

1. Identification

Product identifier	Solder Seal/Gunk MP Radiator Sealant & Conditioner	
Other means of identification		
SDS number	C105	
Part No.	C105	
Tariff code	2840.20.0000	
Recommended use	Radiator Sealer	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	RSC Chemical Solutions	
Address	600 Radiator Road Indian Trail, NC 28079 United States	
Telephone	Customer Service:	(704) 821-7643
	Technical:	(704) 684-1811
Website	www.rscbrands.com	
E-mail	sds@rscbrands.com	
Emergency phone number	Emergency Telephone:	(303) 623-5716
	Emergency Contact:	RMPDC (877-740-5015)

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Reproductive toxicity	Category 2
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements



Signal word	Warning
Hazard statement	Causes skin irritation. Causes serious eye irritation. Suspected of damaging fertility or the unborn child.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

Supplemental information

11.32% of the mixture consists of component(s) of unknown acute oral toxicity. 11.32% of the mixture consists of component(s) of unknown acute dermal toxicity. 14.1% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 14.1% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients**Mixtures**

Chemical name	Common name and synonyms	CAS number	%
Borax		1303-96-4	1 - < 3
Distillates (petroleum), Hydrotreated Heavy Naphthenic		64742-52-5	< 1
Morpholine		110-91-8	< 1
Propylene Glycol		57-55-6	< 1
2-methoxyethanol		109-86-4	< 0.1
4-ethylmorpholine		100-74-3	< 0.1
DIETHANOLAMINE		111-42-2	< 0.1
ETHYLENEDIAMINE		107-15-3	< 0.1
Triéthanolamine		102-71-6	< 0.1
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
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 if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). 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.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

Environmental precautions**7. Handling and storage****Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
2-methoxyethanol (CAS 109-86-4)	PEL	80 mg/m ³	
4-ethylmorpholine (CAS 100-74-3)	PEL	25 ppm	
		94 mg/m ³	
Distillates (petroleum), Hydrotreated Heavy Naphthenic (CAS 64742-52-5)	PEL	20 ppm	Mist.
		5 mg/m ³	
ETHYLENEDIAMINE (CAS 107-15-3)	PEL	2000 mg/m ³	
		500 ppm	
Morpholine (CAS 110-91-8)	PEL	25 mg/m ³	
		10 ppm	
		70 mg/m ³	
		20 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
2-methoxyethanol (CAS 109-86-4)	TWA	0.1 ppm	
4-ethylmorpholine (CAS 100-74-3)	TWA	5 ppm	
Borax (CAS 1303-96-4)	STEL	6 mg/m ³	Inhalable fraction.
		2 mg/m ³	Inhalable fraction.
DIETHANOLAMINE (CAS 111-42-2)	TWA	1 mg/m ³	Inhalable fraction and vapor.
Distillates (petroleum), Hydrotreated Heavy Naphthenic (CAS 64742-52-5)	TWA	5 mg/m ³	Inhalable fraction.
ETHYLENEDIAMINE (CAS 107-15-3)	TWA	10 ppm	
Morpholine (CAS 110-91-8)	TWA	20 ppm	
Triéthanolamine (CAS 102-71-6)	TWA	5 mg/m ³	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
2-methoxyethanol (CAS 109-86-4)	TWA	0.3 mg/m3	
4-ethylmorpholine (CAS 100-74-3)	TWA	0.1 ppm 23 mg/m3	
Borax (CAS 1303-96-4)	TWA	5 ppm	
DIETHANOLAMINE (CAS 111-42-2)	TWA	5 mg/m3 15 mg/m3	
Distillates (petroleum), Hydrotreated Heavy Naphthenic (CAS 64742-52-5)	Ceiling	3 ppm 1800 mg/m3	
ETHYLENEDIAMINE (CAS 107-15-3)	STEL TWA	10 mg/m3 25 mg/m3	Mist.
Morpholine (CAS 110-91-8)	STEL TWA	10 ppm 105 mg/m3 30 ppm 70 mg/m3 20 ppm	

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
Propylene Glycol (CAS 57-55-6)	TWA	10 mg/m3	Aerosol.

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
2-methoxyethanol (CAS 109-86-4)	1 mg/g	2-Methoxyacetic acid	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

2-methoxyethanol (CAS 109-86-4)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
DIETHANOLAMINE (CAS 111-42-2)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-methoxyethanol (CAS 109-86-4)	Skin designation applies.
4-ethylmorpholine (CAS 100-74-3)	Skin designation applies.
Morpholine (CAS 110-91-8)	Skin designation applies.

US - Tennessee OELs: Skin designation

2-methoxyethanol (CAS 109-86-4)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

2-methoxyethanol (CAS 109-86-4)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
DIETHANOLAMINE (CAS 111-42-2)	Can be absorbed through the skin.
ETHYLENEDIAMINE (CAS 107-15-3)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-methoxyethanol (CAS 109-86-4)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-methoxyethanol (CAS 109-86-4)	Can be absorbed through the skin.
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4-ethylmorpholine (CAS 100-74-3)
Morpholine (CAS 110-91-8)

Can be absorbed through the skin.
Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields, goggles or full facepiece.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece. Chemical respirator with organic vapor cartridge and full facepiece if threshold limits are exceeded.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Liquid/Viscous Slurry

Physical state Liquid.

