

422BP

PURE SILICONE MODIFIED CONFORMAL COATING

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Identifier: 422BP**Other Means of Identification:** Pure Silicone Modified Conformal Coating**Related Part #** 422BP-4L, 422BP-20L

Recommended Use and Restriction on Use

Use: Conformal coating**Uses Advised Against:** Not available

Details of Manufacturer or Importer

ManufacturerMG Chemicals
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADAMG Chemicals (Head Office)
9347-193 Street
Surrey, British Columbia V4N 4E7
CANADA**TEL** +1-800-340-0772**TEL** +1-905-331-1396**FAX** +1-800-340-0773**FAX** +1-905-331-2682**E-MAIL** support@mgchemicals.com**E-MAIL** info@mgchemicals.com**WEB** www.mgchemicals.com**E-MAIL** (Competent Person): sds@mgchemicals.com

Emergency Phone Number

For hazardous material incidents ONLY (leaks, spills, fires, exposures or accidents)
USA or CANADA—Call Verisk 3E at **+1-866-519-4752** or **+1-760-476-3962**
(Service access code: 335388)**For emergencies involving dangerous goods;** 24/7 service
CANADA—Call CANUTEC collect at **+1-613-996-6666** or ***666** on cellular phones



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Section 2: Hazard(s) Identification
Classification of Hazardous Chemical
GHS Categories

Criteria	Category	Signal Word	Pictograms
Aspiration Hazard	1	Danger	Health
Carcinogenicity	2	Warning	Health
Reproductive Toxicity	2	Warning	Health
Specific Target Organ Toxicity Repeated Exposure	2	Warning	Health
Flammable Liquid	3	Warning	Flame
Eye Irritation	2A	Warning	Exclamation
Skin Irritation	2	Warning	Exclamation
Specific Target Organ Toxicity Single Exposure	3	Warning	Exclamation
Acute Toxicity Dermal ^{a)}	4	Warning	Exclamation
Acute Toxicity Inhalation ^{a)}	4	Warning	Exclamation
Hazardous to the Aquatic Environment Chronic	3	None	None

Note: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity). Severity categories rankings do not allow comparisons between classes.


a) CLP Annex VI mandated classifications

Label Elements

Signal Word	DANGER
Pictograms	Hazard Statements
	H304: May be fatal if swallowed and enters airways H351: Suspected of causing cancer H361: May damage fertility or the unborn child H373: May cause damage to liver, kidney, and inner ears through prolonged or repeated exposure
	H226: Flammable liquid and vapor

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Pictograms	Hazard Statements
	H319: Causes serious eye irritation H315: Causes skin irritation H335: May cause respiratory irritation H312 + H332: Harmful in contact with skin or if inhaled
No Symbol Mandated	H412: Harmful to aquatic life with long lasting effects
Prevention	Precautionary Statements
P102	Keep out of reach of children.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe mist, vapors, and spray.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating, and lighting equipment.
P243	Take action to prevent static discharges.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection, and face protection.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
Response	Precautionary Statements
P370 + P378	In case of fire: Use dry chemical, carbon dioxide, water fog, or chemical foam to extinguish.
P308 + P313	IF exposed or concerned: Get medical advice or attention.
P301 + P310, P331	IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.

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Response	Precautionary Statements
P303 + P361 + P352	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash with plenty of water or shower.
P332 + P313	If skin irritation occurs: Get medical advice or attention.
P363	Wash contaminated clothing before reuse.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice or attention.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER or doctor if you feel unwell.
Storage	Precautionary Statements
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
Disposal	Precautionary Statements
P501	Dispose of contents in accordance to local, regional, national, and international regulations.

Hazards Not Otherwise Classified

Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
Defats skin	Repeated exposure may cause skin dryness or cracking.	None	None

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
1330-20-7	xylene (mixed isomers)	30-60%
100-41-4	ethylbenzene	5-10%
108-88-3	toluene	0.1-1%

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Section 4: First-Aid Measures

<i>Exposure Condition</i>	<i>GHS Code: Precautionary Statement</i>
IF SWALLOWED	P301 + P310, P331, P308 + P313
Immediate Symptoms	<i>cause a burning sensation, abdominal pain, nausea, and headaches (see also inhalation symptoms).</i>
Response	Immediately call a POISON CENTRE or doctor. Do NOT induce vomiting. IF exposed or concerned: Get medical advice or attention.
IF ON SKIN (or hair)	P303 + P361 + P352, P332 + P313, P308 + P313, P363
Immediate Symptoms	<i>redness, irritation, dry skin</i>
Response	Take off immediately all contaminated clothing. Wash with plenty of water or shower. If skin irritation occurs: Get medical advice or attention. IF exposed or concerned: Get medical advice or attention. Wash contaminated clothing before reuse.
IF INHALED	P304 + P340, P312, P308 + P313
Immediate Symptoms	<i>irritation of the respiratory track, cough, dizziness, drowsiness, headaches, (in extreme exposure cases: unconsciousness and death)</i>
Response	Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF exposed or concerned: Get medical advice or attention.
IF IN EYES	P305 + P351 + P338, P337 + P313
Immediate Symptoms	<i>redness, severe irritation, pain</i>
Response	Rinse cautiously with water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention

