



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

Product identifier	Tapmatic® Dual Action Plus #2 Cutting Fluid	
Version #	02	
Issue date	01-24-2013	
Revision date	09-27-2013	
Supersedes date	01-24-2013	
CAS #	Mixture	
Part Number	C40220, C40230, C40240, C40260	
Product use	A metal-cutting fluid safe for tapping, drilling, reaming, threading or finishing on aluminum.	
Manufacturer information	LPS Laboratories, a division of Illinois Tool Works 4647 Hugh Howell Rd Tucker, Georgia 30084 United States www.lpslabs.com 1-800-241-8334/ 770-243-8800 Chemtrec 1-800-424-9300	

## 2. Hazards Identification

Emergency overview	DANGER  Combustible liquid.  May be ignited by heat, sparks or flames. Irritating to eyes. HARMFUL OR FATAL IF SWALLOWED.
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	Avoid contact with eyes. Irritating to eyes.
Skin	Avoid contact with the skin. Irritating to skin. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Inhalation	Do not breathe vapor. Prolonged inhalation may be harmful.
Ingestion	Do not ingest. Harmful: may cause lung damage if swallowed. May be fatal if swallowed.
Target organs	Lungs. Eyes. Skin. Central nervous system.
Chronic effects	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Signs and symptoms	Irritating to eyes and skin. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Defatting of the skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged exposure may cause chronic effects.
Potential environmental effects	Ecological injuries are not known or expected under normal use.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
METHYL SALICYLATE	119-36-8	0.1 - 1
Other components below reportable levels		60 - 100

## 4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention immediately.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Get medical attention if symptoms persist.
Ingestion	Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.

<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically. Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. In case of shortness of breath, give oxygen. Keep victim under observation.
<b>General advice</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>5. Fire Fighting Measures</b>	
<b>Flammable properties</b>	Combustible by WHMIS criteria. Combustible by OSHA criteria. NFPA Rating Fire = 2. Materials that must be moderately heated or exposed to relative high ambient temperatures before ignition can occur.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Dry chemical powder. Water spray. Water fog. Foam.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	Combustible.
<b>Protective equipment for firefighters</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Use standard firefighting procedures and consider the hazards of other involved materials. Cool containers exposed to heat with water spray and remove container, if no risk is involved. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
<b>Specific methods</b>	In the event of fire and/or explosion do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Use water spray to cool unopened containers. Move container from fire area if it can be done without risk. Use standard firefighting procedures and consider the hazards of other involved materials.
<b>Explosion data</b>	
<b>Sensitivity to static discharge</b>	None known.
<b>Sensitivity to mechanical impact</b>	None known.
<b>General fire hazards</b>	Combustible liquid.
<b>6. Accidental Release Measures</b>	
<b>Personal precautions</b>	Local authorities should be advised if significant spillages cannot be contained. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch or walk through spilled material. Wear appropriate protective equipment and clothing during clean-up. Avoid skin contact and inhalation of vapors during disposal of spills. Ensure adequate ventilation.
<b>Environmental precautions</b>	Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
<b>Methods for containment</b>	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. Do not touch or walk through spilled material. Dike the spilled material, where this is possible. Collect spillage. Prevent entry into waterways, sewer, basements or confined areas.
<b>Methods for cleaning up</b>	Ventilate the contaminated area. Eliminate ignition sources including sources of electrical, static or frictional sparks. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.
	Never return spills in original containers for re-use. Clean up in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste.
<b>Other information</b>	Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

### Handling

DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. All equipment used when handling the product must be grounded. Do not breathe vapor. Avoid contact with skin and eyes. Avoid prolonged exposure. Do not get this material on clothing. Use only in well-ventilated areas. Wear personal protective equipment. Wash thoroughly after handling. Avoid release to the environment. Do not empty into drains.

### Storage

Do not handle or store near an open flame, heat or other sources of ignition. Store in tightly closed original container in a dry, cool and well-ventilated place. Keep away from food, drink and animal feedings. Keep out of the reach of children. Use care in handling/storage.

## 8. Exposure Controls / Personal Protection

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Personal protective equipment

#### Eye / face protection

Avoid contact with eyes. Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.

