CROWN ALLOYS COMPANY

SAFETY DATA SHEET

Section 1 – PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Anti-Spatter and Nozzle Shield in Aerosol Containers.**

PRODUCT IDENTIFICATION: **CROWN 69 (aerosol)**

SPECIFICATION: N/A

RECOMMENDED USE: Anti-Spatter used during various Arc Welding (AW) processes.

SUPPLIER: Crown Alloys Company
30105 Stephenson Hwy.
Madison Heights, MI. 48071

TELEPHONE NUMBER: (248) 588-3790

EMERGENCY NUMBER: **Call CHEMTREC Day or Night 1-800-424-9300 / +1 703-527-3887**

WEBSITE: www.crownalloys.com

Section 2 – HAZARDS IDENTIFICATION

2.1 Classification of the mixture

This product is placed on the market in a pressurized container

2.1.1 Classification in accordance with GHS-US

Aerosol 3	H229	STOT SE 3	H335
Press. Gas	H280	STOT SE 3	H336
Skin Irrit. 2	H315	Carc. 2	H351
Eye Irrit. 2A	H319	STOT SE 2	H371

2.2 Label elements

GHS-US labelling

Hazard Pictograms (GHS-US):

GHS04 GHS08 GHS07

Signal word (GHS-US): Danger

Hazard statements (GHS-US):

H229 – Pressurized container: May burst if heated
H280 – Contains gas under pressure; may explode if heated
H315 – Causes skin irritation
H319 – Causes serious eye irritation
H335 – May cause respiratory irritation
H336 – May cause drowsiness or dizziness
H351 – Suspected of causing cancer
H371 – May cause damage to organs (Nervous System)

Precautionary statements (GHS-US):

P201 – Obtain special instructions before use
P202 – Do not handle until all safety precautions have been read and understood
P260 – Do not breathe dust/fume/gas/mist/vapors/spray
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray
P264 – Wash thoroughly after handling
P270 – Do not eat, drink or smoke when using this product
P271 – Use only outdoors or in a well-ventilated area
P280 – Wear protective gloves/protective clothing/eye protection/face protection
P302 + P352 – IF ON SKIN: Wash with plenty of soap and water
P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 – IF exposed or concerned: Get medical advice/attention
P312 – Call a POISON CENTER or physician if you feel unwell
P314 – Get medical advice and attention if you feel unwell
P332 + P313 – If skin irritation occurs: Get medical advice/attention
P337 + P313 – If eye irritation persists: Get medical advice/attention
P362 – Take off contaminated clothing and wash before reuse
P403+P233 – Store in a well-ventilated place. Keep container tightly closed
P405 – Store locked up
P410 – Protect from sunlight
P501- Dispose of contents/container in accordance with local / regional / national / international regulations

2.3 Other hazards

Caution: Contents under pressure

Aerosol: Do not puncture or incinerate. Do not expose to heat or store at temperatures above 120ºF

2.4 Unknown acute toxicity (GHS-US)

No data available

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Other hazards which do not result in GHS classification:
(When product is used in conjunction with welding)

Electrical shock can kill.
Arc rays can injure eyes and burn skin.
Welding arc and sparks can ignite combustibles and flammable materials.
Overexposure to welding fumes and gases can be hazardous.
Read and understand the manufacturer's instructions, Safety Data Sheets and the precautionary labels before using these alloys. Refer to Section 8.

