

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name Gel Gloss GG-1, GG-8, GG-64, GG-128
Version # 00
Revision date 01-29-2010
Product use Surface gloss.
Manufacturer/Supplier TR Industries
11022 Vulcan Street
South Gate, CA 90280-0893
Telephone: (562) 923-5438
Emergency CHEMTREC: (800) 424-9300

2. Hazards Identification

Physical state Liquid.
Appearance Milky white liquid.
Emergency overview DANGER!
Combustible liquid and vapor. Causes skin and eye burns. Harmful if inhaled or swallowed. Mist or vapor irritating to eyes and respiratory tract. May cause sensitization by skin contact. Cancer hazard. Prolonged exposure may cause chronic effects.
OSHA regulatory status This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects
Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.
Eyes Causes eye burns.
Skin Causes skin burns. May cause sensitization by skin contact.
Inhalation Harmful if inhaled. Irritating to respiratory system. Prolonged inhalation may be harmful. May cause cancer by inhalation.
Ingestion Harmful if swallowed. Irritating. May cause nausea, stomach pain and vomiting.
Target organs Eyes. Liver. Lungs. Respiratory system. Skin. Kidneys.
Chronic effects Crystalline silica has been classified by IARC as a known human carcinogen. Repeated or prolonged breathing of high levels of crystalline silica can cause silicosis. Liver injury may occur. Kidney injury may occur.
Potential environmental effects Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Water	7732-18-5	50 - 60
C12-C14 Isoalkanes	68551-19-9	30 - 35
Crystalline silica	14808-60-7	1 - 5
D-Limonene	5989-27-5	1 - 5
Polydimethylsiloxane	63148-62-9	1 - 5
Isopropyl alcohol	67-63-0	1 - 5
Morpholine	110-91-8	1 - 2
Oleic acid	112-80-1	1 - 5

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Skiih contact

Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation or pain develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. Get medical attention, if needed.

Ingestion

Rinse mouth thoroughly. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately.

Notes to physician

In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General advice

Take off contaminated clothing and shoes immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

5. Fire Fighting Measures

Flammable properties

Combustible by OSHA criteria.

Extinguishing media

Suitable extinguishing media

Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

Protection of firefighters

Protective equipment and precautions for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Special protective equipment for fire-fighters

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Specific methods

In the event of fire and/or explosion do not breathe fumes.

Hazardous combustion products

Carbon monoxide. Carbon Dioxide. Nitrogen oxides (NOx). Silicon oxides.

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the MSDS for Personal Protective Equipment.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. This material and its container must be disposed of as hazardous waste. Should not be released into the environment.

Large Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Do not allow material to contaminate ground water system.

Other information

Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling

Wear personal protective equipment. Avoid breathing mist or vapor. Avoid prolonged exposure. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. All equipment used when handling the product must be grounded. When using, do not eat, drink or smoke. Avoid release to the environment.

Storage

Keep away from heat, sparks and open flame. Keep containers tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components	Type	Value	Form
Crystalline silica (14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.
Isopropyl alcohol (67-63-0)	STEL	400 ppm	
Morpholine (110-91-8)	TWA	200 ppm	
	TWA	20 ppm	

U.S. - OSHA

Components	Type	Value	Form
Crystalline silica (14808-60-7)	TWA	0.3 mg/m ³	Total dust. Respirable. Respirable dust. Respirable.
		2.4 mppcf	
		0.1 mg/m ³	
		0.1 mg/m ³	
Isopropyl alcohol (67-63-0)	PEL	400 ppm	
	STEL	980 mg/m ³	
	TWA	1225 mg/m ³	
Morpholine (110-91-8)	TWA	500 ppm	
		400 ppm	
	PEL	980 mg/m ³	
	STEL	20 ppm	
	TWA	70 mg/m ³	
Morpholine (110-91-8)	STEL	30 ppm	
		105 mg/m ³	
		70 mg/m ³	
Morpholine (110-91-8)	TWA	20 ppm	
		70 mg/m ³	
		20 ppm	

Canada - Alberta

Components	Type	Value	Form
Crystalline silica (14808-60-7)	TWA	0.1 mg/m ³	Respirable particles.
Isopropyl alcohol (67-63-0)	STEL	500 ppm	
Morpholine (110-91-8)	TWA	1230 mg/m ³	
		400 ppm	
		983 mg/m ³	
		20 ppm	
Morpholine (110-91-8)	TWA	71 mg/m ³	
		20 ppm	

