

4225-A

EPOXY CONFORMAL COATING

# Safety Data Sheet

## Section 1: Identification

### Product Identifier and Other Means of Identification

**Product Identifier:** 4225-A**Other Means of Identification:** Epoxy Conformal Coating**Related Part #** 4225-1.35L, 4225-2.7L, 4225-10.8L, 4225-60L, 4225-540L

### Recommended Use and Restriction on Use

**Use:** Conformal coating epoxy resin**Uses Advised Against:** Not applicable

### 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](mailto:support@mgchemicals.com)**Web** [www.mgchemicals.com](http://www.mgchemicals.com)**E-MAIL** (Competent Person): [sds@mgchemicals.com](mailto: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)



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System**

SAI Global File #004008  
Burlington, Ontario, Canada

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**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

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**Section 2: Hazard(s) Identification**

**Classification of Hazardous Chemical**

**GHS Categories**

Criteria		Category	Signal Word	Pictograms
Flammable Liquid		2	Danger	Flame
Sensitization	Skin	1	Warning	Exclamation
Skin Irritation		2	Warning	Exclamation
Eye 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**

<b>Signal Word</b>	<b>DANGER</b>
<b>Pictograms</b>	<b>Hazard Statements</b>
	H225: Highly flammable liquid and vapor
	H317: May cause an allergic skin irritation H315: Causes skin irritation H319: Causes serious eye irritation H336: May cause drowsiness or dizziness

*Section continued on the next page*

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	<p>H411: Toxic to aquatic life with long lasting effects</p>
<p><b>Prevention</b></p>	<p><b>Precautionary Statements</b></p>
<p>P102 P210 P233 P240 P241 P243 P261, P271 P272 P280 P264 P273</p>	<p>Keep out of reach of children. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Take action to prevent static discharges. Avoid breathing mist, vapors, and spray. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, protective clothing, eye protection, and face protection. Wash hand thoroughly after handling. Avoid release to the environment.</p>
<p><b>Response</b></p>	<p><b>Precautionary Statements</b></p>
<p>P370 + P378 P303 + P361 + P352 P333 + P313 P305 + P351 + P338 P337 + P313</p>	<p>In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses. If present and easy to do. Continued rinsing. If eye irritation persists: Get medical advice/attention.</p>

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P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P391	Collect spillage.
<b>Storage</b>	<b>Precautionary Statements</b>
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
<b>Disposal</b>	<b>Precautionary Statements</b>
P501	Dispose of contents/container in accordance to local/regional/international regulations.

**Other Hazards**

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

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

<b>CAS #</b>	<b>Chemical Name</b>	<b>% (weight)</b>
25085-99-8	propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	50%
67-63-0	isopropyl alcohol	26%
123-86-4	n-butyl acetate	12%
68609-97-2	alkyl glycidyl ether	7%
67-64-1	acetone	5%

**Section 4: First-Aid Measures**

<i>Exposure Condition</i>	<i>GHS Code/Symptoms/Precautionary Statements</i>
<b>IF ON SKIN</b>	P302 + P352, P362 + P364, P333 + P313
<b>Immediate Symptoms</b>	<i>dry skin, redness, irritation, allergic dermatitis</i>
<b>Response</b>	Wash with plenty of water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.

*Section continued on the next page*

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<b>IF IN EYES</b>	P305 + P351 + P338, P337 + P313
<b>Immediate Symptoms</b>	<i>irritation, pain, blurred vision</i>
<b>Response</b>	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/attention.
<b>IF INHALED</b>	P304 + P340
<b>Immediate Symptoms</b>	<i>headache, sore throat, cough, confusion, dizziness, drowsiness</i>
<b>Response</b>	Remove person to fresh air and keep comfortable for breathing.
<b>IF SWALLOWED</b>	P301 + P330, P331
<b>Immediate Symptoms</b>	<i>low toxicity</i>
<b>Response</b>	Rinse mouth. Do NOT induce vomiting.