Substance(s) formed under the conditions of use:

Welding fumes may contain the following constituent(s) and/or their complex metallic oxides as well as solid particles or other constituents from the consumables, base metal, or base metal coating not listed below:

Chemical Identity	CAS-No.	Chemical Identity	CAS-No.	Chemical Identity	CAS-No.
Carbon Dioxide	124-38-9	Ozone	10028-15-6	Nitrogen Dioxide	10102-44-0
Carbon Monoxide	630-08-0				

Section 3 – COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

Full text of H-phrases: See section 16

3.2 Mixture

Reportable Hazardous Ingredients:

Chemical Identity	CAS-No.	Weight Percent (%)	GHS-US Classification
Methylene chloride (Dichloromethane)	75-09-2	85.0 – 98.0	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 STOT SE 3, H335 STOT SE 3, H336 STOT SE 2, H371

Section 4 – FIRST AID MEASURES

4.1 Description of first aid measures

Ingestion: Ingestion is unlikely. Should ingestion occur, do not induce vomiting. Drink several large glasses of water. Never give anything by mouth to an unconscious person. Seek medical attention immediately. **GHS: Category 4**

Inhalation: Remove to fresh air. If not breathing give artificial respiration. Seek medical attention.

Skin Contact: Should irritation occur, wash affected area with soap and water for 15 minutes. Apply a lotion. Launder clothing before reuse. If irritation persists, seek medical attention. **GHS: Category 2**

Eye Contact: Flush eyes with cool, clean water (low pressure) for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid. If irritation persists seek medical attention. **GHS: Category 2A**
Arc rays can injure eyes. If exposed, move victim to a dark room, remove contact lenses and cover eyes with a padded dressing and rest. Obtain medical assistance if symptoms persist.

4.2 Most important symptoms/effects, acute and delayed

Medical Conditions Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions (asthma).

Symptoms/injuries after inhalation: Excessive inhalation of **Crown 69** or its vapors/mists may cause respiratory irritation and central nervous system effects such as headache, dizziness, drowsiness, nausea and unconsciousness. Long term overexposure may cause neural dysfunction and elevated carboxyhemoglobin levels in the blood.

Symptoms/injuries after skin contact: Prolonged skin contact may cause dermatitis, drying and defatting of the skin. It may also cause redness, irritation and scaling of the skin.

Symptoms/injuries after eye contact: May cause stinging, redness, blurred vision and/or tears.

Symptoms/injuries after ingestion: Not an anticipated route of exposure during normal product handling (aerosol). However, ingestion may be harmful or fatal. Overexposure may cause heart, liver, kidney, blood system and nervous system damage. Methylene chloride is converted to carbon monoxide in the body which may worsen heart disease. May cause cancer based on animal data. Delayed effects may be irregular breathing, stomach/intestinal disorders, nausea, vomiting and/or increased liver enzymes. Prolonged or repeated ingestion may cause damage to the liver, blood and salivary gland.

4.3 Indication of immediate medical attention and special treatment needed

Notes to physicians: Adrenaline should never be given to a person overexposed to methylene chloride. The finding of chronic toxic effects in laboratory animals may indicate toxicity to humans.

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Section 5 – FIRE-FIGHTING MEASURES

General Fire Hazards:
(When product is used in conjunction with welding)

Welding arc and sparks can ignite combustibles and flammable products. Read and understand American National Standard Z49.1, "Safety In Welding, Cutting and Allied Processes" and National Fire Protection Association NFPA 51B, "Standard for Fire Prevention During Welding, Cutting and Other Hot Work" before using this product.

5.1 Extinguishing media

Suitable extinguishing media: Use foam, dry chemical powder or carbon dioxide (CO_2).

Unsuitable extinguishing media: None

5.2 Special hazards arising from the substance

Fire hazard: Not flammable.

Explosion hazard: Use a self-contained breathing apparatus. Use water fog to cool containers to prevent rupturing of containers. Aerosol cans are under pressure and may explode upon heating, spread fire and overcome sprinkler systems. Vapors are heavier than air and may accumulate in low lying areas. Combustion products are toxic and corrosive. Combustion may produce hydrogen chloride, phosgene and silicon dioxide.

5.3 Special protective equipment and precautions for firefighters

Special firefighting procedures: Use standard firefighting procedures and consider the hazards of other involved materials.

Special protective equipment for firefighters: Firefighters should always wear self-contained breathing apparatus and full protective clothing for fires involving chemicals or in confined spaces. Do not allow run-off from fire fighting to enter drains or water courses. Stay up wind to avoid hazardous vapors and toxic decomposition products. Use shielding to protect against bursting containers.