#### Skin protection

Do not get this material in contact with skin. Wear suitable gloves and eye/face protection. Chemical resistant gloves.

#### Respiratory protection

No personal respiratory protective equipment normally required. Avoid breathing dust/fume/gas/mist/vapors/spray. If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

## 9. Physical & Chemical Properties

### Appearance

Liquid.

### Physical state

Liquid.

### Form

Liquid.

### Color

Amber

### Odor

Mild. Oily.

### Odor threshold

Not established

### pH

Not applicable

### Vapor pressure

< 0.05 mm Hg @ 20°C

### Vapor density

> 1 (air = 1)

### Boiling point

~195°C (383°F)

### Melting point/Freezing point

Not established

### Solubility (water)

Not soluble

### Specific gravity

0.83 - 0.85 (water = 1)

### Relative density

Not available.

### Flash point

> 165.2 °F (> 74.0 °C) Tag Closed Cup

### Flammability limits in air, upper, % by volume

7 %

### Flammability limits in air, lower, % by volume

0.6 %

### Auto-ignition temperature

> 442.4 °F (> 228 °C)

### VOC

0 % per State and Federal Consumer Product Regulations

### Evaporation rate

< 0.1 BuAc

### Viscosity

Not established

### Percent volatile

70 - 75 %

### Partition coefficient (n-octanol/water)

> 1

### Other data

#### Decomposition temperature

Not established

#### Heat of combustion

Not established

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

### Toxicological data

Components	Species	Test Results
METHYL SALICYLATE (CAS 119-36-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Guinea pig	700 mg/kg 0.7 ml/kg
	Rabbit	> 5000 mg/kg
	Rat	>= 2500 mg/kg
<i>Inhalation</i>		
LC50	Mouse	> 400 mg/m3
	Rat	> 114 mg/m3 > 0.9 mg/l
<i>Oral</i>		
LD50	Dog	2100 mg/kg 2.1 g/kg
	Guinea pig	700 mg/kg
	Mouse	580 mg/kg
	Rabbit	1300 mg/kg
	Rat	887 mg/kg 0.887 g/kg
<i>Other</i>		
LD50	Mouse	890 mg/kg

\* Estimates for product may be based on additional component data not shown.

<b>Toxicological information</b>	Occupational exposure to the substance or mixture may cause adverse effects.
<b>Acute effects</b>	Harmful if swallowed.
<b>Local effects</b>	Irritating to eyes and skin. Harmful by inhalation and if swallowed.
<b>Chronic effects</b>	Prolonged or repeated contact may cause drying, cracking, or irritation. Prolonged inhalation may be harmful.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
<b>Neurological effects</b>	No data available for this product.
<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Reproductive effects</b>	Based on available data, the classification criteria are not met.
<b>Symptoms and target organs</b>	Irritating to eyes, respiratory system and skin. Defatting of the skin. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.
<b>Epidemiology</b>	No epidemiological data is available for this product.
<b>Further information</b>	Symptoms may be delayed.

## 12. Ecological Information

<b>Ecotoxicity</b>	Not available.
<b>Environmental effects</b>	No data available for this product.
<b>Aquatic toxicity</b>	No data available for this product.
<b>Persistence and degradability</b>	Not inherently biodegradable.
<b>Partition coefficient</b>	
Tapmatic® Dual Action Plus #2 Cutting Fluid	> 1
METHYL SALICYLATE	2.55
<b>Mobility in environmental media</b>	The product is immiscible with water and will spread on the water surface.

## 13. Disposal Considerations

<b>Disposal instructions</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

## 14. Transport Information

<b>TDG</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.

## 15. Regulatory Information

<b>Canadian regulations</b>	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
<b>WHMIS status</b>	Controlled
<b>WHMIS classification</b>	B3 - Combustible Liquids D2B - Other Toxic Effects-TOXIC

### WHMIS labeling



### Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other Information

### NFPA ratings

Health: 1  
Flammability: 2  
Instability: 0

### Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available.

### This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Disclosure Overrides  
Regulatory Information: United States  
HazReg Data: North America  
GHS: Classification