Form Liquid.

Color greenish

Odor Mild

Odor threshold Not available.

pH 8 - 9

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point None

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 0.00001 hPa estimated

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Density 9.17 lbs/gal

Explosive properties Not explosive.

Oxidizing properties	Not oxidizing.
Percent volatile	84.22 % estimated
Specific gravity	1.62 estimated
VOC	0 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity Not known.

Components	Species	Test Results
2-methoxyethanol (CAS 109-86-4)		
Acute		
Dermal		
LD50	Rabbit	1280 mg/kg
4-ethylmorpholine (CAS 100-74-3)		
Acute		
Oral		
LD50	Rat	1490 - 2120 mg/kg
Borax (CAS 1303-96-4)		
Acute		
Inhalation		
LC50	Rat	> 0.002 mg/l, 4 Hours
DIETHANOLAMINE (CAS 111-42-2)		
Acute		
Oral		
LD50	Rat	710 mg/kg
ETHYLENEDIAMINE (CAS 107-15-3)		
Acute		
Dermal		
LD50	Rabbit	730 mg/kg
Oral		
LD50	Rat	500 mg/kg

Components	Species	Test Results
Morpholine (CAS 110-91-8)		
Acute		
Oral		
LD50	Rat	1.05 g/kg
* Estimates for product may be based on additional component data not shown.		
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
DIETHANOLAMINE (CAS 111-42-2)		2B Possibly carcinogenic to humans.
Morpholine (CAS 110-91-8)		3 Not classifiable as to carcinogenicity to humans.
Triethanolamine (CAS 102-71-6)		3 Not classifiable as to carcinogenicity to humans.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not regulated.		
US. National Toxicology Program (NTP) Report on Carcinogens		
Not listed.		
Reproductive toxicity	Suspected of damaging fertility or the unborn child.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	Prolonged inhalation may be harmful.	

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
2-methoxyethanol (CAS 109-86-4)		
Aquatic		
Fish	LC50	Bluegill (Lepomis macrochirus) > 10000 mg/l, 96 hours
DIETHANOLAMINE (CAS 111-42-2)		
Aquatic		
Crustacea	EC50	Water flea (Ceriodaphnia dubia) 61.8 - 86.04 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas) 100 mg/l, 96 hours
ETHYLENEDIAMINE (CAS 107-15-3)		
Aquatic		
Fish	LC50	Fathead minnow (Pimephales promelas) 98.6 - 131.6 mg/l, 96 hours
Morpholine (CAS 110-91-8)		
Aquatic		
Fish	LC50	Zebra danio (Danio rerio) > 1 mg/l, 96 hours
Propylene Glycol (CAS 57-55-6)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna) > 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas) 710 mg/l, 96 hours

Components	Species	Test Results
Triéthanolamine (CAS 102-71-6)		
Aquatic		
Crustacea	EC50	Water flea (Ceriodaphnia dubia) 565.2 - 658.3 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas) 10610 - 13010 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-methoxyethanol	-0.77
DIETHANOLAMINE	-1.43
ETHYLENEDIAMINE	-2.04
Morpholine	-0.86
Propylene Glycol	-0.92
Triéthanolamine	-1

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

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

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

2-methoxyethanol (CAS 109-86-4) 1.0 % One-Time Export Notification only.

CERCLA Hazardous Substance List (40 CFR 302.4)

2-methoxyethanol (CAS 109-86-4)	Listed.
4-ethylmorpholine (CAS 100-74-3)	Listed.
DIETHANOLAMINE (CAS 111-42-2)	Listed.
ETHYLENEDIAMINE (CAS 107-15-3)	Listed.
Morpholine (CAS 110-91-8)	Listed.

SARA 304 Emergency release notification

ETHYLENEDIAMINE (CAS 107-15-3) 5000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
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ETHYLENEDIAMINE	107-15-3	5000	10000		
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SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)
 Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

2-methoxyethanol (CAS 109-86-4)
 DIETHANOLAMINE (CAS 111-42-2)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

ETHYLENEDIAMINE (CAS 107-15-3)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

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

DIETHANOLAMINE (CAS 111-42-2) Listed: June 22, 2012

US - California Proposition 65 - CRT: Listed date/Developmental toxin

2-methoxyethanol (CAS 109-86-4) Listed: January 1, 1989

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

2-methoxyethanol (CAS 109-86-4) Listed: January 1, 1989

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

2-methoxyethanol (CAS 109-86-4)
 Borax (CAS 1303-96-4)
 DIETHANOLAMINE (CAS 111-42-2)
 Distillates (petroleum), Hydrotreated Heavy Naphthenic (CAS 64742-52-5)
 ETHYLENEDIAMINE (CAS 107-15-3)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
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
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-20-2015
Revision date 03-29-2017
Version # 02
HMIS® ratings Health: 2*
Flammability: 0
Physical hazard: 0
NFPA ratings Health: 2
Flammability: 0
Instability: 0

NFPA ratings



Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.