

# SAFETY DATA SHEET

Residual Solvent Revised Method 467 Class C, Part Number 5190-0493

## Section 1. Identification

### 1.1 Product identifier

**Product name** : Residual Solvent Revised Method 467 Class C, Part Number 5190-0493  
**Part no.** : 5190-0493  
**Validation date** : 6/22/2018

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

**Material uses** :  Reagents and Standards for Analytical Chemistry Laboratory Use  
 1 ml

### 1.3 Details of the supplier of the safety data sheet

**Supplier/Manufacturer** : Agilent Technologies, Inc.  
 5301 Stevens Creek Blvd  
 Santa Clara, CA 95051, USA  
 800-227-9770

### 1.4 Emergency telephone number

**In case of emergency** : CHEMTREC®: 1-800-424-9300

## Section 2. Hazards identification

### 2.1 Classification of the substance or mixture

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Classification of the substance or mixture

H320 EYE IRRITATION - Category 2B  
 H350 CARCINOGENICITY - Category 1B  
 H360 TOXIC TO REPRODUCTION (Unborn child) - Category 1B

### 2.2 GHS label elements

#### Hazard pictograms



#### Signal word

: Danger

#### Hazard statements

:  H320 - Causes eye irritation.  
 H350 - May cause cancer.  
 H360 - May damage the unborn child.

### Precautionary statements

#### Prevention

: P201 - Obtain special instructions before use.  
 P202 - Do not handle until all safety precautions have been read and understood.  
 P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.  
 P264 - Wash hands thoroughly after handling.

#### Response

: P308 + P313 - IF exposed or concerned: Get medical attention.  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337 + P313 - If eye irritation persists: Get medical attention.

#### Storage

: P405 - Store locked up.

## Section 2. Hazards identification

**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

### 2.3 Other hazards

**Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	%	CAS number
Dimethyl sulfoxide	≥90	67-68-5
N,N-dimethylacetamide	<1	127-19-5
N,N-Dimethylformamide	<1	68-12-2
N-Methyl-2-pyrrolidone	≤0.3	872-50-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### 4.1 Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

## Section 4. First aid measures

### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
sulfur oxides

### 5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and materials for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- 7.2 Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

- Recommendations** : Industrial applications, Professional applications.
- Industrial sector specific solutions** : Not applicable.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Dimethyl sulfoxide  N,N-dimethylacetamide	<b>AIHA WEEL (United States, 10/2011).</b> TWA: 250 ppm 8 hours. <b>ACGIH TLV (United States, 3/2017).</b> <b>Absorbed through skin.</b> TWA: 10 ppm 8 hours. TWA: 36 mg/m <sup>3</sup> 8 hours. <b>OSHA PEL 1989 (United States, 3/1989).</b> <b>Absorbed through skin.</b> TWA: 10 ppm 8 hours. TWA: 35 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2016).</b> <b>Absorbed through skin.</b> TWA: 10 ppm 10 hours. TWA: 35 mg/m <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 6/2016).</b> <b>Absorbed through skin.</b> TWA: 10 ppm 8 hours. TWA: 35 mg/m <sup>3</sup> 8 hours.
N,N-Dimethylformamide	<b>ACGIH TLV (United States, 3/2017).</b> <b>Absorbed through skin.</b> TWA: 10 ppm 8 hours. TWA: 30 mg/m <sup>3</sup> 8 hours. <b>OSHA PEL 1989 (United States, 3/1989).</b> <b>Absorbed through skin.</b> TWA: 10 ppm 8 hours. TWA: 30 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2016).</b> <b>Absorbed through skin.</b> TWA: 10 ppm 10 hours. TWA: 30 mg/m <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 6/2016).</b> <b>Absorbed through skin.</b> TWA: 10 ppm 8 hours. TWA: 30 mg/m <sup>3</sup> 8 hours.
N-Methyl-2-pyrrolidone	<b>AIHA WEEL (United States, 10/2011).</b> <b>Absorbed through skin.</b> TWA: 10 ppm 8 hours.