Section 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear the appropriate protective equipment as conditions warrant. Do not touch or walk through spilled material. Eliminate all ignition sources. Ventilate area. Wear appropriate clothing as described in Section 8.

6.2 Environmental precautions

Avoid run off to waterways and sewers. Report releases as required by local, state and federal authorities.

6.3 Methods and material for containment and cleaning up

Clean up spills immediately, observing precautions in the personal protective equipment in Section 8. Prevent product from entering any drains, sewers or water sources. Recover free liquid for recycle or disposal. Soak up remainder of the spill with absorbent material and dispose of properly. Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated.
For Large Spills: Keep unauthorized people from the area. Use self-contained breathing apparatus. Dike the area and pump contents to a labeled, closed container. Absorb residue and sweep up. Place in a closed, labeled container. Dispose of properly.

Section 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Wash hands thoroughly after handling. Empty aerosol cans may contain product residue which may exhibit hazards of product. Do not breathe vapor or mist. Avoid contact of raw material with eyes, skin and clothing. Wear protective clothing and equipment as described in Section 8. Use only with adequate ventilation. Do not eat, drink or smoke when using the product. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Cosmetics should not be applied in areas where exposures exist! Routinely wash work clothing and protective equipment to remove contaminants. Contents under pressure. Do not puncture or incinerate container.

Do not cut, grind or weld on or near containers, even empty containers. Follow all SDS precautions when handling empty containers.

In the United States, refer to OSHA 1910.1052 for requirements for handling and use of methylene chloride.

Read and understand the manufacturer's instruction and the precautionary label on the product. See American National Standard Z49.1, "Safety In Welding, Cutting and Allied Processes" published by the American Welding Society, http://pubs.aws.org and OSHA Publication 2206 (29CFR1910), U.S. Government Printing Office, www.gpo.gov.

7.2 Conditions for safe storage, including any incompatibilities

Leave in the original shipping containers (aerosol cans). Store in a cool, dry place. Do not expose aerosol cans to temperatures above 120ºF or the container may rupture. Store aerosol as Level 1 Aerosol (NFPA 30B). Store away from incompatible materials. Store in accordance with local/regional/national regulations.

7.3 Specific end use(s)

For welding consumables and related products

Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Chemical Identity (CAS-No.)	**ACGIH TLV (TWA)**	**OSHA PEL (TWA)**	**NIOSH REL**	**NIOSH STEL**
Methylene chloride (Dichloromethane) (75-09-2)	12.5 ppm	25 ppm 125 ppm (STEL)	N/A	N/A

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8.2 Exposure controls

Appropriate Engineering Controls: (When used in conjunction with welding)

Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gases from the worker's breathing zone & the general area. Maintain exposures below acceptable exposure levels (see Section 8.1). Use industrial hygiene air monitoring to ensure that your use of this product does not create exposures that exceed the recommended exposure limits. Always use exhaust ventilation in user operations such as high temperature cutting, grinding, welding and brazing. Train the welder to keep his head out of the fume plume. Confined spaces require adequate ventilation and/or air supplied respirators. Read and understand the manufacturer's instructions and the precautionary label on the product. See American National Standard Z49.1, Safety in Welding, Cutting, and Allied Processes, published by the American Welding Society, 8669 Doral Blvd. Suite 130, Doral, FL 33166 and OSHA Publication 2206 (29CFR1910), US Government Printing Office, Washington, D.C. 20402 for more details on many of the following.

Eye/face protection: At a minimum, always wear safety glasses with side shields. Additional protection such as goggles, face shields or respirators may be required. Wear helmet or use face shield with filter lens shade number 12 or darker when engaging in any open arc processes. No specific lens shade recommendation for submerged arc processes. Shield others by providing screens & flash goggles.

Skin/Hand Protection: Wear impervious gloves such as Viton, poly vinyl alcohol (PVA).

