5-N-1

**Penetrant, Lubricant, De-Moisturant, Cleaner, and Protectant**

5-N-1 is an all purpose penetrant, lubricant, de-moisturant, protectant, and cleaner that is non-flammable and non-conductive. 5-N-1 penetrates through rust and corrosion to loosen frozen nuts and bolts. It contains a highly active blend of solvents and lubricants that are designed to penetrate, protect and preserve. 5-N-1 places a light lubricating and corrosion resistant film on all moving parts and bearing surfaces. 5-N-1 displaces moisture in wet electrical systems and its detergent action cleans out dirt, scale, corrosion and gummy deposits. Effectively lubricates under wet conditions. 5-N-1 is safe on most surfaces and is non-flammable.

### FOR USE BY:
- Auto Mechanics
- Construction
- Food and Bottling
- Heavy Equipment
- Industrial Plants
- Marine Repair
- Oil Fields
- Railroads
- Refineries
- Serviceman
- Shipping
- Trucking
- Utilities

### FOR USE ON:
- Clamps
- Engine Parts
- Fasteners
- Frozen Nuts and Bolts
- Gears
- Generators
- Hinges
- Linkages
- Lug Nuts
- Mold
- Relays
- Screws
- Starters
- Threaded Parts
- Tools

### FEATURE-BENEFIT:
- Di-Electric Strength
- No Chlorinated Solvents
- Non-Flammable
- Safe Around Plastic/Paint

### DIRECTIONS:

**TO REMOVE CORROSION:** Spray liberally directly on to dirt and scale. Allow to penetrate. Remove loosened scale, then reapply to leave an anti-corrosive coating. TO DIS

**PLACE MOISTURE:** Spray electrical equipment until thoroughly saturated. Allow to penetrate before attempting to restart, then re-apply to protect surface. TO LOOSEN

**FROZEN NUTS AND BOLTS:** Apply liberally to frozen nuts and bolts, hinges and sliding rotating parts. Allow to penetrate into threads. Work parts back and forth, then re-apply to leave a never-dry, protective lubricating film.

### TECHNICAL DATA:
- Appearance and Odor: Brownish Liquid, Solvent Odor
- Flash Point of Concentrate: 200° F.T.O.C.
- Flammability: Non-Flammable Spray
- Specific Gravity: 0.833
- Propellant: Carbon Dioxide
- Spray Pattern: Circular Spray
- NFPA Fire : Level 3 Aerosol
MATERIAL SAFETY DATA SHEET

Company: Purity Chemicals
114 Southfield Pkwy, Suite 120
Forest Park, Ga. 30297
General Phone (404) 761-8411
Emergency Contact – Infotrac 800-535-5053

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: 5-N-1
CHEMICAL FAMILY: MIXED SOLVENTS
LATEST REVISION DATE: Jan, 2003

SECTION II – HAZARDOUS INGREDIENTS & OTHER COMPONENTS

INGREDIENTS | % Weight | EXPOSURE LIMITS | CAS NO.
--- | --- | --- | ---
Trichloroethylene | 60-85 | 20 | 79-1-6
Mineral seal oil | 5-10 | 200 | 64742-30-9
Butyl Cellosolve (EB) | 2-5 | 20 | 111-76-2
Ethylhexanol | 1-5 | unk | 104-76-7
Mineral seal oil | 5-10 | 200 | 64742-30-9

SECTION III - PHYSICAL DATA

APPEARANCE / ODOR: clear liquid with petroleum odor
BOILING POINT: Conc. only: approx 180 – 225 F SPECIFIC GRAVITY (Water=1): Conc. only: approx 1.2
VAPOR PRESSURE: @ 70 F – 90-110 psig
VAPOR DENSITY (Air=1): > 1 PERCENT VOLATILE by weight: < 70 %
SOLUBILITY IN WATER: Insoluble EVAPORATION RATE (Ethyl Ether=1): < 1

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: Non-Flammable aerosol per ASTM D-3065-77 Flame Extension Test
FLAMMABLE LIMITS: LEL: Not Established UEL: Not Established
FLASH POINT: Concentrate only: none Propellant only: none

SECTION V – HEALTH HAZARD DATA

PRIMARY ROUTE(s) OF ENTRY: INHALATION: YES DERMAL: YES INGESTION: YES

EFFECTS OF OVEREXPOSURE:

SKIN: Redness, irritation and defatting of skin.
EYES: Redness, irritation and tearing.
INHALATION: Respiratory irritation, dizziness, weakness.
INGESTION: Gastrointestinal irritation, nausea, vomiting, diarrhea.

CARCINOGENICITY:

NTP: yes IARC: yes OSHA: yes

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Pre-existing eye, skin and respiratory disorders.

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: Thoroughly with soap and water. Consult Physician if irritation persists.
EYES: Flush immediately with water for 15 minutes. Consult Physician if irritation persists.
INHALATION: Move to fresh air. Get medical attention if irritation persists.
INGESTION: Get immediate medical attention. Do not induce vomiting.

SECTION VI - REACTIVITY DATA

STABILITY: Stable CONDITIONS TO AVOID: Temperatures above 120°F
HAZARDOUS DECOMPOSITION BY-PRODUCTS: Carbon Monoxide, Carbon Dioxide
INCOMPATIBILITY: Strong oxidizers
HAZARDOUS POLYMERIZATION: Will not occur

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Large spills are unlikely due to aerosol packaging. Ventilate area. Soak up with absorbent material and dispose of accordingly.
WASTE DISPOSAL METHOD: When disposing of spent containers, do not puncture or incinerate. Dispose of in accordance with local, state, and federal regulations.

SECTION VIII – SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Use NIOSH approved self-contained breathing apparatus if TLV is exceeded.
VENTILATION: Sufficient local or mechanical ventilation to maintain vapor concentrations below TLV.
PROTECTIVE GLOVES: Solvent resistant.
EYE PROTECTION: Safety glasses with chemical splash-proof side shields, chemical goggles and/or face shield.
OTHER PROTECTIVE CLOTHING AND EQUIPMENT: Sufficient to prevent skin contact.

SECTION IX – SPECIAL PRECAUTIONS

Keep out of reach of children. Avoid contact with skin, eyes or clothing. Avoid prolonged or repeated exposure to vapors. Do not store at temperature exceeding 120°F. Do not use or store around sources of heat, sparks or open flames. Do not puncture or incinerate.

SECTION X – SUPPLEMENTARY INFORMATION

SARA TITLE III: RATING SCALE: 0 = Minimal; 1 = Slight; 2 = Moderate; 3= Serious; 4= Severe
HMIS CLASSIFICATION: HEALTH: 3 FLAMMABILITY: 1 REACTIVITY: 0
NFPA CLASSIFICATION: HEALTH: 3 REACTIVITY: 0 FIRE : 1
TRANSPORTATION INFORMATION: DOT: CONSUMER COMMODITY ORM-D INTERNATIONAL: UN 5050, AEROSOL, NON-FLAMMABLE N.O.S. HAZARD CLASS 2.1

Periodically, user should request new MSDS to assure it matches current formulation. The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use or misuse are beyond our control, no warranty is made either express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. User should satisfy himself that he has all current data relevant to his particular use.