### 8.2 Exposure controls

#### Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

#### Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### Individual protection measures

## Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : 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 contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : 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.
- Other skin protection** : Appropriate footwear and any additional skin protection measures 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Liquid.
- Color** : Colorless.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : 18.4°C (65.1°F)
- Boiling point** : 189°C (372.2°F)
- Flash point** : Closed cup: 95°C (203°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not applicable.
- Lower and upper explosive (flammable) limits** : Lower: 2.6%  
Upper: 28.5%
- Vapor pressure** : 0.0049 kPa (0.037 mm Hg) [room temperature]
- Vapor density** : Not available.
- Relative density** : Not available.
- Density** : 1.101 g/cm<sup>3</sup>
- Solubility** : Soluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water** : Not available.

## Section 9. Physical and chemical properties

**Auto-ignition temperature** : 215°C (419°F)

**Decomposition temperature** : Not available.

**Viscosity** : Not available.

## Section 10. Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : May react or be incompatible with oxidizing materials.

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Dimethyl sulfoxide	LD50 Dermal	Rat	40000 mg/kg	-
	LD50 Oral	Rat	14500 mg/kg	-
N,N-dimethylacetamide	LC50 Inhalation Vapor	Rat	2475 ppm	1 hours
	LD50 Dermal	Rabbit	2240 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
N,N-Dimethylformamide	LC50 Inhalation Vapor	Rat	3421 ppm	1 hours
	LC50 Inhalation Vapor	Rat	1948 ppm	4 hours
	LD50 Dermal	Rabbit	4720 mg/kg	-
	LD50 Oral	Rat	2000 mg/kg	-
N-Methyl-2-pyrrolidone	LD50 Dermal	Rabbit	8 g/kg	-
	LD50 Oral	Rat	3914 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Dimethyl sulfoxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	100 milligrams	-
N,N-dimethylacetamide	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 milligrams	-
N,N-Dimethylformamide	Eyes - Severe irritant	Rabbit	-	100 Percent	-
N-Methyl-2-pyrrolidone	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-

**Section 11. Toxicological information**

	Skin - Mild irritant Eyes - Irritant	Rabbit Rabbit	- -	- -	- -
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**Conclusion/Summary**

**Skin** : Repeated exposure may cause skin dryness or cracking.

**Sensitization**

Not available.

**Mutagenicity**

**Conclusion/Summary** : Not available.

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Classification**

Product/ingredient name	OSHA	IARC	NTP
N,N-Dimethylformamide	-	2A	-

**Reproductive toxicity**

**Conclusion/Summary** : Not available.

**Teratogenicity**

**Conclusion/Summary** : Not available.

**Specific target organ toxicity (single exposure)**

Name	Category	Route of exposure	Target organs
N,N-dimethylacetamide	Category 3	Not applicable.	Narcotic effects
N,N-Dimethylformamide	Category 3	Not applicable.	Narcotic effects
N-Methyl-2-pyrrolidone	Category 3	Not applicable.	Respiratory tract irritation

**Specific target organ toxicity (repeated exposure)**

Name	Category	Route of exposure	Target organs
N,N-dimethylacetamide	Category 2	Not determined	liver
N,N-Dimethylformamide	Category 2	Not determined	liver

**Aspiration hazard**

Not available.

**Information on the likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

**Eye contact** : Causes eye irritation.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : Adverse symptoms may include the following:  
 irritation  
 watering  
 redness



## Section 11. Toxicological information

- Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Potential chronic health effects

- General** : No known significant effects or critical hazards.
- Carcinogenicity** :  May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : May damage the unborn child.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Not available.