Respiratory Protection: Crown 69 is usually used in conjunction with many different open arc processes which requires much more vigilant attention to the resulting fumes.

General Respiratory Welding Controls:
Keep your head out of fumes. Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area. An approved respirator should be used unless exposure assessments are below applicable exposure limits. Use respirable fume respirator or air supplied respirator when welding in confined space or where local exhaust or ventilation does not keep exposure below TLV's (see Section 8.1). Use only NIOSH approved respirators in accordance with 29 CFR 1910.134 – Respiratory Protection. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998).

Hygiene measures: Solvent resistant boots, apron and headgear should be used to prevent contact. A safety shower and eye wash should be available in the immediate work area.
Do not eat, drink or smoke when using the product. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Cosmetics should not be applied in areas where exposures exist! Routinely wash work clothing and protective equipment to remove contaminants.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Physical state	Spray liquid
Color	Clear to amber
Odor	Chloroform-like odor
Odor threshold	160 ppm [methylene chloride (Dichloromethane)]
Specific gravity (H_2O=1)	1.32
Water reactive	Not established
Flash point	None
Evaporation rate (BuAc=1)	14.5
Boiling point	104ºF (40ºC)

Flammability limit - upper (UEL)	19% [methylene chloride (Dichloromethane)]
Flammability limit - lower (LEL)	13% [methylene chloride (Dichloromethane)]
Vapor pressure	47.33 KPa
Vapor density (Air=1)	2.93 [methylene chloride (Dichloromethane)]
pH	Not established
Melting point/Freezing point	Not applicable
Solubility in water	1.32 gm/100 gm @ 25ºC
Partition coefficient (n-octanol/water)	Not established
Auto-ignition temperature	Not established
Decomposition temperature	Not established
VOC content	3% (by weight)

Section 10 – STABILITY AND REACTIVITY

10.1 Reactivity

This product is non-reactive under normal conditions of use, storage and transport.

10.2 Chemical stability

This product is stable under normal conditions.

10.3 Possibility of hazardous reactions

Contact with moisture may yield trichloroacetic acid and hydrochloric acid.

10.4 Conditions to avoid

Avoid ignition sources, open flames, amines and strong bases.

10.5 Incompatible materials

Avoid alkalies, acids, oxidizing agents and reactive metals such as aluminum and its alloys, zinc, magnesium, potassium and sodium.

10.6 Hazardous decomposition products

Carbon monoxide, hydrogen chloride, phosgene and chlorine. Normal use of the Crown 69 as per label instructions does not by itself result in any hazardous decomposition products, however, Crown 69 is usually used in conjunction with many different open arc processes. Please note the below likely hazardous decomposition products from general welding operations:

Welding fumes and gases can't be classified simply. The composition and quantity of both are dependent upon the metal being welded and the rods used. Coatings on the metal being welded (such as paint, plating, or galvanizing), the number of welders, the volume of the work area, the quality and the amount of ventilation, the position of the welder's head with respect to the gas plume, the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities), the process and procedures, as well as the welding consumables. Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from an arc, in addition to the shielding gases like argon and helium, whenever they are employed.

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Section 11 – TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Ingestion: Not an anticipated route of exposure during normal product handling (aerosol). However, ingestion may cause mucous membrane and gastrointestinal irritation, nausea, vomiting or diarrhea and other symptoms listed under inhalation. Aspiration into the lungs during ingestion or vomiting may cause serious lung damage which may be fatal. Alcohol consumed before or after exposure may increase adverse effects.

Inhalation: Excessive inhalation of **Crown 69** or its vapors/mists may cause mucous membrane and respiratory irritation and central nervous system depression with symptoms of headache, dizziness, nausea, incoordination, drunkenness, stupor, irregular heartbeat, cardiac arrest, unconsciousness and death. Long term overexposure may cause cardiac sensitization and increased risk of cardiac arrest, adverse effects on the lungs, liver, kidney, nervous system and other internal organs. Carboxyhemoglobin levels can be elevated in persons exposed to methylene chloride causing stress on the cardiovascular system. Alcohol consumption may increase adverse effects.

