

MINNESOTA MINING & MFG CO INDUSTRIAL CHEM PRODUCTS -- FC-77 FLUORINERT BRAND
ELECTRONIC LIQUID -- 6850-01-334-2633

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

Product ID:FC-77 FLUORINERT BRAND ELECTRONIC LIQUID

MSDS Date:04/08/1997

FSC:6850

NIIN:01-334-2633

MSDS Number: CFKJW

=== 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:612-733-1000/612-733-1110

Emergency Phone Num:612-733-5454

CAGE:28112

=== Contractor Identification ===

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

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

Ingred Name:PERFLUORO COMPOUNDS, PRIMARILY COMPOUNDS WITH 8 CARBONS.

CAS:86508-42-1

Fraction by Wt: 100.0

%

Other REC Limits:NONE RECOMMENDED

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

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.

Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:HEALTH EFFECTS AND/OR IRRITATION

THROUGH ANY ROUTE OF EXPOSURE ARE NOT EXPECTED DURING PRODUCT USE.

Explanation of Carcinogenicity:NO INGREDIENT OF A CONCENTRATION OF 0.1%

OR GREATER IS LISTED

AS A CARCINOGEN OR SUSPECTED CARCINOGEN.

Effects of Overexposure: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:EYES-FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION.
SKIN-WASH WITH MILD SOAP & WATER. INHALED-REMOVE TO FRESH AIR. CALL
A PHYSICIAN IF SYMPTOMS PERSIST. INGESTED-NO NEED FOR FIRST AID IS
ANTI CIAPTED.

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Fire Fig
hting Measures
=====

Flash Point Method:SCC

Flash Point:NONE

Lower Limits:NONE

Upper Limits:NONE

Extinguishing Media:NON-FLAMMABLE. DLA-HMIS SATFF:USE MEDIA APPROPRIATE
FOR SURROUNDING FIRE.

Fire Fighting Procedures:WEAR SELF-CONTAINED BREATHING APPARATUS AND
FULL FIRE FIGHTER'S PROTECTIVE GEAR. USE WATER TO COOL FIRE EXPOSED
CONTAINERS.

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

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Accidental
Release Measures
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Spill Release Procedures:OBSERVE PRECAUTIONS FROM THE OTHER SECTIONS.
IN ACCORDANCE WITH GOOD INDUSTRIAL PRACTICE, PROVIDE EXHAUST
VENTILATION FOR LARGE SPILLS OR IN CONFINED SPACES. COLLECT SPILLED
MATERIAL WITH ABSORBENT. P LACE IN AN APPROVED CONTAINER.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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Handling and Storage
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Handling and Storage Precautions:STORE UNDER NORMAL WAREHOUSE
CONDIT

IONS. AVOID BREATHING OF VAPOR.

Other Precautions:IF THE PRODUCT IS EXPOSED TO EXTREME CONDITION OF
HEAT FROM MISUSE OR EQUIPMENT FAILURE, TOXIC DECOMPOSITION PRODUCTS
THAT INCLUDE HYDROGEN FLUORIDE & PERFLUOROISOBUTYLENE CAN OCCUR.

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Exposure Controls/Personal Protection
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Respiratory Protection:IF ENGINEERING CONTROLS FAIL OR NON-ROUTINE USE
OR AN EMERGENCY OCCURS; WEAR AN MSHA/NIOSH APPROVED RESPIRATOR WITH
ORGANIC VAPOR CARTRIDGE OR AN AIR-SUPPLIED

RESPIRATOR OR SCBA, AS
REQUIRED. USE IAW 29 CFR 1910.134.

Ventilation:WHERE PRODUCT IS SUBJECT TO OVERHEATING, USE LOCAL EXHAUST
TO MAINTAIN EXPOSURE BELOW TLV(S).

Protective Gloves:NONE NORMALLY REQUIRED.

Eye Protection:SAFETY GLASSES FOR SIDE SHIELDS.

Other Protective Equipment:NONE SPECIFIED BY MANUFACTURER.

Work Hygienic Practices:USE GOOD INDUSTRIAL HYGIENE PRACTICES.

Supplemental Safety and Health

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

HCC:N1

Boili

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

Vapor Pres:42 @ 20C

Vapor Density:14

Spec Gravity:1.8

Viscosity:0.8CS @20C

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

Solubility in Water:NIL

Appearance and Odor:COLORLESS, ODORLESS LIQUID.

Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES

FINELY DIVIDED ACTIVE METALS, ALKALI & ALKALINE EARTH METALS.

Stability Condition to Avoid:HIGHLY STABLE UNLESS SEVERELY OVERHEA
TED.

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

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

Waste Disposal Methods:AS A DISPOSAL ALTERNATIVE, INCINERATE IN THE
PRESENCE OF A COMBUSTIBLE MATERIAL IN AN INDUSTRIAL OR COMMERCIAL
FACILITY CAPABLE OF HANDLING HALOGENATED WASTE. RECLAIM IF
FEASIBLE. FOR INFORMATION ON P RODUCT RETURN, CONTACT YOUR
DISTRIBUTOR.

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