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PURE SILICONE MODIFIED CONFORMAL COATING**Section 5: Fire-Fighting Measures**

Extinguishing Media	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. Use water spray to cool containers.
Specific Hazards	The vapors are heavier than air and may accumulate in low-lying areas. Vapors may travel long distances and ignite at an ignition source, which can cause a flashback or an explosion.
Combustion Products	Produces carbon oxides (CO, CO ₂).
Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

Section 6: Accidental Release Measures

Personal Protection	See personal protection recommendations in Section 8.
Precautions for Response	Remove or keep away all sources of extreme heat or open flames. Do not breathe mist, vapors, and spray.
Environmental Precautions	Avoid releasing to the environment. Prevent spill from entering drains and waterways.
Containment	Contain with inert absorbent (such as soil, sand, vermiculite).
Cleaning	Collect the liquid in a sealable, solvent-resistant container. Sprinkle inert absorbent compound onto spill, then sweep into the container. Wipe off residues with paper towels and place the used towels in the waste container. Wash the spill area with soap and water to remove remaining residues. RECOMMENDATION: Use a grounded stainless steel or carbon steel container.
Disposal	Dispose of spill waste according to Section 13.

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Section 7: Handling and Storage
Prevention

Keep out of reach of children.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Take precautionary measures against static discharge.

Do not breathe mist, vapors, and spray. Use only outdoors or in well-ventilated area. In cases of inadequate ventilation wear respiratory protection.

Avoid release to the environment.

Handling

Wear protective gloves, protective clothing, eye protection, and face protection.

Wash hands thoroughly after handling.

Storage

Keep container tightly closed.

Store in a well-ventilated area. Keep cool.

Store locked up.

Section 8: Exposure Controls/Personal Protection
Substances with Occupational Exposure Limit Values

Chemical Name	Country/ Provinces	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
xylene (mixed isomers)	ACGIH	100 ppm	150 ppm
	U.S.A. OSHA PEL	100 ppm	Not established
	Canada AB	100 ppm	150 ppm
	Canada BC	100 ppm	150 ppm
	Canada ON	100 ppm	150 ppm
	Canada QC	100 ppm	150 ppm

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Chemical Name	Country/ Provinces	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
ethylbenzene	ACGIH	20 ppm	Not established
	U.S.A. OSHA PEL	100 ppm	Not established
	Canada AB	100 ppm	125 ppm
	Canada BC	20 ppm (2B)	Not established
	Canada ON	100 ppm	125 ppm
	Canada QC	100 ppm	125 ppm
toluene	ACGIH	20 ppm	Not established
	U.S.A. OSHA PEL	200 ppm	300 ppm
	Canada AB	50 ppm	Not established
	Canada BC	20 ppm	Not established
	Canada ON	20 ppm	Not established
	Canada QC	100 ppm	150 ppm

Note: Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH¹, OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from the RTECS² database and from suppliers' SDS were also consulted. Short term exposure limits (STEL) are for 15 min and long term permissible exposure limits (PEL) for 8 h.

(2B) Carcinogen

Engineering Controls
Ventilation

Keep airborne concentrations below the occupational exposure limits (OEL).

Personal Protective Equipment
Eye Protection

Wear appropriate protective eyeglasses or chemical safety goggles.

RECOMMENDATION: Use safety glasses with lateral protection (side shields).

Skin Protection

For incidental contacts, use disposable nitrile, neoprene, or other chemically resistant gloves.

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For over-exposures up to 10 x OEL of mist, vapors, and spray, wear respirator such as a half-mask respirator with organic vapor cartridges and particulate filter.

Above 10 x OEL, use a positive-pressure, air-supplied respirator or a self-contained breathing apparatus.

RECOMMENDATION: Consult your local safety supply store to ensure that your respirator has a NIOSH (U.S.) approved filter cartridges appropriate for the ingredients listed in Section 3. The respirator should be fitted to the employee by a professional. Ensure vapor cartridges are stored in sealed plastic bags when not being used.

General Hygiene Considerations

Wash hands thoroughly with water and soap after handling.

