Material Safety Data Sheet

Material Name: DataDotDNA® Metallic™ Pressure Pak

*** Section 1 - Chemical Product and Company Identification ***

Manufacturer Information

SPRAYPACK PTY LTD
75-79 Violet Street
Revesby, NSW 2212
Australia

Phone: +61 02 9771 3999

*** Section 2 - Hazards Identification ***

Emergency Overview

Highly flammable material. Avoid skin, eye and respiratory exposure.

Potential Health Effects: Eyes

May cause eye irritation.

Potential Health Effects: Skin

Will cause irritation.

Potential Health Effects: Ingestion

Due to high volatility of product, this is unlikely to occur.

Potential Health Effects: Inhalation

May cause light headedness, dizziness and drowsiness excessive exposure may cause unconsciousness or even death, due to asphyxiation.

HMIS Ratings: Health: 1 **Fire:** 4 **HMIS Reactivity** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 3 - Composition / Information on Ingredients ***

CAS #	Component	Percent
115-10-6	Dimethyl ether	30-60
Trade Secret	Other Resin Ingredients	10-30
108-88-3	Toluene	10-30
141-78-6	Ethylacetate	10
108-10-1	Methylisobutyl ketone	10
78-93-3	Methyl ethyl ketone	10
7440-02-0	Nickel	<1
Trade Secret	Inorganic Ceramic Particles	<1

*** Section 4 - First Aid Measures ***

First Aid: Eyes

Immediately flush eyes with plenty of water for at least 15 minutes.

First Aid: Skin

Wash with water at room temperature to overcome frostbite.

First Aid: Ingestion

Due to high volatility of product, this is not likely to occur.

First Aid: Inhalation

Move to fresh air, keep warm and at rest. Seek medical attention if symptoms persist.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards

See Section 9 for Flammability Properties.

Product is highly flammable. Product will burst and ignite if exposed to heat or flame, avoid all heat sources.

Hazardous Combustion Products

Not Determined.

Extinguishing Media

Use foam, dry chemical or carbon dioxide.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear.

NFPA Ratings: Health: 1 **Fire:** 4 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

* * * Section 6 - Accidental Release Measures * * *

Containment Procedures

Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

Clean-Up Procedures

Eliminate ignition sources including sources of electrical, static or frictional sparks.

Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

Special Procedures

Avoid inhalation of mists or aerosols.

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep this product from heat, sparks, or open flame. Use this product with adequate ventilation.

Storage Procedures

Keep the container in a well-ventilated place.

* * * Section 8 - Exposure Controls / Personal Protection * * *

A: Component Exposure Limits

Toluene (108-88-3)

ACGIH: 20 ppm TWA
OSHA: 100 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL
NIOSH: 100 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL

Ethylacetate (141-78-6)

ACGIH: 400 ppm TWA
OSHA: 400 ppm TWA; 1400 mg/m3 TWA
NIOSH: 400 ppm TWA; 1400 mg/m3 TWA

Methyl ethyl ketone (78-93-3)

ACGIH: 200 ppm TWA
300 ppm STEL
OSHA: 200 ppm TWA; 590 mg/m3 TWA
300 ppm STEL; 885 mg/m3 STEL
NIOSH: 200 ppm TWA; 590 mg/m3 TWA
300 ppm STEL; 885 mg/m3 STEL

Methylisobutyl ketone (108-10-1)

ACGIH: 50 ppm TWA
75 ppm STEL
OSHA: 50 ppm TWA; 205 mg/m3 TWA
75 ppm STEL; 300 mg/m3 STEL
NIOSH: 50 ppm TWA; 205 mg/m3 TWA
75 ppm STEL; 300 mg/m3 STEL

Nickel (7440-02-0)

ACGIH: 1.5 mg/m3 TWA (inhalable fraction)
OSHA: 1 mg/m3 TWA
NIOSH: 0.015 mg/m3 TWA

Engineering Controls

Ventilation should effectively remove and prevent buildup of any aerosols or mists generated from the handling of this product.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear safety glasses with side shields.

Personal Protective Equipment: Skin

Use impervious gloves.

Personal Protective Equipment: Respiratory

If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

Personal Protective Equipment: General

Eye wash fountain is recommended.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Mist/spray	**Odor:**	None
Physical State:	Gas	**pH:**	NA
Vapor Pressure:	ND	**Vapor Density:**	1.62
Boiling Point:	-22°C	**Melting Point:**	NA
Solubility (H2O):	Negligible	**Specific Gravity:**	0.66@21°C
Evaporation Rate:	ND	**VOC:**	75%
Octanol/H2O Coeff.:		**Flash Point:**	-41°C
Flash Point Method:	ND	**Upper Flammability Limit (UFL):**	8.6
Lower Flammability Limit (LFL):	1.8	**Burning Rate:**	ND
Auto Ignition:	ND		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Chemical Stability: Conditions to Avoid

Keep away from heat, sparks, or open flame.

Incompatibility

Not Determined

Hazardous Decomposition

Not Determined.

Possibility of Hazardous Reactions

Will not occur.

* * * Section 11 - Toxicological Information * * *

Acute Dose Effects

A: General Product Information

No information available for the product.