Canada - British Columbia

Components	Type	Value	Form
Crystalline silica (14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.
Isopropyl alcohol (67-63-0)	STEL	400 ppm	
Morpholine (110-91-8)	TWA	200 ppm	
	TWA	20 ppm	

Canada - Ontario

Components	Type	Value	Form
Crystalline silica (14808-60-7)	TWA	0.1 mg/m ³	Respirable fraction.
Isopropyl alcohol (67-63-0)	STEL	400 ppm	
Morpholine (110-91-8)	TWA	200 ppm	
	STEL	30 ppm	
	TWA	105 mg/m ³	
Morpholine (110-91-8)	TWA	20 ppm	
		20 ppm	

Components	Type	Value	Form
		70 mg/m3	

Canada - Quebec

Components	Type	Value	Form
Crystalline silica (14808-60-7)	TWA	0.1 mg/m3	Respirable dust.
Isopropyl alcohol (67-63-0)	STEL	500 ppm	
		1230 mg/m3	
	TWA	400 ppm	
Morpholine (110-91-8)	TWA	983 mg/m3	
		20 ppm	
		71 mg/m3	

Mexico

Components	Type	Value
Crystalline silica (14808-60-7)	TWA	0.1 mg/m3
Isopropyl alcohol (67-63-0)	STEL	500 ppm
		1225 mg/m3
	TWA	400 ppm
		980 mg/m3
Morpholine (110-91-8)	STEL	30 ppm
		105 mg/m3
	TWA	20 ppm
		70 mg/m3

Engineering controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal protective equipment

- Eye / face protection** Wear approved chemical safety goggles.
- Skin protection** Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information.
- Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment. If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.
- General hygiene considerations** When using, do not eat, drink or smoke. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Milky white liquid.
Color	Milky white.
Odor	Characteristic.
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
pH	Not available.
Melting point	Not available.
Freezing point	Not available.
Boiling point	> 302 °F (> 150 °C)
Flash point	140 - 199.9 °F (60 - 93.3 °C) Estimated
Evaporation rate	0.1 estimated
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	4.9 estimated
Specific gravity	< 1 estimated

Solubility (water)	negligible
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases. Amines.
Hazardous decomposition products	Nitrogen oxides (NOx). Silicon oxides.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components

Test Results

Morpholine (110-91-8)	Acute Dermal LD50 Rabbit: 0.5 ml/kg Acute Oral LD50 Guinea pig: 90 mg/kg Acute Oral LD50 Mouse: 720 mg/kg Acute Oral LD50 Rat: 1050 mg/kg
Oleic acid (112-80-1)	Acute Dermal LD50 Guinea pig: > 3000 mg/kg Acute Oral LD50 Rat: 74 g/kg Acute Other LD50 Mouse: 230 mg/kg Acute Other LD50 Rat: 2 mg/kg
D-Limonene (5989-27-5)	Acute Dermal LD50 Rabbit: 5 g/kg Acute Oral LD50 Mouse: 5600 - 6600 mg/kg Acute Oral LD50 Rat: 4400 mg/kg
Polydimethylsiloxane (63148-62-9)	Acute Dermal LD50 Rabbit: >= 5000 mg/kg Acute Oral LD50 Rat: >= 17000 mg/kg
Isopropyl alcohol (67-63-0)	Acute Dermal LD50 Rabbit: 5030 - 7900 mg/kg Acute Oral LD50 Rat: 4700 - 5800 mg/kg
C12-C14 Isoalkanes (68551-19-9)	Acute Dermal LD50 Rabbit: > 2 g/kg Acute Inhalation LC50 Rat: > 5.3 mg/l Acute Oral LD50 Rat: > 5 mg/l

Acute effects

Causes burns. Contains a potential skin sensitizer.

Local effects

Causes skin and eye burns. Harmful by inhalation and if swallowed. Irritating to respiratory system. May cause sensitization by skin contact.

US ACGIH Threshold Limit Values: Skin designation

Morpholine (CAS 110-91-8)

Can be absorbed through the skin.

Sensitization

May cause sensitization by skin contact.

Chronic effects

Prolonged inhalation may be harmful. Prolonged or repeated exposure may cause lung injury. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood.

Subchronic effects

Kidney injury may occur.

Carcinogenicity

Cancer hazard. Prolonged breathing of high levels of crystalline silica can cause silicosis. Also, airborne crystalline silica is possibly carcinogenic to humans.

ACGIH Carcinogens

Crystalline silica (CAS 14808-60-7)

A2 Suspected human carcinogen.

