


Section 1 - Chemical Product and Company Identification

Product Name	Gas Spec SS Selective Solvent 45%
Synonyms	N-methyldiethanolamine, MDEA, 2,2'-methyliminodiethanol
Product Use	Various
Restrictions On Use	Not Applicable
Supplier	CFR Chemicals 38451 Range Road 22 County of Red Deer T4E 2N6
General Assistance	1 (877) 269-3419
Emergency Telephone	Not Dangerous Goods – Call General Assistance
Date of Preparation of SDS	April 1, 2017

Section 2 – Hazard Identification

Signal Word	Warning
GHS Pictogram(s)	
Hazard Statement:	
H302	Harmful if swallowed.
H316	Causes mild skin irritation.
H319	Causes serious eye irritation.
Precautionary Statement	
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/eye protection/face protection.
Response	
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301 + P312	IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.
P330	Rinse mouth.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
Storage	No Statements
Disposal	
P501	Dispose of contents/container to an approved waste disposal unit.
GHS Classification	Acute Toxicity (oral) (Category 4) Skin corrosion/irritation (Category 3) Eye Irritation (Category 2A)
HMIS Classification	
Health Hazard	2
Chronic Health Hazard	*
Flammability	1



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Physical Hazards 0

Potential Health Effects

Inhalation May be harmful if inhaled.
Skin Causes skin irritation.
Eye Causes eye irritation.
Ingestion Harmful if swallowed.

Section 3 – Composition Information on Ingredients

HAZARDOUS INGREDIENT, Common Name	Hazardous Ingredient, Synonyms	PERCENT	CAS NUMBER
Methyldiethanolamine	N-methyldiethanolamine, MDEA, 2,2'- methyliminodiethanol * = Various ** = Mixture *** = Proprietary	45%	105-59-9
Chemical Formula	$C_5H_{13}NO_2$		

Section 4 - First Aid Measures

Inhalation Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Eye Contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower lids. Check for and remove contact lenses. Continue to rinse for at least 30 minutes. Get medical attention.

Skin Contact Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion Do not induce vomiting. Do not give anything by mouth unless the person is fully conscious. Get medical attention.

Most Important Symptoms/Effects both Acute and Delayed

Harmful if swallowed. Causes skin irritation and eye irritation.

Note to Physician Treat symptomatically.

Section 5 – Fire-Fighting Measures

Flash Point (°C) 127°C
Flash Point Method PMCC
Auto Ignition Temperature 280°C
Conditions of Flammability Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/ hot surface.
Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unusual Fire/

Explosion Hazard	No data available.
Hazardous Combustion Products	Carbon oxides, Nitrogen oxides..
Fire Fighting Equipment	Wear appropriate protective equipment and self-contained breathing apparatus with a full face-piece operated in positive pressure mode.
Special Precautions for Firefighters	No data available.

Section 6 – Accidental Release Measures

Personal precautions	Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapour can accumulate in low areas.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods and materials for containment and cleaning up	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Section 7 – Handling and Storage

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Conditions for safe storage	Store in cool, dry well ventilated area. Sensitive to light. Store in light-resistant containers. Hygroscopic material. Segregate from acids and acid forming substances. Suitable material for containers: Carbon Steel (Iron), Stainless steel 1.4401, Stainless steel 1.4301, High-density polyethylene (HDPE), glass.
Incompatible Materials	Oxidizing materials. Acids.

Section 8 – Exposure Controls / Personal Protection

Occupational Exposure Limits

Ingredient Name	Exposure Limits
Methyldiethanolamine	None Established

Personal protective equipment

Eye/face protection	Chemical safety glasses with side shields to prevent eye contact. As a general rule do not wear contact lenses when handling chemicals. If contact is possible, the following protection should be worn: Splash goggles. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases, or dusts. If inhalation hazards exist, a full-face respiratory may be required instead.
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Skin protection	Wear chemical resistant gloves, impermeable protective clothing and safety shoes. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary.
General hygiene Considerations	Handle in accordance with good industrial hygiene and safety. Eye wash fountains and safety showers must be easily accessible.
Specific engineering controls	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Use explosion-proof ventilation equipment.