B: Component Analysis - LD50/LC50

Dimethyl ether (115-10-6)

Inhalation LC50 Rat: 308.5 mg/L/4H

Toluene (108-88-3)

Inhalation LC50 Rat: 12.5 mg/L/4H; Inhalation LC50 Rat:>26700 ppm/1H; Oral LD50 Rat:636 mg/kg; Dermal LD50 Rabbit:8390 mg/kg; Dermal LD50 Rat:12124 mg/kg

Ethylacetate (141-78-6)

Oral LD50 Rat: 5620 mg/kg; Dermal LD50 Rabbit:>20 mL/kg; Dermal LD50 Rabbit:>18000 mg/kg

Methyl ethyl ketone (78-93-3)

Inhalation LC50 Mouse: 32 g/m3/4H; Oral LD50 Rat:2737 mg/kg; Dermal LD50 Rabbit:6480 mg/kg

Methylisobutyl ketone (108-10-1)
Inhalation LC50 Rat: 8.2 mg/L/4H; Oral LD50 Rat:2080 mg/kg; Dermal LD50 Rabbit:>16000 mg/kg

Nickel (7440-02-0)
Oral LD50 Rat: >9000 mg/kg

Carcinogenicity

A: General Product Information

No information available for the product.

B: Component Carcinogenicity

Toluene (108-88-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999], Monograph 47 [1989] (Group 3 (not classifiable))

Nickel (7440-02-0)

ACGIH: A5 - Not Suspected as a Human Carcinogen
NIOSH: potential occupational carcinogen
NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)
IARC: Monograph 49 [1990], Supplement 7 [1987] (Group 2B (possibly carcinogenic to humans))

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

No information available for the product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Toluene (108-88-3)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	25 mg/L [flow-through]	1 day old
96 Hr LC50 Oncorhynchus mykiss	24.0 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	24.0 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	13 mg/L [static]	
96 Hr EC50 Selenastrum capricornutum	>433 mg/L	
48 Hr EC50 water flea	11.3 mg/L	
48 Hr EC50 water flea	310 mg/L	
48 Hr EC50 Daphnia magna	11.3 mg/L	

Ethylacetate (141-78-6)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	230 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	484 mg/L [flow-through]	
48 Hr EC50 Scenedesmus subspicatus	3300 mg/L	
48 Hr EC50 Daphnia magna	717 mg/L	

Methyl ethyl ketone (78-93-3)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	3220 mg/L [flow-through]	

96 Hr LC50 Lepomis macrochirus	1690 mg/L	
48 Hr EC50 water flea	520 mg/L	
48 Hr EC50 Daphnia magna	5091 mg/L	

Methylisobutyl ketone (108-10-1)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	505 mg/L [flow-through]	
96 Hr EC50 Selenastrum capricornutum	400 mg/L	
24 Hr EC50 water flea	4280.0 mg/L	
48 Hr EC50 Daphnia magna	170 mg/L	

Nickel (7440-02-0)

Test & Species		Conditions
96 Hr LC50 Oncorhynchus mykiss	31.7 mg/L	adult
96 Hr LC50 Pimephales promelas	3.1 mg/L	
96 Hr LC50 Brachydanio rerio	>100 mg/L	
72 Hr EC50 freshwater algae (4 species)	0.1 mg/L	
72 Hr EC50 Selenastrum capricornutum	0.18 mg/L	
96 Hr EC50 water flea	510 µg/L	

* * * Section 13 - Disposal Considerations * * *

US EPA Waste Number & Descriptions

Component Waste Numbers

Toluene (108-88-3)
RCRA: waste number U220

Ethylacetate (141-78-6)
RCRA: waste number U112 (Ignitable waste)

Methyl ethyl ketone (78-93-3)
RCRA: waste number U159 (Ignitable waste, Toxic waste)
200.0 mg/L regulatory level

Methylisobutyl ketone (108-10-1)
RCRA: waste number U161 (Ignitable waste)

Disposal Instructions

All wastes must be handled in accordance with local, state and federal regulations.
See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

* * * Section 14 - Transportation Information * * *

US DOT Information

Shipping Name: Aerosols, flammable, n.o.s. (dimethylether, toluene)
UN/NA #: 1950 **Hazard Class:** 2.1

* * * Section 15 - Regulatory Information * * *

US Federal Regulations

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Toluene (108-88-3)

SARA 313: 1.0 % de minimis concentration
CERCLA: 1000 lb final RQ; 454 kg final RQ

Ethylacetate (141-78-6)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Methyl ethyl ketone (78-93-3)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Methylisobutyl ketone (108-10-1)

SARA 313: 1.0 % de minimis concentration
CERCLA: 5000 lb final RQ; 2270 kg final RQ

Nickel (7440-02-0)

SARA 313: 0.1 % de minimis concentration
CERCLA: 100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Dimethyl ether	115-10-6	No	Yes	Yes	Yes	Yes	Yes
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes	Yes
Ethylacetate	141-78-6	Yes	Yes	Yes	Yes	Yes	Yes
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes	Yes
Methylisobutyl ketone	108-10-1	Yes	Yes	Yes	Yes	Yes	Yes
Nickel	7440-02-0	Yes	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.
WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Toluene	108-88-3	1 %
Ethylacetate	141-78-6	1 %
Methyl ethyl ketone	78-93-3	1 %
Methylisobutyl ketone	108-10-1	1 %
Nickel	7440-02-0	0.1 %

Additional Regulatory Information

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Dimethyl ether	115-10-6	Yes	DSL	EINECS
Toluene	108-88-3	Yes	DSL	EINECS
Ethylacetate	141-78-6	Yes	DSL	EINECS
Methyl ethyl ketone	78-93-3	Yes	DSL	EINECS
Methylisobutyl ketone	108-10-1	Yes	DSL	EINECS
Nickel	7440-02-0	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.