

CO Residual Solvents

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 12/10/2018

Revision date: 12/10/2018

Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
 Product name : CO Residual Solvents
 Product code : MMJ-CO-0001

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.3. Details of the supplier of the safety data sheet

Phenova
 6390 Joyce Dr. Suite 100
 Golden, CO 80403 - United States
 T 1-866-942-2978 - F 1-866-283-0269
info@phenova.com - www.phenova.com

1.4. Emergency telephone number

Emergency number : ChemTel Assistance (US/Canada) 1-800-255-3924
 ChemTel Assistance (International) +1 813-248-0585

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Liq. 2	H225
Acute Tox. 4 (Dermal)	H312
Acute Tox. 4 (Inhalation:dust,mist)	H332
Carc. 1A	H350

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapour
 H312+H332 - Harmful in contact with skin or if inhaled
 H350 - May cause cancer

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P233 - Keep container tightly closed.
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
 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 water
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 P308+P313 - If exposed or concerned: Get medical advice/attention.
 P312 - Call a poison center or doctor if you feel unwell
 P322 - Specific treatment (see supplemental first aid instruction on this label)
 P362+P364 - Take off contaminated clothing and wash it before reuse.
 P370+P378 - In case of fire: Use media other than water to extinguish.
 P403+P235 - Store in a well-ventilated place. Keep cool.
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

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2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
N,N-dimethylacetamide	(CAS-No.) 127-19-5	98.9928	Flam. Liq. 4, H227 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332
ethanol	(CAS-No.) 64-17-5	0.1	Flam. Liq. 2, H225 Carc. 1A, H350

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a poison center or doctor/physician. Wash with plenty of soap and water. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.
- Symptoms/effects after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapour.
- Explosion hazard : May form flammable/explosive vapor-air mixture.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.

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Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up in absorbent material. Collect spillage.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

Hygiene measures : Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.

Storage conditions : Keep in fireproof place. Keep container tightly closed. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.

Incompatible materials : Direct sunlight. Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

CO Residual Solvents		
USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	Remark (ACGIH)	Liver, embryo & fetal dam; repro, renal & teratogenic eff; Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure); BEI
USA OSHA	OSHA PEL (TWA) (mg/m ³)	35 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	10 ppm
ethanol (64-17-5)		
USA ACGIH	ACGIH STEL (ppm)	1000 ppm (Ethanol; USA; Short time value; TLV - Adopted Value)
USA ACGIH	Remark (ACGIH)	URT irr
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1900 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
N,N-dimethylacetamide (127-19-5)		
USA ACGIH	ACGIH TWA (ppm)	10 ppm

8.2. Exposure controls

Appropriate engineering controls : Either local exhaust or general room ventilation is usually required.

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Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.



Hand protection : Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration.

Eye protection : Chemical goggles or safety glasses. Safety glasses.

Skin and body protection : Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Colorless.
Odor	: characteristic.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

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10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Dermal: Harmful in contact with skin. Inhalation:dust,mist: Harmful if inhaled.

CO Residual Solvents	
ATE CLP (dermal)	1111.192 mg/kg body weight
ATE CLP (dust, mist)	1.515 mg/l/4h

ethanol (64-17-5)	
LD50 oral rat	10740 mg/kg body weight (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit; Literature study)

N,N-dimethylacetamide (127-19-5)	
LD50 oral rat	5830 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male/female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	2100 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
ATE CLP (oral)	5830 mg/kg body weight
ATE CLP (dermal)	1100 mg/kg body weight
ATE CLP (gases)	4500 ppmV/4h
ATE CLP (vapors)	11 mg/l/4h
ATE CLP (dust, mist)	1.5 mg/l/4h

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Based on available data, the classification criteria are not met
Carcinogenicity : May cause cancer.