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Section 9: Physical and Chemical Properties

Physical State	Liquid	Lower Flammability Limit ^{c)}	1.2%
Appearance	Clear	Upper Flammability Limit ^{c)}	7.6%
Odor	Aromatic	Vapor Pressure @20 °C ^{c)}	1.06 kPa [7.95 mmHg]
Odor Threshold	≥0.324 ppm	Vapor Density ^{b)}	>3.16 (Air = 1)
pH	Not available	Relative Density @25 °C	0.98
Freezing/Melting Point	Not available	Solubility in Water	Insoluble
Initial Boiling Point ^{b)}	137 °C [279 °F]	Partition Coefficient (n-octanol/water)	Not available
Flash Point ^{a)}	24.5 °C [76 °F]	Auto-ignition Temperature ^{b)}	500 °C [932 °F]
Evaporation Rate	0.86 (ButAc = 1)	Decomposition Temperature	Not available
Flammability	Flammable	Viscosity @40 °C	<20.5 mm ² /s

a) Based on supplier SDS

b) Based on xylene component

c) Based on Raoult's Law and LeChatelier' principal

Section 10: Stability and Reactivity

Reactivity	Not available
Chemical Stability	Chemically stable at normal temperatures and pressures
Conditions to Avoid	Ignition sources, excessive heat, and incompatible substances. Vapors may form explosive mixture with air.
Incompatibilities	strong oxidizing agents, strong acids, strong bases
Polymerization	Will not occur
Decomposition	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

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Section 11: Toxicological Information

Summary of Effects and Symptoms by Routes of Exposure

Ingestion	May cause a burning sensation, abdominal pain, nausea, vomiting (See also inhalation symptoms).
Skin	Causes skin redness, skin irritation, and dry skin.
Inhalation	May cause irritation of the respiratory track, cough, dizziness, drowsiness, and headaches (<i>in extreme overexposure cases: unconsciousness and death</i>).
Eyes	Causes redness, severe irritation, and pain.
Chronic	<p>Prolonged or repeated exposure may cause skin dryness and cracking, defat skin, and local redness and discomfort.</p> <p>Prolonged and repeated exposure is possibly carcinogenic based on inhalation studies on rats.</p> <p>Prolonged or repeated overexposure may damage the liver and kidneys.</p> <p>Long term exposure to loud noises and product vapors may lead to some hearing loss.</p>

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
xylene	4 350 mg/kg Rat	>5 000 mg/kg Rabbit	5 000 ppm 4 h Rat
ethylbenzene	3 500 mg/kg Rat	>5 000 mg/kg Rabbit	35 500 mg/m ³ 2 h Mouse
toluene	5 580 mg/kg Rat	12 124 mg/kg Rabbit	49 g/m ³ 4 h Rat

Note: Toxicity data from the RTECS² and ECHA were consulted. The data from supplier SDS were also consulted.

422BP**PURE SILICONE MODIFIED CONFORMAL COATING****Other Toxicological Effects**

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes severe eye irritation.
Sensitization (allergic reactions)	Based on available data, the classification criteria are not met.
Carcinogenicity (risk of cancer)	Ethylbenzene [100-41-4] IARC Group 2B: Possibly carcinogenic to humans ACGIH A3: Confirmed animal carcinogen with unknown relevance to humans CA Prop 65: Listed as a carcinogen NTP: Not listed
Mutagenicity (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.
Reproductive Toxicity (risk to sex functions)	At high doses, spermatogenesis was observed in male rat by inhalation of toluene.
Teratogenicity (risk of fetus malformation)	Fetotoxicity is observed in animal studies for inhalation and oral exposures for toluene.
STOT-single exposure	Xylene isomers and toluene can affect the central nervous system by inhalation causing drowsiness or dizziness. They are a respiratory system irritant.
STOT-repeated exposure	Contains toluene, which is a Cat 2 STOT repeated exposure hazard for the central nervous system and cochlear systems. Prolonged or repeated over-exposure to toluene, p-xylene and ethylbenzene and noise can lead to hearing loss (cochlear impairment) according to rat inhalation studies. Prolonged or repeated over-exposure to xylenes can damage the liver, kidneys, and central nervous system. At high levels of exposures, ethylbenzene causes damage of the liver.
Aspiration hazard	The liquid content is classified as Cat 1 aspiration hazards.

422BP**PURE SILICONE MODIFIED CONFORMAL COATING****Section 12: Ecological Information**

Ecological classifications are based on the IMDG/GHS criteria in conjunction with ecotoxicological data from our suppliers, the European Chemical Agency database (<http://echa.europa.eu>), and other reliable sources.

Xylene isomers mixture is acutely toxic to the aquatic environment of category 2 with a minimal LC50 96 h of 2.5 mg/L for *Oncorhynchus mykiss* (rainbow trout).