### Section 5: Fire-Fighting Measures

<b>Extinguishing Media</b>	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish.  Use water spray to cool containers.
<b>Specific Hazards</b>	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.
<b>Combustion Products</b>	Produces carbon oxides (CO, CO <sub>2</sub> ), nitrogen oxides (NO <sub>x</sub> ), sulphur oxides, and toxic fumes.
<b>Fire-Fighter</b>	Wear self-contained breathing apparatus and full firefighting turn-out gear.

### Section 6: Accidental Release Measures

<b>Personal Protection</b>	See personal protection recommendations in Section 8.
<b>Precautions for Response</b>	Avoid breathing the mist, spray, and vapors. Remove or keep away all sources of ignition or extreme heat.
<b>Environmental Precautions</b>	Avoid releasing to the environment. Prevent spill from entering drains and waterways.
<b>Containment Methods</b>	Contain with inert and nonflammable absorbent (such as soil, sand, vermiculite).
<b>Cleaning Methods</b>	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.  <b>RECOMMENDATION:</b> Use a grounded stainless steel or carbon steel container.
<b>Disposal Methods</b>	Dispose of spill waste according to Section 13.

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### Section 7: Handling and Storage

#### Prevention

Keep out of reach of children.

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.

Keep container tightly closed.

Avoid breathing mist, vapors, and spray. Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

#### Handling

Wear protective gloves, protective clothing, eye protection.

Wash hand thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Collect spillage.

#### Storage

Store in a well-ventilated place. Keep cool.

Store locked up.

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

**Substances with Occupational Exposure Limit Values**

<b>Chemical Name</b>	<b>Country/Province</b>	<b>Long Term Exposure Limits (PEL)</b>	<b>Short Term Exposure Limits (STEL)</b>
isopropyl alcohol	ACGIH	200 ppm (TWA)	400 ppm
	U.S.A. OSHA PEL	400 ppm	Not established
	Canada AB	200 ppm	400 ppm
	Canada BC	200 ppm	400 ppm
	Canada ON	200 ppm	400 ppm
	Canada QC	400 ppm	500 ppm
n-butyl acetate	ACGIH	150 ppm	Not established
	U.S.A. OSHA PEL	150 ppm	Not established
	Canada AB	150 ppm	200 ppm
	Canada BC	20 ppm	200 ppm
	Canada ON	150 ppm	Not established
	Canada QC	150 ppm	200 ppm
acetone	ACGIH	500 ppm	750 ppm
	U.S.A. OSHA PEL	1 000 ppm	Not established
	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

*Note:* Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH<sup>1</sup>, OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from suppliers' SDSs were also consulted. Short term exposure limits (STEL) are for 15 min and long term permissible exposure limits (PEL) for 8 h.

**Engineering Controls**

**Ventilation**

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

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**Personal Protective Equipment**

**Eye protection**

Wear appropriate protective eyeglasses or chemical safety goggles.

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

**Skin Protection**

For likely contacts, use of protective butyl rubber or other chemically resistant gloves.

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

**Respiratory Protection**

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

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**

<b>Physical State</b>	Liquid	<b>Lower Flammability Limit</b>	2.3%
<b>Appearance</b>	Clear	<b>Upper Flammability Limit</b>	14%
<b>Odor</b>	Ester-like	<b>Vapor Pressure @20 °C</b>	<0.001 hPa [<0.001 mmHg]
<b>Odor Threshold</b>	Not available	<b>Vapor Density</b>	>2.01
<b>pH</b>	Not available	<b>Relative Density @25 °C</b>	0.97
<b>Freezing/Melting Point</b>	-90 °C [-130 °F]	<b>Solubility in Water</b>	Partly soluble
<b>Initial Boiling Point <sup>a)</sup></b>	56 °C [133 °F]	<b>Partition Coefficient n-octanol/water</b>	Not available
<b>Flash Point <sup>a)</sup></b>	-17 °C [1.4 °F]	<b>Auto-ignition Temperature <sup>b)</sup></b>	420 °C [788 °F]
<b>Evaporation Rate</b>	Not available	<b>Decomposition Temperature</b>	Not available
<b>Flammability</b>	Highly Flammable	<b>Viscosity @25 °C</b>	<20.5 mm <sup>2</sup> /s

a) Based on acetone component.

b) Based on n-butyl acetate component.