ethanol (64-17-5)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : Not classified
Specific target organ toxicity – repeated exposure : Not classified
Based on available data, the classification criteria are not met
Aspiration hazard : Not classified
Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms : Harmful in contact with skin. Harmful if inhaled.
Symptoms/effects after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.
Symptoms/effects after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

ethanol (64-17-5)	
LC50 fish 1	14200 mg/l (LC50; US EPA; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)

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N,N-dimethylacetamide (127-19-5)	
LC50 fish 1	> 500 mg/l (Equivalent or similar to DIN 38412/15, 96 h, Leuciscus idus, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 Daphnia 1	> 500 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)
ErC50 (algae)	> 500 mg/l (DIN 38412-9, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)

12.2. Persistence and degradability

CO Residual Solvents	
Persistence and degradability	Not established.
ethanol (64-17-5)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.8 - 0.967 g O ₂ /g substance
Chemical oxygen demand (COD)	1.7 g O ₂ /g substance
ThOD	2.1 g O ₂ /g substance
BOD (% of ThOD)	0.43
N,N-dimethylacetamide (127-19-5)	
Persistence and degradability	Readily biodegradable in water.
Chemical oxygen demand (COD)	1.84 g O ₂ /g substance

12.3. Bioaccumulative potential

CO Residual Solvents	
Bioaccumulative potential	Not established.
ethanol (64-17-5)	
BCF fish 1	1 (BCF; Other; 72 h; Cyprinus carpio; Static system; Fresh water; Read-across)
Log Pow	-0.31 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
N,N-dimethylacetamide (127-19-5)	
BCF other aquatic organisms 1	3.162 (BCFWIN, Calculated value)
Log Pow	-0.77 (Calculated, Other, 25 °C)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

ethanol (64-17-5)	
Surface tension	0.022 N/m (20 °C)
Log Koc	Koc,PCKOCWIN v1.66; 1; Read-across
N,N-dimethylacetamide (127-19-5)	
Surface tension	34 N/m (20 °C)
Log Koc	0.969 (log Koc, SRC PCKOCWIN v1.66, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT
Transport document description : UN1993 Flammable liquids, n.o.s. (N,N-dimethylacetamide ; ethanol), 3, II
UN-No.(DOT) : 1993
DOT NA no. : UN1993

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Proper Shipping Name (DOT) : Flammable liquids, n.o.s.
N,N-dimethylacetamide ; ethanol

Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid



DOT Symbols : G - Identifies PSN requiring a technical name

Packing group (DOT) : II - Medium Danger

DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32 F).
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

DOT Packaging Bulk (49 CFR 173.xxx) : 242

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

Additional information

Emergency Response Guide (ERG) Number : 128

Other information : No supplementary information available.

ADR

Transport document description :

Transport by sea

UN-No. (IMDG) : 1993

Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N.O.S.

Class (IMDG) : 3 - Flammable liquids

Packing group (IMDG) : II - substances presenting medium danger

Air transport

UN-No. (IATA) : 1993

Proper Shipping Name (IATA) : Flammable liquid, n.o.s.

Class (IATA) : 3 - Flammable Liquids

Packing group (IATA) : II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

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ethanol (64-17-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

N,N-dimethylacetamide (127-19-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

ethanol (64-17-5)

Listed on the Canadian DSL (Domestic Substances List)

N,N-dimethylacetamide (127-19-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

N,N-dimethylacetamide (127-19-5)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2	H225
Acute Tox. 4 (Dermal)	H312
Acute Tox. 4 (Inhalation:dust,mist)	H332
Repr. 1B	H360

Full text of H statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

15.2.2. National regulations

ethanol (64-17-5)

Listed on IARC (International Agency for Research on Cancer)

N,N-dimethylacetamide (127-19-5)

15.3. US State regulations

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U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No

ethanol (64-17-5)

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 significant risk level (NSRL)
No	No	No	No	

N,N-dimethylacetamide (127-19-5)

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 significant risk level (NSRL)
No	Yes	No	Yes	

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SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Hazard Rating

PHV SDS US

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