Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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Penetrating Oil
8472 Technical Data Sheet

8472-Liquid

Description

The 8472 *Penetrating Oil* has excellent lubricating and penetrating characteristics. It provides corrosion resistance as strong as any penetrant on the market. It has low-VOC's, so it does not dry quickly. As well, unlike some penetrants, it is safe on plastics, seals, and painted surfaces.

Applications & Usages

Common uses include releasing rusted bolts, nuts, screws, fasteners, pulleys, scales, tools, and other frozen metal mechanisms; general industrial maintenance and repair work, lubricating close fitting parts, displacing moisture, maintaining garden and yard equipment, household repair tasks, maintaining boating equipment and any mechanical equipment regularly subject to moist or wet conditions.

Superior Characteristics

Penetrates	Creeps into tiny spaces and quickly dissolves rust to free corroded nuts, bolts, and frozen mechanical parts
Cleans	Removes tar, sap, oils, greases, adhesives, label residues, and more
Lubricates	Minimizes friction and wear with a low viscosity, long lasting oil blend, leading to greater machine efficiency
Protects	Provides extreme protection against rust and corrosion with high tech corrosion inhibitors and leaves a preservative film that protects against abrasive particles like dirt, sand, and salt
Displaces Moisture	Repels water due to its high hydrophobicity
Safe on parts	Safe on seals, plastics, rubber, paint, and coatings
Environmentally safe	Low VOC's, no CFC's or Chlorinated Solvents
Human safe	Non-toxic
Silicone free	Will not contaminate delicate electronic circuits with silicone particles

Usage Parameters

Properties	***Value***
Shelf Life [a)]	5 y
Theoretical coverage per can for 25 μm [0.001"]	<8 870 000 cm^2 [<9 547 ft^2]

a) Reported shelf life assumes room temperature storage and unopened container.

Temperature Ranges

Properties	***Value***
Constant Service Temperature [b)]	-20 to 100 °C [-4 to 212 °F]
Storage Temperature Limits	5 to 45 °C [41 to 113 °F]

b) Propellant limits the lower temperature range, and the flash point the upper range. The actual operational range of the oil is wider than stated.

Rev. Date: 01 February 2017 / Ver. 1.01

Properties

Physical Properties	*Method*	*Value*
Color		Clear, yellow tint
Odor	—	Slight hydrocarbon
Density @25 °C [77 °F]	ASTM D 287	0.83 g/mL
Viscosity		<20.5 mm^2/s
Flash Point		66 °C [151 °F]
Boiling Point		≥228 °C [≥442 °F]
Auto-ignition Temperature		≥216 °C [≥421 °F]
Solubility in Water		Insoluble
Hydrophobic		Yes
Surface Tension		20-30 dyne/sec [a)]

a) Estimated value based on components

Compatibility

The 8472 is designed not to damage the base metals nor most paints and plastics. Early estimates of compatibility are provided in the Chemical Compatibility table.

Chemical Compatibility	*Method*	*Value*
Metals	—	recommended
Woods	—	recommended
Paints (epoxy, phenolic, alkyd, urethane, latex)	—	safe
Paints (acrylic, latex, vinyl, polyurethanes)	—	safe
Plastics (nylon, teflon, polyacetal, polypropylene)	—	safe
Plastics (Polyurethanes, polyethylene, polysulfone)	—	safe
Rubbers (viton, NBR, fluorosilicone, polyester)	—	safe
Rubbers (nitrile, silicone, epichlorohydrin, EPDM)	—	safe
Rubbers (natural, neoprene, butyl, SBR)	—	*not estimated*
Polycarbonate, ABS, polyvinyl chloride	24 h, >24 h	safe; not tested
Styrofoam	12 h, 24 h	safe; fail

Note: Estimated values based on components and early test results.

Packaging and Supporting Products

Product Availability

- Cat. No. 8472-450G (20 oz) Aerosol
- Cat. No. 8472-4L (1 gal) / 8472-20L (5 gal) Liquid

Health, Safety, and Environmental Awareness

Please see the 8472 **Safety Data Sheet** (SDS) for more details on transportation, storage, handling and other security guidelines.

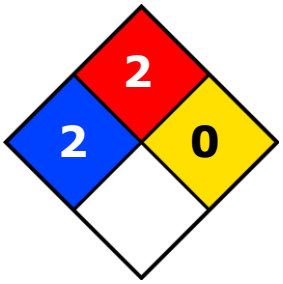
Environmental Impact: The 8472 formulation is designed for commercial and domestic uses. It has <4% volatile organic compound (VOC) content. It contains petroleum products; avoid runoff into storm and sewer drains.

Health and Safety: The 8472 penetrant and lubricating oil is moderately flammable and should be kept away from flames, especially near or above the flash point of 66 °C [151 °F]. Avoid breathing in mist or fumes (if heated). Avoid contact with the eyes. Do not ingest. The product provides no known risk of cancer, no known risk to fetus, no known sterility risk, and has no known mutagenicity effect. Wash your hands after using.

HMIS® RATING

HEALTH:	* 2
FLAMMABILITY:	2
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	

NFPA® 704 CODES



Approximate HMIS and NFPA Risk Ratings Legend:
0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

Application Instructions

Follow the procedure below for best results.

NOTE: This product is not intended to be heated and it should be used at room temperature. If you need to solder or heat a lubricated part, wipe the area with a clean cloth to remove the lubricating oil.

To lubricate, prevent rust, and protect large surfaces against water

1. Shake thoroughly.
2. Imbibe a clean cloth or a brush with oil.
3. Wipe or brush the surface with the cloth or brush.

To penetrate and lubricate seized or moving parts

1. Shake thoroughly.
2. Soak the area to be penetrated. Tap metal joint with hammer to speed up penetration.
3. Wait for a few minutes to >1 hours (depending on level of rust).
4. Reapply if necessary.

To clean tar, sap, greases, adhesives, and label residues

1. Shake thoroughly.
2. Pour some oil over the surface to be cleaned.
3. Wait a few minutes to allow absorption deep into the residue.
4. Wipe with cloth.

Technical Support

Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at www.mgchemicals.com.

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Warranty

M.G. Chemicals Ltd. warranties this product for 12 months from the date of purchase by the end user. *M.G. Chemicals Ltd.* makes no claims as to shelf life of this product for the warranty. The liability of *M.G. Chemicals Ltd.* whether based on its warranty, contracts, or otherwise shall in no case include incidental or consequential damage.

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