4229 **CONNECTOR COATING**

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Identifier: 4229

Other Means of Identification: Connector Coating

Related Part # 4229-55ML, 4229-1L, 4229-4L

Recommended Use and Restriction on Use

Uses: Electrically insulating coating used as an electrical tape substitute

Uses Advised Against: Not available

Details of Manufacturer or Importer

Manufacturer
MG Chemicals
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA

☎ +1-800-340-0772
FAX +1-800-340-0773
E-MAIL support@mgchemicals.com
WEB www.mgchemicals.com

MG Chemicals (Head Office)
9347-193 Street
Surrey, British Columbia V4N 4E7
CANADA

☎ +1-905-331-1396
FAX +1-905-331-2682
E-MAIL info@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 the transport of dangerous goods; 24/7 service
CANADA—Call CANUTEC collect at ***+1-613-996-6666*** or ****666*** on cellular phones

Section 2: Hazard(s) Identification

Classification of Hazardous Chemical

GHS Categories

Criteria		Category	Signal Word	Pictograms
Flammable liquid		2	Danger	Flame
Carcinogenicity		2	Warning	Health
Reproductive Toxicity		2	Warning	Health
Specific target organ toxicity	Repeated exposure	2	Warning	Health
Eye Irritation		2	Warning	Exclamation
Skin Irritation		2	Warning	Exclamation
Specific target organ toxicity	Single exposure	3	Warning	Exclamation
Hazardous to the Aquatic Environment	Chronic	2	None	Environment

Note: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity), which is opposite to HMIS and NFPA conventions. Severity category rankings do not allow comparisons between classes.

Label Elements

Signal Word	**DANGER**
Pictograms	**Hazard Statements**
	H225: Highly flammable liquid and vapor
	H373: May cause damage to central nervous system or inner ear through prolonged or repeated exposure H351: Suspected of causing cancer H361: Suspected of damaging fertility or the unborn child
	H319: Causes serious eye irritation H315: Causes skin irritation H336: May cause dizziness or drowsiness

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Pictograms	Hazard Statements
	H411: Toxic 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.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof equipment.
P243	Take action to prevent static discharge.
P260	Do not breathe mist or vapors.
P271	Use only outdoors or in a well-ventilated area.
P233	Keep container tightly closed.
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, chemical foam, or water spray to extinguish.
P308 + P313	IF exposed or concerned: Get medical advice or attention.
P304 + P340, P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE or doctor if you feel unwell.
P303 + P361 + P364 + P352	IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs: Get medical advice or attention.

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Response	Precautionary Statements
P305 + P351 + P358	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
P337 + P313	If eye irritation persists: Get medical attention.
P391	Collect spillage.
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
None	None	None	None

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
64742-89-8	solvent naphtha (petroleum), light aliphatic	30–60%
110-54-3	n-hexane	10–30%
1330-20-7	xylene (mixed isomers)	10–30%
67-64-1	acetone	5–10%
100-41-4	ethylbenzene	1–5%
112945-52-5	silica, amorphous fumed	1–5%
1333-86-4	carbon black	0.1–1%

Section 4: First-Aid Measures

Exposure Condition	*GHS Code/Symptoms/Precautionary Statements*
IF ON SKIN (or hair)	P303 + P361 + P364 + P352, P332 + P313, P308 + P313
Immediate Symptoms	*irritation, redness, dry skin*
Response	Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice or attention. EN CAS d'exposition prouvée ou suspectée : Demander un avis médical ou consulter un médecin.
IF IN EYES	P305 + P351 + P338, P310, P337 + P313
Immediate Symptoms	*irritation, tearing, redness, pain, blurred vision*
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 attention.
IF INHALED	P304 +P340, P312, P308 + P313
Immediate Symptoms	*respiratory irritation*
Response	Remove person to fresh air (out of the contaminated zone) and keep comfortable for breathing. Call a POISION CENTER or doctor if you feel unwell. IF exposed or concerned: Get medical advice or attention.
IF SWALLOWED	P301 + P330 + P331, P312
Immediate Symptoms	*irritation, nausea, vomiting*
Response	Rinse mouth. Do NOT induce vomiting. Call a POISION CENTER or doctor if you feel unwell.

