



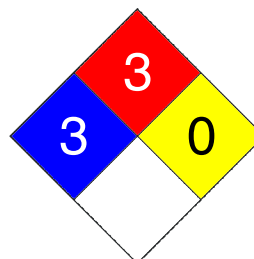
MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name Dynamic Lacquer Thinner - AA221100/AA221200/AA221300
CAS # Mixture
Product Use Solvent Cleaner
Manufacturer Dynamic Paint Products Inc.
7040 Financial Drive
Mississauga, ON L5N 7H5 CA
Phone: 1-905-812-9319
Emergency Phone: 1-613-996-6666 (CANUTEC)

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	* 3
Flammability	3
Physical Hazard	0
Personal Protection	B



2. Hazards Identification

Emergency Overview DANGER
Flammable liquid - may release vapours that form flammable mixtures at or above the flash point. Containers may explode when heated.
Toxic. Contains a potential teratogen. Eye and skin irritant.

Potential short term health effects

Routes of exposure Eye, Skin contact, Skin absorption, Inhalation, Ingestion.
Eyes May cause irritation.
Skin May cause irritation. This product may be harmful if it is absorbed through the skin.

ACGIH - Threshold Limit Values - Skin Notations

Methyl alcohol 67-56-1 Skin - potential significant contribution to overall exposure by the cutaneous route

NIOSH - Pocket Guide - Skin Notations

Methyl alcohol 67-56-1 Potential for dermal absorption

Inhalation Harmful if inhaled. Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).

Ingestion Harmful if swallowed. May cause stomach distress, nausea or vomiting. Aspiration of material into lungs can cause chemical pneumonitis.

Target organs Eyes. Kidney. Liver. Respiratory system. Skin.

Chronic effects Prolonged or repeated exposure can cause drying, defatting and dermatitis.

Signs and symptoms Symptoms are prostration, gasping, pallor, and uncoordinated movements. Symptoms may include redness, oedema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

3. Composition/Information on Ingredients

Ingredient(s)	CAS #	Percent
Methylisobutyl ketone	108-10-1	1 - 5
Methyl ethyl ketone	78-93-3	10 - 30
Methyl alcohol	67-56-1	10 - 30
Xylene	1330-20-7	15 - 40
Toluene	108-88-3	15 - 40
N-Butyl acetate	123-86-4	3 - 7

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention if irritation develops or persists.
Skin contact	Immediately flush with water. Wash with soap and water. Obtain medical attention if irritation persists.
Inhalation	If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately.
Ingestion	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

Notes to physician

Symptoms may be delayed.

General advice

Keep away from sources of ignition. No smoking. Avoid contact with eyes and skin. Immediate medical attention is required. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Keep out of reach of children.

5. Fire-fighting Measures

Flammable properties	Flammable by WHMIS criteria. Vapours may travel to a source of ignition and flash back. Containers may explode when heated.
Extinguishing media	
Suitable extinguishing media	Carbon dioxide. Dry chemical. Foam. Water Fog.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Methods for containment	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Remove sources of ignition. Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. Do not get this material in your eyes, on your skin, or on your clothing.
Storage	Keep out of reach of children. Store in a closed container away from incompatible materials. Do not store at temperatures above 120°F (49°C).

8. Exposure Controls / Personal Protection

Exposure limit values

Ingredient(s)	Exposure limit values
Methyl alcohol	ACGIH-TLV TWA: 200 ppm STEL: 250 ppm
Methyl ethyl ketone	ACGIH-TLV TWA: 200 ppm STEL: 300 ppm
Methylisobutyl ketone	ACGIH-TLV TWA: 50 ppm STEL: 75 ppm
N-Butyl acetate	ACGIH-TLV TWA: 150 ppm STEL: 200 ppm
Toluene	ACGIH-TLV TWA: 20 ppm Skin: 50 ppm
Xylene	ACGIH-TLV TWA: 100 ppm STEL: 150 ppm

Engineering controls

Use only under good ventilation conditions or with respiratory protection.

Personal protective equipment

Eye/Face protection

Chemical splash goggles.

Hand protection

Rubber gloves. Confirm with a reputable supplier first.

Skin and body protection

As required by employer code.

Respiratory protection

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Clear.
Colour	Colourless
Form	Liquid
Odour	Aromatic.
Odour threshold	Not available
Physical state	Liquid
pH	Not available
Freezing point	Not available
Boiling point	80 °C (176.00 °F)
Pour point	Not available
Flash point	< 4.4 °C (< 39.92 °F) TCC
Evaporation Rate	Slower than ether
Flammability limits in air, lower, % by volume	1.3
Flammability Limits in Air, Upper, % by Volume	12.6
Vapour pressure	71.2 mmHg
Vapour density	2.8 (air=1)

Specific gravity	0.83 @ 21°C
Octanol/water coefficient	Not available
Solubility (H2O)	slightly soluble
Auto-ignition temperature	Not available
Percent volatile	100