Section 10: Stability and Reactivity

<b>Reactivity</b>	Reacts exothermically with amines.
<b>Chemical Stability</b>	Chemically stable at normal temperatures and pressures.
<b>Conditions to Avoid</b>	Direct sunlight, high temperatures, open flames, sparks and incompatible substances.
<b>Incompatibilities</b>	Strong oxidizing agents, strong bases, acids
<b>Polymerization</b>	Will cause irreversible polymerization with considerable heat buildup with aliphatic amine.
<b>Decomposition</b>	Avoid prolonged exposure to temperatures above 250 °C. Generation of gas during decomposition can cause pressure in closed systems.  For thermal decomposition, see combustion products in Section 5.

Section 11: Toxicological Information

Summary of Effects and Symptoms by Routes of Exposure

<b>Eyes</b>	May cause irritation, pain, and blurred vision.
<b>Skin</b>	May cause dry skin, redness, irritation, allergic dermatitis.
<b>Inhalation</b>	May cause headache, sore throat, cough, confusion, dizziness, and drowsiness.
<b>Ingestion</b>	Low toxicity.
<b>Chronic</b>	Prolonged or repeated exposure may cause dry skin, cracking, as well as defatting of the skin.  Repeated or prolonged skin contact may cause allergic skin reaction.

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers polyphenylene isocyanate	>15 000 mg/kg Rat	23 000 mg/kg Rabbit	Not Available
isopropyl alcohol	5 000 mg/kg Rat	12 800 mg/kg Rabbit	24.6 mg/L 4 h Rat
n-butyl acetate	10 768 mg/kg Rat	>17 600 mg/kg Rabbit	>21.1 mg/L 4 h Rat
alkyl glycidyl ether	19 200 mg/kg Rat	>4 000 mg/kg Rabbit	Not Available
acetone	5 800 mg/kg Rat	7 435 mg/kg Rabbit	16 000 ppm 4 h Rat
Mixture ATE	>5 000 mg/kg	>5 000 mg/kg	58 mg/L

Note: Toxicity data from the ECHA database were consulted. The data from supplier SDSs were also consulted.



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**4225-A****EPOXY CONFORMAL COATING****Other Toxicological Effects****Skin Corrosion/Irritation**

Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers and alkyl glycidyl ether may cause skin irritation.

**Serious Eye Damage/Irritation**

Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers, isopropyl alcohol, and acetone may cause eye irritation.

**Sensitization**  
(allergic reactions)

Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers and alkyl glycidyl ether may cause skin sensitization.

**Carcinogenicity**  
(risk of cancer)

Based on available data, the classification criteria are not met.

**Mutagenicity**  
(risk of heritable genetic effects)

Based on available data, the classification criteria are not met.

**Reproductive Toxicity**  
(risk to sex functions)

Based on available data, the classification criteria are not met.

**Teratogenicity** (risk of fetus malformation)

Based on available data, the classification criteria are not met.

**STOT-Single Exposure**

Isopropyl alcohol, n-butyl acetate, and acetone may cause drowsiness and dizziness through inhalation.

**STOT-Repeated Exposure**

Based on available data, the classification criteria are not met.

**Aspiration Hazard**

Based on available data, the classification criteria are not met.

**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.

Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers is classified as an environmental hazard according to GHS criteria.

**Acute Ecotoxicity**

Available toxicity data does not meet classification thresholds.

**Chronic Ecotoxicity**

Category 2

Toxic to aquatic life with long lasting effects

Avoid release to the environment. Collect Spillage.

