

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:	FOR USE ON:	FEATURE-BENEFIT:
Auto Mechanics	Clamps	Di-Electric Strength
Construction	Engine Parts	No Chlorinated Solvents
Food and Bottling	Fasteners	Non-Flammable
Heavy Equipment	Frozen Nuts and Bolts	Safe Around Plastic/Paint
Industrial Plants	Gears	
Marine Repair	Generators	
Oil Fields	Hinges	
Railroads	Linkages	
Refineries	Lug Nuts	
Serviceman	Molds	
Shipping	Relays	
Trucking	Screws	
Utilities	Starters	
	Threaded Parts	
	Tools	

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



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CONTACT INFORMATION

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MATERIAL SAFETY DATA SHEET



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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.
		OSHA PEL	ACGIH TLV	
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	

THIS PRODUCT MAY CONTAIN ONE OR MORE MATERIALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACTS OF 1968 AND OF 40 CFR 372. SEE SECTION X FOR SPECIFIC MATERIALS.

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
SPECIAL FIRE FIGHTING PROCEDURES : Keep aerosol containers cooled with water fog to prevent bursting.
EXTINGUISHING MEDIA : Foam, CO₂, Dry Chemical
UNUSUAL FIRE AND EXPLOSION HAZARDS : Contents under pressure. Exposure of aerosol cans to temp above 120°F may cause bursting.

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 1950, 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.