Skin Contact: Prolonged contact will de-fat and dry skin to a point, persons with sensitive skin may experience mild to moderate redness of irritation. Liquid methylene chloride is painful and irritating if confined to the skin by gloves, clothing, etc.

Eye contact: May cause stinging, redness, blurred vision and/or tears. Direct contact may cause temporary eye damage.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure): Harmful if swallowed

Specified substance: METHYLENE CHLORIDE (Dichloromethane)
LD50 (oral, rat) > 2,000 mg/kg
LC50 (inhalation, rat) = 52,000 mg/m^3
LC50 inhalation, rat) = 49 mg/l/7 hr
LD50 (dermal, rat) > 2,000 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation (product): Methylene chloride (Dichloromethane) has been shown to be irritating in humans on repeated contact particularly when sealed to the skin by shoes or tight clothing.

Serious eye damage/irritation (product): Not classified

Respiratory or skin sensitization (product): This product is not expected to cause sensitization.

Germ cell mutagenicity (product): Methylene chloride (Dichloromethane) tested positive in AMES tests but negative in CHO assay and invivo micronucleus assay.

Carcinogenicity (product):

NTP: Reasonably anticipated to be a Human Carcinogen

IARC: Group 2B: Possibly carcinogenic to humans

OSHA: Specifically regulated carcinogen [Methylene chloride (Dichloromethane)]

ACGIH: Confirmed Animal Carcinogen with Unknown Relevance to Humans (A3)

Methylene chloride (Dichloromethane) has been evaluated for possible cancer causing effects in laboratory animals. Inhalation studies at concentrations of 2,000 and 4,000 ppm increased the incidence of malignant liver and kidney tumors in mice. Three inhalation studies of rats have shown increased incidence of benign mammary gland tumors in female rats at concentrations of 500 ppm and above and increases in benign mammary gland tumors in males at concentrations of 1,500 ppm and above. Rats exposed to 50 and 200 ppm via inhalation showed no increased incidence of tumors. Mice and rats exposed by ingestion at levels up to 250-ppm/kg/day lifetime and hamsters exposed via inhalation to concentrations up to 3,500-ppm lifetime did not show an increased incidence of tumors.

Reproductive toxicity (product): Methylene chloride (Dichloromethane) has been shown to cause reproductive toxicity and/or birth defects only at doses that produce significant toxicity in the parent animal.

Genetic Toxicity (product): Negative results from animal studies

Specific target organ toxicity - single exposure (product): Not classified

Specific target organ toxicity - repeated exposure (product): Not classified

Aspiration hazard (product): Not classified

Other Effects: Not classified

Symptoms related to the physical, chemical and toxicological characteristics under the condition of use: Not classified

Additional toxicological information under the conditions of use:

Repeat Dose Toxicity: Epidemiology studies of 751 humans chronically exposed to methylene chloride in the workplace, of which 252 were exposed for a minimum of 20 years, did not demonstrate any increase in deaths caused by cancer or cardiac problems. A second study of 2,227 workers confirmed these results.

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Section 12 – ECOLOGICAL INFORMATION

Eco-toxicity:

Acute hazards to the aquatic environment:

Fish

Specified substance: METHYLENE CHLORIDE (Dichloromethane)
LC50 (Fathead minnow (Pimephales promelas), 96 h): 193.00 mg/l
NOEC (Sheepshead minnow (Cyprinodon variegatus), 96 h): 130.00 mg/l

Aquatic Invertebrates

Specified substance: METHYLENE CHLORIDE (Dichloromethane)
EC50 (Water flea (Daphnia magna), 48 h): 1,682.00 mg/l

Chronic hazards to the aquatic environment:

Fish (product): Not classified

Aquatic Invertebrates (product): Not classified

Persistence and Degradability

Biodegradation (product): Methylene chloride (Dichloromethane) is reported to completely biodegrade under aerobic conditions with sewage seed or activated sludge between 6 hours to 7 days. 86-92 % conversion to CO2 will occur after a varying acclimation period using anaerobic digestion in wastewater.