Section 9 – Physical and Chemical Properties

Physical State	Liquid	Water Solubility	miscible
Appearance & Odour	Clear, colourless to pale yellow. Amine-like odour.	Boiling Point	Not applicable
Vapour Pressure	0.01 mmHg (20.0°C)	Boiling Point Range	246-248°C
Vapour Density	2.1 (Air = 1)	Melting Point	-17°C
Specific Gravity	1.00 – 1.02	Freezing Point	-17°C
Partition coefficient (n-octonal/water)	-1.08	Lower Explosive Limit (LEL)	1.4%
pH	11.5 (10% solution in water)	Upper Explosive Limit (UEL)	8.8%
Flashpoint (Method)	127°C (PMCC) (Non-flammable)	Auto Ignition temperature	280°C
Odour Threshold	Not available.	Evaporation Rate	Not available.
Flammability (Solid, Gas)	Flammable at high temperatures.	Viscosity	Not available.
Decomposition Temperature	Not available.		

Section 10 – Stability and Reactivity

Reactivity	No specific test data related to reactivity available for this product.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur
Conditions to avoid	Heat, flames and sparks.
Materials to avoid	Oxidizing materials. Acids.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides, nitrous gases.

Section 11- Toxicological Information

Information on Likely Routes of Exposure

Inhalation No data available.
Skin contact Causes skin irritation.
Eye contact Causes eye irritation.
Ingestion Harmful if swallowed.
Acute and Chronic Toxicity No data available.

Acute toxicity

Product/Ingredient Name	Result	Species	Dose	Exposure
Methyldiethanolamine	LD50 Oral	Rat	46800mg/kg	-

Skin corrosion/irritation Skin – Rabbit – mild skin irritation.

Serious eye damage/ irritation Eyes – Rabbit – mild eye irritation.

Respiratory or skin sensitization

No data available

Mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Reproductive toxicity

Reproductive Toxicity – Rat – Skin
 Maternal Effects: Other Effects

Teratogenicity

No data available

Target Organ effects

No data available

Aspiration hazard

No data available

Delayed and Immediate Effects and also Chronic Effects from Short and Long Term Exposure

Short Term Exposure

Potential immediate Health Effects No data available.

Potential Delayed Health Effects No data available.

Long Term Exposure

Potential immediate Health Effects No data available.

Potential Delayed Health Effects No data available.

Potential Chronic Effects No data available.

Synergistic effects No data available

Section 12 – Ecological Information

Toxicity

Product / Ingredient Name	Result	Species	Exposure
Methyldiethanolamine	Acute LC50 1466mg/L	Fish – Leuciscus idus	96 Hr
	Acute EC50 233mg/L	Daphnia – Daphnia magna	48 Hr

Persistence and degradability Material is not biodegradable.

Bioaccumulative potential No data available

Mobility in soil No data available



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PBT and vPvB assessment No data available

Section 13 – Disposal Considerations

Product

Do not discharge substance/product into sewer system. Dispose of in accordance with national, regional, and local regulations.

Contaminated packaging

Dispose of as unused product in a licensed facility. Recommend crushing, puncturing, or other means to prevent unauthorized use of used containers. Do not cut, weld, or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled materials and runoff and contain with soil, waterways, drains, and sewers.

Section 14 - Transportation Information

CANADA Transportation of Dangerous Goods (TDG)

Not Dangerous Goods

Environmental hazards

Not a marine pollutant.

Transportation in bulk, if applicable

No data available

Special Precautions

No data available

Section 15 – Regulatory Information

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act)

All components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

TSCA Inventory (8b)

All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

Section 16 – Other Information

REVISION SUMMARY:

Date of Preparation	April 1, 2017
Date of Revision	June 19, 2019

SDS Prepared by: CFR Lab Manager

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