Country:US

Phone:317-244-7241

CAGE:70842

Company Name:MINNESOTA MINING AND MFG CO PERFORMANCE CHEM AND FLUIDS DIV

Address:3M CTR

Box:City:SAINT PAUL

State:MN

ZIP:55144-1000

Country:US

Phone:800-364-3577/651-737-6501

CAGE:28112

Company Name:NAPA, A DIVISION O

F LINCOLN AUTOMOTIVE
Address:ONE LINCOLN WAY
Box:City:ST. LOUIS
State:MO
ZIP:63120-1578
Country:US
Phone:414-255-5520
CAGE:050Q3

=====
Composition/Information on Ingredients
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Ingred Name:PERFLUORO COMPOUNDS, (PRIMARYLY COMPOUNDS W/ 8 CARBONS)
CAS:86508-42-1
Fraction by Wt: 100.0%
Other REC Limits:NONE RECOMMENDED

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Hazards Identification
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LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:Y
ES Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:SKIN/EYE:CONTACT DURING PROD USE NOT
EXPECTED TO RESULT IN SIGNIF IRRIT.INHAL:HEALTH EFFECTS FRM INHAL
NOT EXPECTED UNLESS PROD OVER HEATED & DECOMPO OCCURS.INGEST:NOT
LIKELY ROUTE OF EXPO TO THIS PRO DUCT.PROD EXPO TO EXTREME
CONDITION OF HEAT FRM MISUSE/EQPMT FAIURE TOXIC DECOMPO PRODUCE
INCLUDE HYDROGEN (SIGN/SYMPT)
Explanation of Carcinogenicity:NO INGREDIENTS OF A CONCE
NTRATION OF
0.1% OR GREATER IS LISTED AS A CARCINOGEN OR SUSPECTED CARCINOGEN.
Effects of Overexposure:HEALTH:FLUORIDE & PERFLUOROISOBUTYLENE CAN
OCCUR. NONE SPECIFIED BY MANUFACTURER.
Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

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First Aid Measures
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First Aid:EYE:IMMED FLUSH W/LOTS OF H2O.GET IMMED MED ATTN.SKIN:WASH
AFFECT AREA W/SOAP/H2O.INHAL:SIGN/SYMPT OCCUR REMOVE TO FRESH
AIR.SIGNS/SYMPT CONT CALL DR.

INGEST:NO NEED FOR 1ST AID

ANTICIPATED. PROD NOT EXPECTED TO IRRIT EYE/SKIN/RESP SYS @ RM TEMP CONDITIONS. THIS ASSESSMENT DOESN'T ACCOUNT FOR CONTAM FROM PROD USE. SUGGEST 1ST AID MEASURES BASIC 1ST AID MEASURES FOR REMOVAL OF FOREIGN MATL FROM SKIN &/OR EYE.

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

Flash Point Method: SCC

Flash Point: NONE

Autoignition Temp: Autoignition Temp Text: NONFLA

Lower Limits: NONFLAMM

Upper Limits: NONFLAMM

Extinguishing Media: NON-FLAMM
ABLE.

Fire Fighting Procedures: WHEN FIRE FIGHT CONDITIONS SEVERE/TOT THERM
DECOMPO OF PROD POSSIBLE WEAR FULL PROT CLOTH INCLUDE
HELMET, SELF-CONTAIN +PRESSURE/PRESSURE DEMAND BREATH (SUPPLME)

Unusual Fire/Explosion Hazard: EXPOSURE TO EXTREME HEAT CAN GIVE RISE TO
THERMAL DECOMPOSITION.

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

Spill Release Procedures: OBSERVE PRECAUT IN MSDS. IAW GOOD INDUST PRACT
PROVIDE EXHURTI FOR LG SPILL/CONF SPACES. COLLECT SPIL
LED MATL

W/ABSORBENT. PLACE IN APPROVED CONTAINER.

Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions: STORE UNDER NORMAL WAREHOUSE
CONDITIONS. NO SMOKING: SMOKING WHILE USING PROD CAN RESULT IN CONTAM
OF TOBACCO/SMOKE/LEAD TO FORMATION OF HAZ DECOMPO PRO

Other Precautions: SUBSTANCE RESISTANT TO BIODEGRADATION/LIKELY TO
PERSIST IN ENVIRO. CMPD COMPLETELY

FLUORINATED (PERFLUORINATE

D)/CONTAINS PERFLUORINATED

PORTIONS. PERFLUOROALKYL GROUPS RESIST DEGRADATION IN MOST NAT ENVI
RO.

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

Respiratory Protection: AVOID PROL BREATH OF VAP. IF THERM DECOMPO OCCURS
AVOID BREATH THERM DECOMPO PRODS. SELECT NIOSH APPROV RESP BASED ON
AIRBORNE CONC OF CONTAM & IAW OSHA REGS: HALF-MASK SUPPL AIR
RESP, FULL FACE SUPPLIED AIR RESPIRATOR.

Ventilation: WHEN FLUID EXPO TO EXTREME OVERHEAT (MISUSE/EQPMT
FAILURE

)USE W/APPROP LOC EXHAU VENTI SUFFI TO MAINTAIN BEL EXPO
GUIDELN

Protective Gloves:GLOVES NOT REQUIRED

Eye Protection:WEAR SAF GLASSES W/SIDE SHIELD

Other Protective Equipment:NONE SPECIFIED BY MANUFACTURER.

Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.

Supplemental Safety and Health

FIREFIGHT:APPARATUS,BUNKER COAT,PANTS,BAND AROUND

ARMS/WAIST/LEGS,FACEMASK,PROT COVER FOR EXPO AREAS OF HEAD.NO
UNUSUAL EFFECTS ANTICIPATED DURING FIRE EXTING OPERATIONS.AVOID
BREATHPROD/SU

BST THAT MA Y RESULT FRM THERM DECOMPO OF PROD/OTHER

SUBST IN FIRE ZONE.KEEP CNTNR COOL W/H2OSPRAY WHEN EXPO TO
FIRE-AVOID RUPTURE.

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

HCC:N1

Boiling Pt:B.P. Text:194F,90C

Melt/Freeze Pt:M.P/F.P Text:NA

Decomp Temp:Decomp Text:NP

Vapor Pres:42

Vapor Density:14

Spec Gravity:1.8

pH:NA

Viscosity:0.8CT @20C

Evaporation Rate & Reference:>1.0, BUTYL ACETATE=1

Solubility in Water:NIL

Appearance and Odor:COLORLESS, ODORLESS

LIQUID

Percent Volatiles by Volume:100

Corrosion Rate:NP

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

Stability Indicator/Materials to Avoid:YES

FINELY DIVIDED ACTIVE METALS, ALKALI AND ALKALINE EARTH METALS.

Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.

Hazardous Decomposition Products:TOXIC DECOMPOSITION PRODUCTS THAT
INCLUDE HYDROGEN FLUORIDE & PERFLUOROISOBUTYLENE CAN OCCUR.

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

Wast

e Disposal Methods:AS DISPO ALTERNATIVE INCINERATE IN PRESENCE OF
COMBUST MATL IN INDUSTRIAL OR COMMERCIAL FACILITY CAPABLE OF HNDLG
HALOGENATED WASTE.RECLAIM IF FEASIBLE.FOR INFO ON PRODUCT RETURN
CONTACT YOUR DISTRIBU TOR.REGS VARY CONSULT APPLIC REGS/AUTHOR BEF
DISPO

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