Ethylbenzene is an acute category 2 environmental toxicant with minimal LC50 96 h of 4.2 mg/L for *Oncorhynchus mykiss* (rainbow trout); EC50 48 h of 2.9 mg/L and 7d NOEL of 0.91 mg/L *Daphnia magna* (water flea).

Toluene is an acute category 2 environmental toxicant with minimal LC50 96 h of 7.63 mg/L for *Oncorhynchus mykiss* (rainbow trout); EC50 24 h of 8.9 mg/L *Daphnia magna* (water flea); EC50 24 h of 10 mg/L *Pseudokirchneriella subcapitata* (green algae).

Acute Ecotoxicity

See chronic ecotoxicity

Chronic Ecotoxicity

Category 3

Harmful to aquatic life with long lasting effects.

Avoid release to the environment.

Biodegradability

Readily biodegradable. Product is volatile and only slightly soluble in water. In water and soil, it is biodegradable under both aerobic and anaerobic condition. Photooxidation in the atmosphere are typically in the range of 0.5 to 1.5 days.

Other Effects

VOC (EPA, WHIMS, and Europe) = 100% (980 g/L)

*VOC = Regulated Volatile Organic Content

Section 13: Disposal Information

Dispose of contents in accordance with all local, regional, national, and international regulations.

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Section 14: Transport Information

Ground

Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations); **USA DOT 49 CFR** (Parts 100 to 185) **Regulations.**

Sizes 5 L and under

422BP-4L

Limited Quantity



Sizes greater than 5 L

422BP-20L

UN number: UN1263

Shipping Name: PAINT

Class: 3

Packing Group: III

Marine Pollutant: No



Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Sizes 5 L and under

422BP-4L

Limited Quantity

Total net quantity per package 10 L



Sizes up to 60 L (Passenger), 220 L (Cargo)

422BP-20L

UN number: UN1263

Shipping Name: PAINT

Class: 3

Packing Group: III

Marine Pollutant: No



Sea

Refer to IMDG regulations.

Sizes 5 L and under

422BP-4L

Limited Quantity

Packing instructions P001



Sizes greater than 5 L

422BP-20L

UN number: UN1263

Shipping Name: PAINT

Class: 3

Packing Group: III

Marine Pollutant: No



Note: Shipper must be appropriately trained and certified before involvement with the transport of dangerous goods.

422BP**PURE SILICONE MODIFIED CONFORMAL COATING****Section 15: Regulatory Information****Canada****Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)**

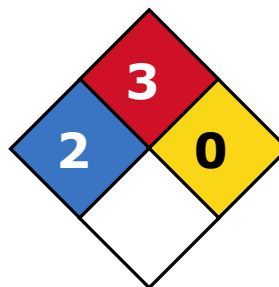
All hazardous ingredients are listed on the DSL/NDSL.

Hazardous Products Act (R.S.C., 1985, c. H-3)

The safety data sheet and label comply with the Hazardous Product Act and WHMIS 2015.

USA**Other Classifications****HMIS® RATING**

HEALTH:	*	2
FLAMMABILITY:		3
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)

CAA (Clean Air Act, USA)

This product does not contain any class 1 ozone depleting substances.

This product does not contain any class 2 ozone depleting substances.

This product contains xylenes, ethylbenzene, and toluene that are listed as hazardous air pollutants.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product contains ethylbenzene (CAS# 100-41-4; reportable quantity = 1 000 lb) and xylene (CAS# 1330-20-7, reportable quantity = 100 lb), which are subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

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422BP**PURE SILICONE MODIFIED CONFORMAL COATING****California Proposition 65** (Chemicals known to cause cancer or reproductive toxicity, USA)

This product contains ethylbenzene, which is listed as a carcinogen.

This product contains toluene, which is listed as reproductively toxic.

Europe**RoHS** (Restriction of Hazardous Substances Directive)

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, PBDE's, DEHP, BBP, DBP, or DIBP and complies with European RoHS regulations.

WEEE (Waste Electrical and Electronic Equipment Directive)

This product is not a piece of electrical or electronic equipment and is therefore not governed by this regulation.

Section 16: Other Information

SDS Prepared by	Regulatory Department
Date	27 February 2020
Supersedes	29 April 2019
Reason for Changes:	Update to emergency contact information.

References

- 1) ACGIH 2017 TLVs and BEIs: Based on the documentation of the threshold limit values for chemical substances and physical agents & biological exposure indices, American Conference of Governmental of Industrial Hygienist Cincinnati, OH (2017).
- 2) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

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422BP**PURE SILICONE MODIFIED CONFORMAL COATING****Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
PEL	Permissible Exposure Limit
STEL	Short-Term Exposure Limit
TCLo	Lowest published toxic concentration
TWA	Time Weighted Average
VOC	Volatile Organic Content

Technical Queries 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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