

SAFETY DATA SHEET

LPS® Tapmatic Dual Action Plus #1



Section 1. Identification

GHS product Identifier	LPS® Tapmatic Dual Action Plus #1
Chemical Name	Chlorinated Hydrocarbon (trichloroethylene)
Material uses	A metal cutting fluid designed to simultaneously cool and lubricate to reduce friction and eliminate chip welding in tapping, drilling, reaming, and threading.
Supplier/Manufacturer	LPS Laboratories 4647 Hugh Howell Road Tucker, Georgia, USA 30084 Tel: +1 770-243-8800 Fax: +1 770-243-8899 Website: www.lpslabs.com
Emergency Telephone number (with hours of operation)	CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3887 (24 hours)

Section 2. Hazards identification

Classifications of the substance or mixture	ACUTE TOXICITY: ORAL – Category 5 ACUTE TOXICITY: INHALATION – Category 4 SKIN CORROSION/IRRITATION – Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION – Category 2B GERM CELL MUTAGENICITY – Category 2 CARCINOGENICITY – Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation and Narcotic effects] – Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) [central nervous system (CNS)] – Category 1 AQUATIC TOXICITY (ACUTE) – Category 2 AQUATIC TOXICITY (Chronic) – Category 3
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GHS label elements

Hazard pictograms



Signal word

Danger

Hazard statements

Harmful if inhaled. May be harmful if swallowed.
Causes skin irritation. Causes eye irritation.
May cause cancer. Suspected of causing genetic defects.
May cause respiratory irritation. May cause drowsiness or dizziness.
Causes damage to organs through prolonged or repeated exposure (central nervous system (CNS)). Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention

Obtain special instructions before use. Wear protective gloves. Wear eye or face protection. Avoid release to the environment. Do not breathe vapour.

Response

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.



Section 2. Hazards identification

Storage	Store locked up.
Disposal	Not applicable.
Other hazards which do not result in classification	Not available.

Section 3. Composition/information on ingredients

Substance/mixture	Mixture
Chemical Name	Chlorinated Hydrocarbon (trichloroethylene)
Other means of identification	Not Available

CAS number/other identifiers

CAS number	Not applicable
EC number	Mixture
Product code	40120, 40130

Ingredient name	%	CAS Number
Trichloroethylene	60-100	79-01-6

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye Contact	Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Get medical attention if any symptoms occur.
Inhalation	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Call medical doctor or poison control centre immediately. Contact your local Poison Control Centre.
Ingestion	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	No specific treatment. See toxicological information (Section 11).
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.



Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Use dry chemical, CO ₂ , water spray (fog) or foam. Cool containers with water jet in order to prevent pressure build-up, auto-ignition or explosion.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	Decomposition products may include the following materials: chlorine carbon dioxide carbon monoxide and traces of phosgene gas
Special protective actions for fire-fighters	No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

Small Spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.



Section 7. Handling and storage

Precautions for safe handling

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Trichloroethylene	GBZ-2 (China, 4-2007) PC-TWA: 30 mg/m ³ 8 hour(s)

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Appropriate engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.



Section 8. Exposure controls/personal protection

Skin Protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: PVA gloves.
Hand protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Body protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Organic vapour cartridge.

Section 9. Physical and chemical properties

Appearance

Physical State	Liquid [Clear]
Colour	Brown [Light]
Odour	Sweet, spice
pH	Not available
Melting point	Not available
Boiling point	87°C (188.6°F)
Flash Point	Not applicable
Evaporation rate	0.3 (ether (anhydrous) = 1)
Vapour pressure	7.7 kPa (58 mm Hg) [20°C]
Vapour density	4.5 [Air = 1]
Relative density	1.35
Solubility	0.1% by weight
Partition coefficient: n-octanol/water	2.4
Auto-ignition temperature	420°C (>788°F)
Viscosity	< 3 mm ² /sec @ 25°C

Section 10. Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Keep away from red hot surfaces, sparks or naked flames which may generate toxic fumes of phosgene and hydrogen chloride. Prolonged contact with aluminum or light alloys may cause a reaction resulting in the generation of hydrogen chloride gas and heat.