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. Prevent fire-fighting wash from entering waterway or sewer system.
Combustion Products	Produces carbon oxides (CO, CO_2).
Fire-fighters	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

Section 6: Accidental Release Measures

Personal Protection	Use personal protection recommended in Section 8.
Precautions for Response	Do not breathe fumes or vapors. Remove all sources of ignition. Keep away from extreme heat or open flames.
Environmental Precautions	Prevent spill from entering drains and waterways.
Containment Methods	Contain with inert absorbent (such as soil, sand, vermiculite).
Cleaning Methods	Collect liquid in a sealable, solvent-resistant container. Sprinkle inert absorbent compound onto spill, then sweep into the container. Wash spill area with soap and water to remove the last traces of residue. **RECOMMENDATION:** Use a grounded stainless steel or carbon steel container or a solvent resistant plastic container.
Disposal Methods	Dispose of spill waste according to Section 13.

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.

Do not breathe fume or vapors. Use only outdoors or in well-ventilated area. Keep container tightly closed.

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

Use explosion proof equipment. Take action to prevent static discharge. For large metal containers, ground and bond container and receiving equipment. Use explosion-proof equipment.

Avoid release to the environment.

Handling

Wear protective gloves, protective clothing, and eye protection.

Take off immediately all contaminated clothing and wash it before reuse.

Wash hands thoroughly after handling.

Storage

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	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
n-hexane	ACGIH	50 ppm	Not established
	U.S.A. OSHA PEL	50 ppm	Not established
	Canada AB	50 ppm	Not established
	Canada BC	50 ppm	Not established
	Canada ON	50 ppm	Not established
	Canada QC	50 ppm	Not established
xylene (mixed isomers)	ACGIH	100 ppm	Not established
	U.S.A. OSHA PEL	100 ppm	150 ppm
	Canada AB	500 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	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
acetone	ACGIH	500 ppm	750 ppm
	U.S.A. OSHA PEL	1 000 ppm	1 000 ppm
	Canada AB	500 ppm	750 ppm
	Canada BC	250 ppm	500 ppm
	Canada ON	500 ppm	750 ppm
	Canada QC	750 ppm	1 000 ppm
ethylbenzene	ACGIH	100 ppm	Not established
	U.S.A. OSHA PEL	100 ppm	125 ppm
	Canada AB	150 ppm	200 ppm
	Canada BC	20 ppm	Not established
	Canada ON	100 ppm	125 ppm
	Canada QC	100 ppm	125 ppm
carbon black [a)]	ACGIH	3.5 mg/m^3	Not established
	U.S.A. OSHA PEL	3.5 mg/m^3	Not established
	Canada AB	3.5 mg/m^3	Not established
	Canada BC	3 mg/m^3	Not established
	Canada ON	3.5 mg/m^3	Not established
	Canada QC	3.5 mg/m^3	Not established

Note: Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH[1], OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from the RTECS database[2] 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.

a) Respirable airborne particles

Engineering Controls

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

Section continued on the next page

Personal Protective Equipment

Eye/Face Protection

Wear appropriate protective eyeglasses or chemical safety goggles.

RECOMMENDATION: Ensure that glasses have side shields for lateral protection.

Skin Protection

For full contact, use of protective gloves in viton or other chemically resistant gloves.

For incidental splash contact, use nitrile rubber or other chemically resistant gloves.

Respiratory Protection

For over-exposures up to 10 x OEL of mist, vapors, or 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.