Bioaccumulative Potential: Methylene chloride (Dichloromethane) as an estimated BCF of <2 which suggests the potential for bioaccumilation is low.

Mobility in Soil: Potential for mobility in soil is high.

Octanol/Water partition coefficient: 1.25

Organic carbon/Water partition coefficient: 24

Atmospheric half-life: 79 – 110 days

Other Adverse Effects: None

Section 13 – DISPOSAL CONSIDERATIONS

Product Disposal Method: Collect and reclaim or dispose in sealed containers at a licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Under RCRA, it is the responsibility of the user of the final product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This product should be disposed of in accordance with all applicable federal, state and local regulations.

Do not discard into any sewers, on the ground or into any bodies of water.

Contaminated Container or Packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Dispose of spent aerosol cans and packaging in accordance with all federal, state, regional and/or local regulations.

Section 14 – TRANSPORT INFORMATION

In accordance with DOT / ADR / RID / ADNR / IMDG / ICAO / IATA

14.1 UN number

Not a dangerous good in sense of transport regulations

14.2 UN proper shipping name

Not applicable

14.3 Additional information

TDG Shipping Information:

TDG Shipping Name: Aerosols, Non flammable
UN number: 1950
Hazard Class: 2.2
Labeling: Non-flammable gas
Packing Group: None
Sub classification: 6.1

DOT HM-181 Shipping Information:

DOT Shipping Name: Consumer commodity
Hazard Class or Division: ORM-D (on shipping carton)
UN Number: 1950
Packing Group: None
Label(s) Required: None

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Section 15 – REGULATORY INFORMATION

15.1 US Federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Methylene chloride (Dichloromethane) (75-09-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)
Listed on SARA Section 311/312 Hazards

Superfund Amendments and Reauthorization Act of 1986 (SARA):

Section 302 (Product) This product does not contain chemicals regulated under SARA Section 302

Section 311/312 Hazard Categories (Product)

- Immediate Health Hazard – YES
- Delayed Health Hazard – YES
- Fire Hazard – NO
- Reactivity Hazard – NO

Section 313 (Product) This product contains the following chemicals that are regulated under SARA Title III, Section 313:
Methylene Chloride (Dichloromethane) (75-09-2) 85 – 98%

CERCLA: This product has a Reportable Quantity (RQ) of 1,177 lbs. based on the RQ for methylene chloride (Dichloromethane) 1,000 lbs. Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

15.2 US State regulations

Methylene chloride (Dichloromethane) (75-09-2)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes				
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List		U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List		

WARNING: This product can expose you to chemicals including **Dichloromethane**, which is known to the State of California to cause cancer. For more information, visit **www.p65warnings.ca.gov/product**

International Inventories:

US EPA TSCA Inventory: All of the components are listed on the TSCA inventory.

Canadian Environmental Protection Act: All of the ingredients are listed on the Canadian Domestic Substances List.

European Union: All of the components of this product are listed on the European Inventory of New and Existing Chemical Substances (EINECS) inventory.

Australia: All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances (AICS).

China: All of the ingredients of this product are listed on the Inventory of Existing Chemical Substance in China (IECSC).

Korea: All of the components of this product are listed on the Korean Existing Chemical List (KECL).

Japan: All of the components of this product are listed on the Japanese Existing and New Chemical Substances List (ENCS).

New Zealand: All of the components of this product are listed on the New Zealand Inventory of Chemicals (NZIoC).

Philippines: All of the components of this product are listed on the Philippine Inventory of Chemicals and Chemical Substances (PICCS).