10. Stability and Reactivity

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Heat, open flames, static discharge, sparks and other ignition sources. Do not mix with other chemicals.
Incompatible materials	Acids. Oxidizers. Caustics.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.
Possibility of hazardous reactions	Hazardous polymerisation does not occur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Methyl alcohol	Not available
Methyl ethyl ketone	2000 mg/l/4h rat
Methylisobutyl ketone	8.2 mg/l/4h rat
N-Butyl acetate	2000 ppm rat; 2000 mg/l/4h rat
Toluene	12.5 mg/l/4h rat
Xylene	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Methyl alcohol	5628 mg/kg rat; 7300 mg/kg mouse; 14200 mg/kg rabbit; 7600 mg/kg Monkey
Methyl ethyl ketone	2600 mg/kg rat; 3000 mg/kg mouse
Methylisobutyl ketone	2080 mg/kg rat; 1200 mg/kg mouse
N-Butyl acetate	10770 mg/kg rat; 7100 mg/kg mouse; 7400 mg/kg rabbit
Toluene	636 mg/kg rat
Xylene	4300 mg/kg rat

Effects of acute exposure

Eye	May cause irritation.
Skin	May cause irritation. This product may be harmful if it is absorbed through the skin.

ACGIH - Threshold Limit Values - Skin Notations

Methyl alcohol	67-56-1	Skin - potential significant contribution to overall exposure by the cutaneous route
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NIOSH - Pocket Guide - Skin Notations

Methyl alcohol	67-56-1	Potential for dermal absorption
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Inhalation

Harmful if inhaled. Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).

Ingestion

Harmful if swallowed. May cause stomach distress, nausea or vomiting. Aspiration of material into lungs can cause chemical pneumonitis.

Sensitisation

Non-hazardous by WHMIS criteria.

Local effects

Toxic if swallowed.

Chronic effects

Prolonged or repeated overexposure can cause liver and kidney damage.

Carcinogenicity Non-hazardous by WHMIS criteria.

ACGIH - Threshold Limit Values - Carcinogens

Toluene 108-88-3 A4 - Not Classifiable as a Human Carcinogen
Xylene 1330-20-7 A4 - Not Classifiable as a Human Carcinogen

IARC - Group 3 (Not Classifiable)

Toluene 108-88-3 Monograph 71 [1999]; Monograph 47 [1989]
Xylene 1330-20-7 Monograph 71 [1999]; Monograph 47 [1989]

Mutagenicity Non-hazardous by WHMIS criteria.

Reproductive effects Non-hazardous by WHMIS criteria.

Teratogenicity Methanol has produced teratogenic effects in mice exposed by inhalation to high concentrations that did not produce significant maternal toxicity. Toluene (benzene, methyl-) has caused fetotoxicity (reduced fetal weight), behavioural effects (effects on learning and memory) and hearing loss (in males). These effects have been observed in the offspring of rats exposed by inhalation to 1200 or 1800 ppm toluene. These effects were observed in the absence of maternal toxicity. Xylene is considered fetotoxic in humans, based on observations of reduced fetal weight, delayed ossification and persistent behavioural effects in animal studies in the absence of maternal toxicity.

Synergistic Materials Not available

12. Ecological Information

Ecotoxicity Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Algae Data

Methylisobutyl ketone 108-10-1 96 Hr EC50 *Pseudokirchneriella subcapitata*: 400 mg/L
N-Butyl acetate 123-86-4 72 Hr EC50 *Desmodesmus subspicatus*: 674.7 mg/L
Toluene 108-88-3 96 Hr EC50 *Pseudokirchneriella subcapitata*: >433 mg/L; 72 Hr EC50 *Pseudokirchneriella subcapitata*: 12.5 mg/L [static]

