

MATERIAL SAFETY DATA SHEET - NOKORODE® REGULAR PASTE FLUX

MSDS0495
Ver. No.1
Ver. Date June 22, 2000

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Nokorode® Regular Paste Flux
PRODUCT CODES: 14000, 14010, 14020, 14030
CHEMICAL FAMILY: Organic/Inorganic
USE: Soft Soldering Flux
MANUFACTURER / SUPPLIER
RectorSeal
2601 Spenwick
Houston, Texas 77055 USA

EMERGENCY TELEPHONE NUMBERS:
Chemtrec 24 hours: (800) 424-9300
RectorSeal: (713) 263-8001

NON EMERGENCY TELEPHONE NUMBERS:
Technical Service: (800) 231-3345

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

<u>HAZARDOUS COMPONENTS</u>	<u>CAS NO.</u>	<u>APPROX %</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OTHER LIMITS</u>	<u>HMIS</u>	<u>NFPA</u>
Zinc Chloride	7646-85-7	10-25	1 mg/m ³	1 mg/m ³	2 mg/m ³ STEL	N/D	N/D
Ammonium Chloride	12125-02-9	10-25	10 mg/m ³	10 mg/m ³	20 mg/m ³ STEL	H1,F0,R0	H1,F0,R0
Pertrolatum	8009-03-8	-	N/D	N/D	N/D	N/D	N/D

SECTION 3 HAZARDS IDENTIFICATION

SUMMARY OF ACUTE HAZARDS Irritation to respiratory system from fumes evolved during soldering.
Eye contact may cause intense irritation and injury.

<u>ROUTE OF EXPOSURE</u>	<u>SIGNS AND SYMPTOMS</u>	<u>PRIMARY ROUTE(S)</u>
INHALATION:	Irritation to respiratory system from fumes evolved during soldering.	Yes
EYE CONTACT:	Contact may cause intense irritation and injury.	Yes
SKIN CONTACT:	May cause skin irritation.	Yes
INGESTION:	Chemical burns to digestive system and mucosal surface. May be fatal.	No

SUMMARY OF CHRONIC HAZARDS: Short term effects to liver and kidneys can occur. Chemical irritation from continued skin contact can occur. Continuous industrial use in small unventilated areas may result in sufficient inhalation of solder and flux fumes to cause lung damage and irritation of respiratory tract.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver, or kidneys may have increased susceptibility to excessive exposure.

SECTION 4 FIRST AID MEASURES

INHALATION: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

EYE CONTACT: Immediately flush with large amounts of water for at least 15 minutes. Get prompt medical attention.

SKIN CONTACT: Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing.

INGESTION: If swallowed, DO NOT induce vomiting. Give victim a glass of water. Call a physician immediately. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

FLASH POINT: >399°F (204°C) **FLAMMABILITY LIMITS:** LEL: N/A UEL: N/A

EXTINGUISHING MEDIA: Foam, dry chemical, carbon dioxide or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained full face piece breathing apparatus and other protective clothing. Hazardous decomposition products possible (see Section 10). May release ZnO and HCl fumes.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Heat may build up pressure and rupture closed containers.

SECTION 6 ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wipe up spills to prevent footing hazard. Avoid flushing into sewers, drains, waterways and soil. Wear protective clothing during clean up.

SECTION 7 STORAGE AND HANDLING

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. Store flux at ambient conditions, keep under extremely dry and controlled conditions. Wash thoroughly after handling to remove all residue.

OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues and vapors; treat as if full and observe all products precautions. Do not breathe soldering fumes. Do not reuse empty containers. **KEEP OUT OF REACH OF CHILDREN.**

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SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined, poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air respirators during soldering operations until fumes have dissipated.

VENTILATION – LOCAL EXHAUST: Maintain air flow away from user to exhaust soldering fumes and vapors.

MECHANICAL (GENERAL): Acceptable

SPECIAL: N/A

PROTECTIVE GLOVES: Wear non-permeable gloves.

OTHER: N/A

EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent).

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Full protective equipment normally used in soldering operation so as to prevent any contact. Review operations to avoid contact with the hazardous gas, liquids or solids.

WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A

SPECIFIC GRAVITY (H₂O = 1): 1.06

VAPOR PRESSURE (mm Hg): < 0.01 @ 68°F (20°C)

MELTING POINT: 120-150°F (52-66°C)

VAPOR DENSITY (AIR = 1): >1

EVAPORATION RATE (ETHYL ACETATE = 1): N/A

SOLUBILITY IN WATER: Insoluble

APPEARANCE/ODOR: Tan/Gold to Black Paste, Slight Petroleum Odor

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: N/D

INCOMPATIBILITY (MATERIALS TO AVOID): Strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Toxic fumes of zinc, chlorine, and HCL may be evolved during soldering.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 TOXICOLOGY INFORMATION

CARCINOGENICITY: NTP: No

IARC MONOGRAPHS: No

OSHA REGULATED: No

SUBSTANCE

CAS NO.

LD50

LC50

Zinc Chloride

7646-85-7

Oral-Rat LD50:350 mg/kg

Inhalation-Rat LCLo:1960 mg/m3/10M

Ammonium Chloride

12125-02-9

Oral-Rat LD50:1650 mg/kg

N/D

Petrolatum

8009-03-8

N/D

N/D

SECTION 12 ECOLOGICAL INFORMATION

SUBSTANCE

FOOD CHAIN CON POTENTIAL

WATERFOWL TOXICITY

BOD

AQUATIC TOXICITY

Zinc Chloride

None

N/A

None

7.2 ppm/96 hr/medium bluegill/TLm

Ammonium Chloride

N/A

N/A

N/A

6 ppm/96 hr/sunfish TLm

Petrolatum

N/D

N/D

N/D

N/D

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of material in accordance with all local, state and federal regulations.

SECTION 14 TRANSPORTATION INFORMATION

DOT: Non-Regulated

OCEAN (IMDG): Non-Regulated

AIR (IATA): Non-Regulated

WHMIS (CANADA): Non-Regulated

SECTION 15 REGULATORY INFORMATION

SUBSTANCE

SARA 313

TSCA INVENTORY

CERCLA RQ

RCRA CODE

Zinc Chloride

Yes

Yes

1,000 lb.

N/A

Ammonium Chloride

No

Yes

N/A

N/A

Petrolatum

No

Yes

N/A

N/A

SECTION 16 OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazardous Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, express or implied is made. Consult RectorSeal for further information: (713) 263-8001.