Section 10. Stability and reactivity

Incompatible materials	Extremely reactive or incompatible with the following materials: Oxidising agent. Reacts violently with sodium, potassium, barium metal. Reacts with finely divided aluminum, zinc and magnesium.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product / ingredient name	Result	Species	Dose	Exposure
Trichloroethylene	LC50 Inhalation Vapour	Rat	140700 mg/m ³	1 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	4920 mg/kg	-

Irritation/Corrosion

Product / ingredient name	Result	Species	Score	Exposure	Observation
Trichloroethylene	Eyes – Moderate Irritant	Rabbit	-	24 hours 20 mg	-
	Skin – Severe Irritant	Rabbit	-	24 hours 2 mg	-

Specific target organ toxicity (single exposure)

Not available

Specific target organ toxicity (repeated exposure)

Not available

Information on the likely routes of exposure Not available

Potential acute health effects

Eye Contact	Causes serious eye irritation.
Inhalation	Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact	Causes skin irritation.
Ingestion	May be harmful if swallowed. Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	Adverse symptoms may include the following: pain or irritation watering redness
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Section 11. Toxicological information

Inhalation	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	Adverse symptoms may include the following: irritation redness
Ingestion	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	Not available
Potential delayed effects	Not available

Long term exposure

Potential immediate effects	Not available
Potential delayed effects	Not available
General	Causes damage to organs through prolonged or repeated exposure.
Carcinogenicity	May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	Suspected of causing genetic defects.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE Value
Oral	4951.1 mg/kg
Inhalation (vapours)	11.07 mg/L



Section 12. Ecological information

Toxicity

Product / ingredient name	Result	Species	Exposure
Trichloroethylene	Acute EC50 36.5 mg/L Fresh Water	Algae – Chlamydomonas reinhardtii – Exponential growth phase – 7 days	72 hour
	Acute EC50 390000 ug/L Fresh water	Algae – Selenastrum sp.	96 hours
	Acute LC50 30000 ug/L Fresh water	Crustaceans – Asellus aquaticus	48 hours
	Acute LC50 18000 to 26000 ug/L Fresh water	Daphnia – Daphnia magna- <= 24 hours	48 hours
	Acute LC50 3100 ug/L Fresh water	Fish – Jordanella floridae – Juvenile (Fledgling, Hatchling, Weanling) – 2 to 4 months	96 hours
	Chronic NOEC 2200 ug/L Fresh water	Daphnia – Daphnia magna - <= 24 hours	48 hours

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
LPS® Tapmatic Dual Action Plus #1	2.4	-	Low
Trichloroethylene	2.42	-	Low

Mobility in soil

Soil/water partition coefficient (K_{cc}) Not available

Other adverse effects No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.



Section 14. Transport Information

	UN	IMDG	IATA
UN number	UN1710	UN1710	UN1710
UN proper shipping name	Trichloroethylene mixture	Trichloroethylene mixture	Trichloroethylene mixture
Transport hazard class(es)	6.1	6.1	6.1
Packing group	III	III	III
Environmental Hazards	No	No	No
Special precautions for user	Not available	Not available	Not available
Additional information	-	Emergency schedules (EmS) F-A, S-A	Passenger and Cargo Aircraft Packaging instructions: 655 Limited Quantities - Passenger Aircraft Packaging instructions: Y642

PG*: Packing group

Exemption to the above classifications may apply.

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product No known specific national and or regional regulations applicable to this product (including its ingredients).

Section 16. Other information

History

Date of issue August 3, 2012
Version 1
Prepared by LPS Laboratories, a division of Illinois Tool Works, Inc.

Notice to reader

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