

MAGNAFLUX CORPORATION MATERIAL SAFETY DATA SHEET

PRODUCT: SKD-NF/ZP-9B Developer

HMSA

H HEALTH	2
F FLAMMABILITY	0
R REACTIVITY	1
PERSONAL PROTECTION MSDS © 1981 NPGA	B

NEED GOOD VENTILATION

IDENTIFICATION

ADDRESS: 7300 W. Lawrence Avenue, Chicago, Illinois 60656
TELEPHONE: (312)867-8000
CHEMICAL FAMILY: Chlorinated Alkane
PACKAGES: 1 gallon can, 5 gallon pail, 55 gallon drum, 12 oz. aerosol
HMS Rating: Health 2, flammability 0, reactivity 1

HAZARDOUS INGREDIENTS

1,1,1-Trichloroethane (Methyl chloroform), CAS #71-55-6, TLV: 350 ppm, Conc. 90% in bulk, 70% aerosol
Chlorodifluoromethane, CAS# 75-45-6, TLV: 1000 ppm (Aerosol only), Conc. about 25%
Dioxane, CAS #123-91-1, TLV: 25 ppm, Conc. about 1%

Contains no other ingredient suspected of being hazardous according to information sources given in 29 CFR 1910-1200, OSHA Hazard Communication Rule.

HEALTH HAZARD

THRESHOLD LIMIT VALUE: 350 ppm

ROUTES OF ENTRY, EFFECTS OF OVEREXPOSURE

Inhalation: Dizziness, drowsiness, nausea. Unconsciousness at high exposure
Skin Contact: Irritates by dissolving skin oils. Not absorbed through skin in significant amounts.
Eye Contact: Irritating due to strong solvent action
Ingestion: Low single dose toxicity in test animals

CARCINOGENICITY: The first listed ingredient is currently under test to determine if it is a possible carcinogen.

MEDICAL CONDITIONS KNOWN TO BE AGGRAVATED BY EXPOSURE TO PRODUCT: None

FIRST AID

INHALATION: Remove to fresh air. If not breathing, call emergency vehicle immediately. Give mouth-to-mouth resuscitation. If breathing is difficult, give oxygen.
SKIN CONTACT: Wash off in flowing water or shower. Remove contaminated clothes and wash before re-use. Use soothing lotion.
EYE CONTACT: Lift upper eyelid, depress lower eyelid, and flush eye with a steady, gentle flow of water. Roll eyeball in all directions while flushing.
INGESTION: Do not induce vomiting; if vomit is inhaled, it may cause asphyxiation. Contact physician immediately.

IMPORTANT:

POISON CONTROL CENTER NUMBER

In all severe cases, contact physician immediately. Local telephone operators are able to furnish number of regional poison control center to assist physician.

FIRE HAZARD

PRIMARY HAZARD: Can be a major contributing factor to a fire in progress.

SPECIAL FIRE FIGHTING PROCEDURE: Keep containers cool with water spray.

FLASH POINT: None

FLAMMABLE LIMITS IN AIR: 10 - 15%, using intense ignition sources.

EXTINGUISHING MEDIA: None

UNUSUAL FIRE HAZARDS: Aerosol cans may burst at temperatures over 130° F. Vapors partially decompose to toxic gases when exposed to flame, arcs, or red hot surfaces.

REACTIVITY HAZARDS

STABILITY: Partially decomposes in flame, arcs, near red hot surfaces.

INCOMPATIBILITY: Powdered zinc and aluminum

HAZARDOUS DECOMPOSITION PRODUCTS: Phosgene, hydrochloric acid. Phosgene CAS #75-44-5 is extremely toxic, TLV 0.1 ppm and cannot be reliably detected by odor. Hydrochloric acid CAS #7647-01-0 is also toxic, TLV 5 ppm, and is detectable and even irritating at this concentration.

SAFE HANDLING PROCEDURES

GENERAL: Do not breathe vapors. Exposures above the TLV can result in clumsiness and poor judgment, with resulting danger to the victim and those around him. Much like ingesting too much alcohol. If victim is unconscious, death is possible, due to either suffocation (lack of oxygen), or cardiac arrest. For avoidance see next two sections.

Avoid frequent or prolonged exposure to skin as the solvent can irritate skin. Do not use around flame, arcs, red hot surfaces or lighted smoking materials, so as to avoid exposure to phosgene and hydrochloric acid.

Do not heat aerosol cans above 130° F to eliminate the possibility of their bursting and releasing unwanted vapors.

Store away from heat sources to minimize the danger from exposure to fires.

PERSONAL PROTECTIVE EQUIPMENT.

In poorly ventilated areas such as small rooms with no windows, or in sumps or other low areas (SKD-NF vapors are dense and sink to low spots) the user should wear a respirator with chemical cartridge.

In confined, unventilated spaces, such as the inside of tanks or small compartments, the inspector should wear a full mask with separate air supply.

If hand exposure to SKD-NF is unavoidable, wear nitrile rubber gloves, to avoid skin contact.

Wear full goggles if the application of SKD-NF includes splashing or the possibility of spraying into the eyes. Be sure the goggles are clean and not apt to degrade the inspection procedure.

CONTROLS: SKD-NF vapors cannot be allowed to collect. It is preferred to use SKD-NF either in a spray booth or next to an exhaust vent. Remember that the vapors tend to settle to the floor.

General ventilation must be sufficient to keep the concentration below 350 ppm. Almost all of the SKD-NF that is used will evaporate into the surrounding air. Base ventilation rate on consumption.

DISPOSAL

SPILLS AND LEAKS: Less than 1 quart - wipe up, following guidelines above in "Safe Handling Procedure"

One quart or more - **EVACUATE AREA.** Insure that clean up crew wears all personal safety wear as presented in "Safe Handling Procedure." The nose is NOT a reliable gauge of air contamination.

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WASTE DISPOSAL:

Dispose of as EPA hazardous waste #F002.

May be sent to solvent reclaimer. Insure that aerosol cans are empty and depressurized before discarding, unless a waste treatment facility is approved to accept them as is.

PHYSICAL PROPERTIES

BOILING POINT:	162° F	VAPOR PRESSURE:	230 mm at 100° F
PERCENT VOLATILE:	100%	VAPOR DENSITY:	4
DENSITY:	1.3	EVAPORATION RATE:	3 times faster than ethyl alcohol
WATER SOLUBILITY:	Negligible	APPEARANCE:	Clear, colorless, mobile liquid
pH:	Neutral		
WARNING PROPERTIES:	Odor can be detected at 100 ppm, but is not strong enough to cause discomfort at 1000 ppm.		

DOT SHIPPING

SHIPPING NAME:	For Bulk - Methyl Chloroform For Aerosol - Compressed Gas, N.O.S.
MARKING:	For Bulk - None For Aerosol - Nonflammable Gas
HAZARD CLASS:	For Bulk - ORM-A For Aerosol - Nonflammable Gas
IDENTIFICATION:	For Bulk - UN2831 For Aerosol - UN1956

CERTIFIED

DATE: September 15, 1986

Supercedes MSDS dated May 1, 1986

SIGNED: _____

Bruce C. Graham
Bruce C. Graham, Chief Chemist
MAGNAFLUX Corporation