Section 9: Physical and Chemical Properties

Physical State	Liquid	**Lower Flammability Limit** [a)]	1%
Appearance	Black	**Upper Flammability Limit** [a)]	9%
Odor	Aromatic hydrocarbon	**Vapor Pressure @20 °C**	25 kPa [185 mmHg]
Odor Threshold	Not available	**Vapor Density**	>2 (Air = 1)
pH	Not available	**Relative Density @25 °C**	0.83
Freezing/Melting Point	Not available	**Solubility in Water**	Insoluble
Initial Boiling Point	≥56 °C [≥133 °F]	**Partition Coefficient n-octanol/water**	Not available
Flash Point	-19.5 °C [-3.1 °F]	**Auto-ignition Temperature** [a)]	Not available
Evaporation Rate	>1 (ButAc =1)	**Decomposition Temperature**	Not available
Flammability	Highly Flammable	**Viscosity @25 °C**	3 970 mm^2/s

a) Calculated based on Raoult's Law and using Le Chatelier principle

Section 10: Stability and Reactivity

Reactivity	Not available
Chemical Stability	Chemically stable at normal temperatures and pressures.
Possible Hazardous reactions	No hazardous polymerization
Conditions to Avoid	Ignition sources, excessive heat, and incompatible substances. Vapors may form explosive mixture with air.
Incompatibilities	Strong oxidizing agents, strong bases, strong acids, alkali metals
Decomposition	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

Section 11: Toxicological Information

Summary of Effects and Symptoms by Routes of Exposure

Eyes	Causes moderate to severe irritation, tearing redness, pain, and blurred vision.
Skin	Causes moderate skin irritation, redness, and dry skin.
Inhalation	May cause irritation of the respiratory tract.
Ingestion	May cause irritation, nausea, vomiting.
Chronic	Prolonged or repeated exposure may cause skin dryness and cracking, and defat skin. Chronic exposure with co-exposure to loud noises may lead to hearing loss. Long term exposure to loud noises and vapors of xylene and ethylbenzene may lead to some hearing loss and kidney damage (nephropathy). Chronic inhalation or ingestion of large doses may cause central nervous system depression. Prolonged and repeated exposure is possibly carcinogenic based on animal inhalation studies. Ingestion or inhalation of material, mist, or vapor during pregnancy increases the chances fetal death and developmental defects.

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
solvent naphtha (petroleum), light aliphatic	>5 000 mg/kg Rat	>2 000 mg/kg Rabbit	Not available
n-hexane	15 480 mg/kg Rat	>1.3 g/kg Rabbit [b)]	627 000 ppm 3 min Rat
xylene	4 350 mg/kg Rat	>1 700 mg/kg Rabbit	5 000 ppm 4 h Rat
acetone	5 800 mg/kg Rat	>9 400 μL/kg Guinea pig	44 g/m^3 4 h Rat
ethylbenzene	3 500 mg/kg Rat	>5 000 mg/kg Rabbit	35 500 mg/m^3 2 h Mouse

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Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
silica, amorphous fumed	3 160 mg/kg Rat	Not available	Not available
carbon black	>15 g/kg Rat	>3 g/kg Rabbit	Not available

Note: Toxicity data from the RTECS[2] and ECHA databases were consulted. The data from supplier SDS were also consulted.

Other Toxicological Effects

Skin corrosion/irritation — Provoke a skin irritation according to Draize test on animals.

Serious eye damage/irritation — Causes a serious eye irritation according to Draize tests on animals.

Respiratory or Skin 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

Carbon Black [1333-86-4]

IARC Group 2B: Possibly carcinogenic to humans

ACGIH A4: Not classified as a human carcinogen

CA Prop 65: Listed as a carcinogen (airborne, as unbound particles of respirable size)

NTP: Not listed

Mutagenicity (risk of heritable genetic effects) — Based on available data, the classification criteria are not met.

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Reproductive Toxicity (risk to sex functions)	Based on available data, the classification criteria are not met.
Teratogenicity (risk of fetus malformation)	The n-hexane component causes harm to fetus according to animal studies.
STOT-single exposure	Inhalation of solvent naphtha (petroleum), n-hexane, and xylene isomers can affect the central nervous system causing drowsiness or dizziness.
STOT-repeated exposure	Prolonged or repeated over-exposure to p-xylene and ethylbenzene and noise can lead to hearing loss (cochlear impairment) according to rat inhalation studies. At high levels of exposures, ethylbenzene causes damage of the liver.
Aspiration hazard	Does not meet classification criteria. The mixture has about 63% cat 1 components, but its kinematic viscosity is well above the 20.5 mm^2/s threshold at 40 °C.