Ecotoxicity - Freshwater Fish Species Data

Methyl alcohol 67-56-1 96 Hr LC50 *Pimephales promelas*: 28200 mg/L [flow-through]; 96 Hr LC50 *Pimephales promelas*: >100 mg/L [static]; 96 Hr LC50 *Oncorhynchus mykiss*: 19500-20700 mg/L [flow-through]; 96 Hr LC50 *Oncorhynchus mykiss*: 18-20 mg/L [static]; 96 Hr LC50 *Lepomis macrochirus*: 13500-17600 mg/L [flow-through]
Methyl ethyl ketone 78-93-3 96 Hr LC50 *Pimephales promelas*: 3130-3320 mg/L [flow-through]
Methylisobutyl ketone 108-10-1 96 Hr LC50 *Pimephales promelas*: 496-514 mg/L [flow-through]
N-Butyl acetate 123-86-4 96 Hr LC50 *Pimephales promelas*: 17-19 mg/L [flow-through]; 96 Hr LC50 *Lepomis macrochirus*: 100 mg/L [static]; 96 Hr LC50 *Leuciscus idus*: 62 mg/L [static]
Toluene 108-88-3 96 Hr LC50 *Pimephales promelas*: 15.22-19.05 mg/L [flow-through] (1 day old); 96 Hr LC50 *Pimephales promelas*: 12.6 mg/L [static]; 96 Hr LC50 *Oncorhynchus mykiss*: 5.89-7.81 mg/L [flow-through]; 96 Hr LC50 *Oncorhynchus mykiss*: 14.1-17.16 mg/L [static]; 96 Hr LC50 *Oncorhynchus mykiss*: 5.8 mg/L [semi-static]; 96 Hr LC50 *Lepomis macrochirus*: 11.0-15.0 mg/L [static]; 96 Hr LC50 *Oryzias latipes*: 54 mg/L [static]; 96 Hr LC50 *Poecilia reticulata*: 28.2 mg/L [semi-static]; 96 Hr LC50 *Poecilia reticulata*: 50.87-70.96
Xylene 1330-20-7 96 Hr LC50 *Pimephales promelas*: 13.4 mg/L [flow-through]; 96 Hr LC50 *Oncorhynchus mykiss*: 2.661-4.093 mg/L [static]; 96 Hr LC50 *Oncorhynchus mykiss*: 13.5-17.3 mg/L; 96 Hr LC50 *Lepomis macrochirus*: 13.1-16.5 mg/L [flow-through]; 96 Hr LC50 *Lepomis macrochirus*: 19 mg/L; 96 Hr LC50 *Lepomis macrochirus*: 7.711-9.591 mg/L [static]; 96 Hr LC50 *Pimephales promelas*: 23.53-29.

Ecotoxicity - Microtox Data

Methyl alcohol 67-56-1 5 min EC50 *Photobacterium phosphoreum*: 43000 mg/L; 15 min EC50 *Photobacterium phosphoreum*: 40000 mg/L; 25 min EC50 *Photobacterium phosphoreum*: 39000 mg/L
Methyl ethyl ketone 78-93-3 5 min EC50 *Photobacterium phosphoreum*: 3426 mg/L; 30 min EC50 *Photobacterium phosphoreum*: 3403 mg/L
Methylisobutyl ketone 108-10-1 5 min EC50 *Photobacterium phosphoreum*: 79.6 mg/L
N-Butyl acetate 123-86-4 5 min EC50 *Photobacterium phosphoreum*: 70.0 mg/L; 15 min EC50 *Photobacterium phosphoreum*: 82.2 mg/L; 30 min EC50 *Photobacterium phosphoreum*: 98.9 mg/L; 18 Hr EC50 *Pseudomonas putida*: 959 mg/L
Toluene 108-88-3 30 min EC50 *Photobacterium phosphoreum*: 19.7 mg/L
Xylene 1330-20-7 24 hr EC50 *Photobacterium phosphoreum*: 0.0084 mg/L

Ecotoxicity - Water Flea Data

Methyl ethyl ketone 78-93-3 48 Hr EC50 *Daphnia magna*: >520 mg/L; 48 Hr EC50 *Daphnia magna*: 5091 mg/L; 48 Hr EC50 *Daphnia magna*: 4025 - 6440 mg/L [Static]
Methylisobutyl ketone 108-10-1 48 Hr EC50 *Daphnia magna*: 170 mg/L
N-Butyl acetate 123-86-4 24 Hr EC50 *Daphnia magna*: 72.8 mg/L
Toluene 108-88-3 48 Hr EC50 *Daphnia magna*: 5.46 - 9.83 mg/L [Static]; 48 Hr EC50 *Daphnia magna*: 11.5 mg/L
Xylene 1330-20-7 48 Hr EC50 water flea: 3.82 mg/L; 48 Hr LC50 *Gammarus lacustris*: 0.6 mg/L

Environmental effects Not available

Aquatic toxicity Not available

Persistence and degradability	Not available
Bioaccumulation/accumulation	Not available
Partition coefficient	Not available
Mobility in environmental media	Not available
Chemical fate information	Not available
Other adverse effects	Not available

13. Disposal Considerations

Waste codes	Not available
Disposal instructions	Review federal, provincial, and local government requirements prior to disposal.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name	FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
Hazard class	3 (6.1)
UN number	UN1992
Packing group	II
Additional information:	
Special provisions	16



15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada - WHMIS - Ingredient Disclosure List

Methyl alcohol	67-56-1	1 %
Methyl ethyl ketone	78-93-3	1 %
Methylisobutyl ketone	108-10-1	1 %
N-Butyl acetate	123-86-4	1 %
Toluene	108-88-3	1 %

WHMIS classification Class B - Division 2 - Flammable Liquid, Class D - Division 1B, 2A, 2B
WHMIS status Controlled
WHMIS labeling



Inventory Status

Country(s) or region	Inventory Name	On Inventory (Yes/No)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date

27-Jan-2010

Effective Date

15-Jan-2010

Expiry Date

15-Jan-2013

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Other Information

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.