**Biodegradability**

Not available

**Other Effects**

Volatile Organic Content (VOC) = 45% [826 g/L]

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**Section 13: Disposal Information**

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 DOT 49 CFR** (Parts 100 to 185) **Regulations.**

Sizes 1 L and under

*Part A of kits 4225-1.35L and 4225-2.7L*

**Limited Quantity**



Sizes greater than 1 L up to 5 L (passenger road and rail vehicle), >5 L (cargo)

*Part B of kits 4225-10.8L, 4225-60L and 4225-540L*

**UN number:** UN1993

**Shipping Name:** Flammable Liquid, N.O.S (isopropyl alcohol, acetone)

**Class:** 3

**Packing Group:** II

**Marine Pollutant:** Yes



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**Air**

**Refer to ICAO-IATA Dangerous Goods Regulations.**

Sizes 0.5 L and under

*Part A of kits 4225-1.35L*

**Limited Quantity**

Max Net Qty/Pkg  
=  
1 L



Sizes greater than 0.5 L

up to 5 L (passenger), 60 L (cargo)

*Part A of kits 4225-2.7L, 4225-10.8L, 4225-60L and 4225-540L*

**UN number:** UN1993

**Shipping Name:** Flammable Liquid, N.O.S (isopropyl alcohol, acetone)

**Class:** 3

**Packing Group:** II

**Marine Pollutant:** Yes



**Sea**

**Refer to IMDG regulations.**

Sizes 1 L and under

*Part A of kits 4225-1.35L and 4225-2.7L*

**Limited Quantity**



Sizes greater than 1 L

*Part A of kits 4225-10.8L, 4225-60L and 4225-540L*

**UN number:** UN1993

**Shipping Name:** Flammable Liquid, N.O.S (isopropyl alcohol, acetone)

**Class:** 3

**Packing Group:** II

**Marine Pollutant:** Yes



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

**4225-A****EPOXY CONFORMAL COATING****Section 15: Regulatory Information****Canada****Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)**

All hazardous ingredients are listed on the DSL.

**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.

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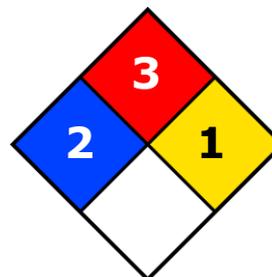
**USA**

**Other Classifications**

**HMIS® RATING**

<b>HEALTH:</b>	<b>*</b>	<b>2</b>
<b>FLAMMABILITY:</b>		<b>3</b>
<b>PHYSICAL HAZARD:</b>		<b>1</b>
<b>PERSONAL PROTECTION:</b>		

**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 does not contain substances that are listed as hazardous air pollutants.

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

This product contains acetone (CAS# 67-64-1), which is subject to the CERCLA reporting requirements at the 5 000 lb (2 268 kg) threshold.

This product contains n-butyl acetate (CAS# 123-86-4), which is subject to the CERCLA reporting requirements at the 5 000 lb (2 268 kg) threshold.

This product contains propan-2-ol (CAS # 67-63-0) which is 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.

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

This product does not contain any substances on the California Proposition 65 list.

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**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**

**SDS Prepared by** MG Chemical's Regulatory Department

**Date of Creation** 09 November 2022

**Supersedes** 05 March 2020

**Reason for Changes:** Update to toxicological information section 11 and to transport section 14

**Reference**

1) ACGIH 2022 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 (2022).

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**4225-A****EPOXY CONFORMAL COATING****Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
EC50	Half maximal effective concentration
EL50	Half maximal effective loading
IARC	International Agency for Research on Cancer
NOELR	No observable effect loading ratio
NTP	National Toxicology Program
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
SDS	Safety Data Sheet
STEL	Short-Term Exposure Limit
TCLo	Lowest published toxic concentration
TWA	Time Weighted Average
VOC	Volatile Organic Content
Wt	Weight

**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](http://www.mgchemicals.com).

Email: [support@mgchemicals.com](mailto:support@mgchemicals.com)

Phone: +1-905-331-1396

**Mailing Addresses**

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Burlington, Ontario  
Canada, L7L 5R6

**Disclaimer**

This safety data sheet is provided as an information resource only. *M.G. Chemicals, Ltd.* believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to query and verify any information seeming suspect where doubt on the validity may exist. The buyer assumes all responsibility of using and handling the product in

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accordance with local, regional, national, and  
international regulations.