Isopropyl alcohol (CAS 67-63-0)

A4 Not classifiable as a human carcinogen.

Morpholine (CAS 110-91-8)

A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Crystalline silica (CAS 14808-60-7)

1 Carcinogenic to humans.

D-Limonene (CAS 5989-27-5)
Morpholine (CAS 110-91-8)
US NTP Report on Carcinogens: Known carcinogen
Crystalline silica (CAS 14808-60-7)

3 Not classifiable as to carcinogenicity to humans.
3 Not classifiable as to carcinogenicity to humans.

Known carcinogen.

Epidemiology	Not available.
Mutagenicity	Not available.
Neurological effects	Not available.
Reproductive effects	Not available.
Teratogenicity	Not available.
Further information	Symptoms may be delayed.

12. Ecological Information

Ecotoxicological data

Components

Test Results

Morpholine (110-91-8)	LC50 Zebra danio (Danio rerio): > 1 mg/l 96 Hours
Oleic acid (112-80-1)	LC50 Fathead minnow (Pimephales promelas): 205 mg/l 96 Hours
D-Limonene (5989-27-5)	EC50 Daphnia: 0.42 mg/l 48 Hours LC50 Fathead minnow (Pimephales promelas): 0.619 - 0.796 mg/l 96 Hours
Isopropyl alcohol (67-63-0)	LC50 Bluegill (Lepomis macrochirus): > 1400 mg/l 96 Hours

Ecotoxicity	Contains a substance which causes risk of hazardous effects to the environment.
Environmental effects	The product may cause risk of hazardous effects to the environment in the event of unprofessional handling or disposal.
Aquatic toxicity	Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
Persistence and degradability	Not available.
Bioaccumulation / Accumulation	No data available.
Partition coefficient (n-octanol/water)	Not available
Mobility in environmental media	No data available.

13. Disposal Considerations

Disposal instructions	Dispose in accordance with all applicable regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not allow this material to drain into sewers/water supplies.
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14. Transport Information

DOT

Basic shipping requirements:

UN number	NA1993
Proper shipping name	Combustible liquid, n.o.s. (C12-C14 Isoalkanes; Isopropyl alcohol)
Hazard class	Combustible Liquid
Packing group	III

Additional information:

Special provisions	B1, B52, IB3, T4, TP1, TP29
Packaging exceptions	150
Packaging non bulk	203
Packaging bulk	242
ERG number	128

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

TDG

Not regulated as dangerous goods.



DOT

15. Regulatory Information

US federal regulations

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

All components are on the U.S. EPA TSCA Inventory List.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Isopropyl alcohol (CAS 67-63-0) 1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Isopropyl alcohol (CAS 67-63-0) Listed.

CERCLA (Superfund) reportable quantity (lbs)

Isopropyl alcohol: 100

Morpholine: 100

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance

No

Section 311 hazardous chemical

Yes

Drug Enforcement Agency (DEA)

Not controlled

Canadian regulations

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status

Controlled

WHMIS classification

B3 - Flammable/Combustible
D1B - Immediate/Serious-TOXIC
D2A - Other Toxic Effects-VERY TOXIC
D2B - Other Toxic Effects-TOXIC
E - Corrosive

WHMIS labeling



Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Hazardous Substances (Director's): Listed substance

Isopropyl alcohol (CAS 67-63-0) Listed.

Morpholine (CAS 110-91-8) Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Crystalline silica (CAS 14808-60-7) Listed.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Crystalline silica (CAS 14808-60-7) Listed: October 1, 1988 Carcinogenic.

US - Massachusetts RTK - Substance: Listed substance

Crystalline silica (CAS 14808-60-7) Listed.

Isopropyl alcohol (CAS 67-63-0) Listed.

Morpholine (CAS 110-91-8) Listed.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

Isopropyl alcohol (CAS 67-63-0) 500 LBS

US - New Jersey RTK - Substances: Listed substance

Crystalline silica (CAS 14808-60-7) Listed.

D-Limonene (CAS 5989-27-5) Listed.

Morpholine (CAS 110-91-8) Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Crystalline silica (CAS 14808-60-7) Listed.

Isopropyl alcohol (CAS 67-63-0) Listed.

Morpholine (CAS 110-91-8) Listed.

Oleic acid (CAS 112-80-1) Listed.

16. Other Information

Further information	HMIS® is a registered trade and service mark of the NPCA.
HMIS® ratings	Health: 3* Flammability: 2 Physical hazard: 0
NFPA ratings	Health: 3 Flammability: 2 Instability: 0
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available.
Issue date	01-29-2010