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.

The solvent naphtha (petroleum), light aliphatic and n-hexane components are classified as chronic category 2 environmental toxicants.

Xylene isomers are an acute category 2 environmental toxicant with minimal LC50 of 2.5 mg/L for fish; EC50 1 mg/L 48 h Daphnia magna (water flea).

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

Acetone is not toxic to the aquatic environment with a LC50 96 h of 5 540 mg/L for Oncorhynchus mykiss (rainbow trout) and EC50 48 h of 13 500 mg/L for Daphnia magna (water flea).

Fumed silica and carbon black are non-hazardous for the environment for according to GHS classification criteria.

Section continued on the next page

Acute Ecotoxicity

See the chronic ecotoxity.

Chronic Ecotoxicity

Category 2

Toxic to aquatic life with long lasting effects

Avoid release to the environment. Collect spillage.

Biodegradability

Not available

Bioaccumulative Potential

No data available

Other Adverse Effects

Volatile Organic Compound (VOC) = 67% [556 g/L]

Section 13: Disposal Considerations

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

Section 14: Transport Information

Ground

Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations); **USA CFR 49 Regulations** (Parts 100 to 185).	
Sizes 5 L and under *4229-55ML, 4229-1L, 4229-4L* **Limited Quantity** 	

Section continued on the next page

Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Sizes 0.5 L and under
4229-55ML
Limited Quantity

Total Net Qty/Outer
Pkg = 1 L

Sizes up to 5 L (passenger) 60 L (cargo)
4229-1L, 4229-4L
UN number: UN1139
Shipping Name:
COATING SOLUTION
Class: 3
Packing Group: II
Marine Pollutant: Yes

Sea

Refer to IMDG regulations.

Sizes 5 L and under
4229-55ML, 4229-1L, 4229-4L
Limited Quantity

FOR REFERENCE ONLY
UN number: UN1139
Shipping Name:
COATING SOLUTION
Class: 3
Packing Group: II
Marine Pollutant: Yes

Note: **Shipper must be appropriately <u>trained and certified</u> before involvement with the transport of dangerous goods.**

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.

Section continued on the next page

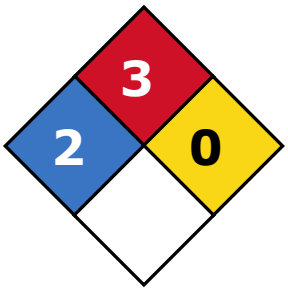
USA

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 n-hexane, xylene, and ethylbenzene, which are listed as hazardous air pollutants.

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

This product contains n-hexane (CAS# 110-54-3; reportable quantity = 100 lb), xylene (CAS# 1330-20-7, reportable quantity = 100 lb), and ethylbenzene (CAS# 100-41-4; reportable quantity = 1 000 lb), which are subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

This product contains acetone (CAS# 78-93-3, reportable quantity = 5 000 lb), which can be subject to the CERCLA reporting requirements.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

California Proposition 65
(Chemicals known to cause cancer or reproductive toxicity, USA).

This product contains n-hexane, which is listed as reproductively toxic in California.

This product contains carbon black (airborne, unbound particles of respirable size), which is listed as a carcinogen.

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

Section continued on the next page

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 electronics equipment and is therefore not governed by this regulation.

Section 16: Other Information

Prepared by the	Regulatory Affairs Department
Date of Revision	06 March 2020
Supersedes	18 November 2019
Reason for Changes:	Update to the emergency phone number information and general revision.

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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Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
EC50	Half maximal effective concentration
EL50	Half maximal effective loading
NOELR	No observable effect loading ratio
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
OEL	Occupational Exposure Limit
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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Largest Supplier of Electrical and Electronic Components

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