INTERNATIONAL REGULATIONS

WHMIS Classification: Class A (Compressed Gas), Class D Division 1 Subdivision B (Toxic material causing immediate and serious toxic effects), Class D Division 2 Subdivision A (Very toxic material causing other toxic effects)

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Section 16 – OTHER INFORMATION (continued)

SUPERSEDES LAST REVISION: 03/15/2018 (SDS)

HMIS RATING (Hazardous Materials Information System)			
Health (blue) - 2	**Flammability (red) - 2**	**Reactivity (yellow) - 0**	**Protective Equipment - X** (See Sections 4, 8 & 10)

Health Hazard: **0** (minimal acute or chronic exposure hazard); **1** (slight acute or chronic exposure hazard); **2** (moderate acute or significant chronic exposure hazard); **3** (severe acute exposure hazard; one time overexposure can result in permanent injury and may be fatal); **4** (extreme acute exposure hazard; onetime overexposure can be fatal).

Flammability Hazard: **0** (minimal hazard); **1** (materials that require substantial pre-heating before burning); **2** (combustible liquid or solids; liquids with a flash point of 38-93ºC [100-200ºF]); **3** (Class IB and IC flammable liquids with flash points below 38ºC [100ºF]); **4** (Class IA flammable liquids with flash points below 23ºC [73ºF] and boiling points below 38ºC [100ºF].

Reactivity Hazard: **0** (normally stable); **1** (material that can become unstable at elevated temperatures or which can react slightly with water); **2** (materials that are unstable but do not detonate or which can react violently with water); **3** (materials that can detonate when initiated or which can react explosively with water); **4** (materials that can detonate at normal temperatures or pressures).

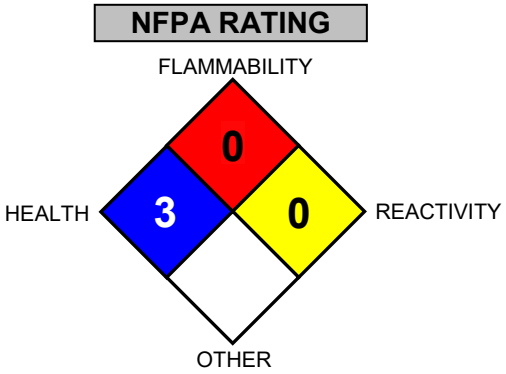
Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDS's under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA.

NATIONAL FIRE PROTECTION ASSOCIATION:

Health Hazard: **0** (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure cause serious temporary or residual injury); **4** (materials that under very short exposure causes death or major residual injury).

Flammability Hazard: Refer to definitions for "HMIS RATING (Hazardous Materials Information System)"

Reactivity Hazard: Refer to definitions for "HMIS RATING (Hazardous Materials Information System)"



DEFINITIONS OF TERMS

ACGIH - American Conference of Governmental Industrial Hygienists
CAS No. - Chemical Abstracts Service Number
EPA - Environmental Protection Agency
GHS - Globally Harmonized System
IARC - International Agency for Research on Cancer
LC50 - Lethal Concentration (50 percent kill)
LCLO - Lowest published lethal concentration
LD50 - Lethal dose (50 percent kill)
LDLO - Lowest published lethal dose
NIOSH - National Institute of Occupational Safety and Health
NTP - National Toxicology Program
OSHA - U.S. Occupational Safety and Health Administration
PEL - Permissible Exposure Limit
SARA - Superfund Amendments and Reauthorization Act
STEL - Short Term Exposure Limit
TCLo - the lowest concentration to cause a symptom
TDLo - the lowest dose to cause a symptom
TLV - Threshold Limit Value
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average

Full text of H-phrases (from Section 2)

Aerosol 3	Aerosol, Category 3
Press. Gas	Gases under pressure
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2
STOT SE 3	Specific target organ toxicity – single exposure, Category 3
STOT SE 3	Specific target organ toxicity – single exposure, Category 3
Carc. 2	Carcinogenicity, Category 2
STOT SE 2	Specific target organ toxicity – single exposure, Category 2

H229	Pressurized container: May burst if heated
H280	Contains gas under pressure; may explode if heated
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H371	May cause damage to organs (Nervous System)

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