## Section 12. Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> Dimethyl sulfoxide	Acute LC50 25000 ppm Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
N,N-Dimethylformamide	Acute LC50 34000000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 100 µl/L Marine water	Algae - Ulva lactuca	72 hours
	Acute EC50 4500000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute EC50 7100000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 >100000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Chronic NOEC 1500 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 1000 mg/l Fresh water	Fish - Pimephales promelas - Embryo	32 days

## Section 12. Ecological information

N-Methyl-2-pyrrolidone	Acute LC50 1.23 ppm Fresh water Acute LC50 832 ppm Fresh water	Daphnia - Daphnia magna Fish - Lepomis macrochirus	48 hours 96 hours
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### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<input checked="" type="checkbox"/> N-Methyl-2-pyrrolidone	302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	>90 % - 8 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<input checked="" type="checkbox"/> N,N-dimethylacetamide	-	-	Readily
N-Methyl-2-pyrrolidone	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<input checked="" type="checkbox"/> Dimethyl sulfoxide	-1.35	3.16	low
N,N-dimethylacetamide	-0.77	-	low
N,N-Dimethylformamide	-1.01	0.79	low
N-Methyl-2-pyrrolidone	-0.46	-	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**12.5 Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## Section 14. Transport information

**DOT / TDG / Mexico / IMDG / IATA** : Not regulated.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

## Section 15. Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**U.S. Federal regulations** : **TSCA 5(a)2 final significant new use rules:** 2-Ethoxyethanol; 2-Methoxyethanol  
**TSCA 8(a) PAIR:** N,N-dimethylacetamide; Formamide; Tetrahydrothiophene-1,1-dioxide  
**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

#### SARA 302/304

##### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

#### SARA 311/312

**Classification** : **EYE IRRITATION** - Category 2B  
**CARCINOGENICITY** - Category 1B  
**TOXIC TO REPRODUCTION (Unborn child)** - Category 1B

##### Composition/information on ingredients

Name	%	Classification
Dimethyl sulfoxide	≥90	FLAMMABLE LIQUIDS - Category 4 EYE IRRITATION - Category 2A
N,N-dimethylacetamide	<1	FLAMMABLE LIQUIDS - Category 4 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Unborn child) - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (liver) - Category 2
N,N-Dimethylformamide	<1	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A

## Section 15. Regulatory information

N-Methyl-2-pyrrolidone	≤0.3	CARCINOGENICITY - Category 1B TOXIC TO REPRODUCTION (Unborn child) - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (liver) - Category 2 FLAMMABLE LIQUIDS - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Unborn child) - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 HNOC - Defatting irritant
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### State regulations

- Massachusetts** : None of the components are listed.
- New York** :  The following components are listed: Dimethyl formamide
- New Jersey** :  The following components are listed: DIMETHYL SULFOXIDE; METHANE, SULFINYLBIIS-; DIMETHYLFORMAMIDE; FORMAMIDE, N,N-DIMETHYL-
- Pennsylvania** :  The following components are listed: FORMAMIDE, N,N-DIMETHYL-
- California Prop. 65**

**⚠ WARNING:** This product can expose you to chemicals including Ethylene glycol monoethyl ether, Ethylene Glycol, Ethylene glycol monomethyl ether, N, N-Dimethylacetamide, N-methylpyrrolidone, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Ingredient name	No significant risk level	Maximum acceptable dosage level
<input checked="" type="checkbox"/> Ethylene glycol monoethyl ether	-	Yes.
Ethylene Glycol	-	Yes.
Ethylene glycol monomethyl ether	-	Yes.
N, N-Dimethylacetamide	-	-
N-methylpyrrolidone	-	Yes.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol (Annexes A, B, C, E)

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

- Australia** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Europe** : All components are listed or exempted.
- Japan** :  **Japan inventory (ENCS):** All components are listed or exempted.  
**Japan inventory (ISHL):** All components are listed or exempted.

## Section 15. Regulatory information

Malaysia	: Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: <input checked="" type="checkbox"/> Not determined.
Turkey	: Not determined.
United States	: All components are listed or exempted.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

## Section 16. Other information

### History

Date of issue	: 06/22/2018
Date of previous issue	: 06/21/2016
Version	: 5

### Procedure used to derive the classification

Classification	Justification
<input checked="" type="checkbox"/> EYE IRRITATION - Category 2B	Calculation method
CARCINOGENICITY - Category 1B	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 1B	Calculation method

Indicates information that has changed from previously issued version.

### Notice to reader

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