

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 11/01/2018

Reviewed on 11/01/2018

### 1 Identification

- **Product Identifier**

- **Trade Name:** NuSolv AR 2V4

- **Product Number:** ng-NSAR2V4

- **Relevant identified uses of the substance or mixture and uses advised against:**

Use as directed by manufacturer.

- **Product Description:** Fast evaporating, residue-free adhesive removal solution. 0 g/l VOC.

- **Application of the substance / the mixture:** Industry-specific application.

- **Details of the Supplier of the Safety Data Sheet:**

- **Manufacturer/Supplier:**

NuGeneration Technologies, LLC (dba NuGenTec)

1155 Park Avenue, Emeryville, CA 94608

salesteam@nugentec.com

1-888-996-8436 or 1-707-820-4080 for product information

[www.nugentec.com](http://www.nugentec.com)

- **Emergency telephone number:** PERS Emergency response: 1-801-629-0667

### 2 Hazard(s) Identification

- **Classification of the substance or mixture:**



Flame

Flam. Liq. 2 H225

Highly flammable liquid and vapor.



Eye Irrit. 2A H319

Causes serious eye irritation.

STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

- **Label elements:**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms:**



GHS02 GHS07

- **Signal word:** Danger

- **Hazard-determining components of labeling:**

Proprietary Solvent

Proprietary Solvent

- **Hazard statements:**

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

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**Trade Name: NuSolv AR 2V4**
**Precautionary statements:**

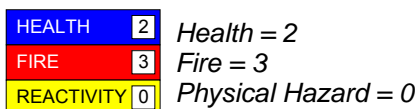
- P210 *Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*
- P240 *Ground/bond container and receiving equipment.*
- P241 *Use explosion-proof electrical/ventilating/lighting/equipment.*
- P242 *Use only non-sparking tools.*
- P243 *Take precautionary measures against static discharge.*
- P261 *Avoid breathing dust/fume/gas/mist/vapors/spray.*
- P264 *Wash thoroughly after handling.*
- P271 *Use only outdoors or in a well-ventilated area.*
- P280 *Wear protective gloves/protective clothing/eye protection/face protection.*
- 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.*
- P305+P351+P338 *If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
- P312 *Call a poison center/doctor if you feel unwell.*
- P337+P313 *If eye irritation persists: Get medical advice/attention.*
- P370+P378 *In case of fire: Use for extinction: CO2, powder or water spray.*
- P403+P233 *Store in a well-ventilated place. Keep container tightly closed.*
- P403+P235 *Store in a well-ventilated place. Keep cool.*
- P405 *Store locked up.*
- P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

**Unknown acute toxicity:**

*This value refers to knowledge of known, established toxicological or ecotoxicological values.*

• **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

**NFPA ratings (scale 0 - 4)**

**HMIS-ratings (scale 0 - 4)**


• **Hazard(s) not otherwise classified (HNOC):** None known

### 3 Composition/Information on Ingredients

• **Chemical characterization: Mixtures**

• **Description:** Mixture of substances listed below with non-hazardous additions.

**Dangerous Components:**

Proprietary Solvent	70-90%
⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2A, H319; STOT SE 3, H335-H336	
Proprietary Solvent	15-35%
⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2A, H319; STOT SE 3, H336	

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**Trade Name: NuSolv AR 2V4****· Additional information:**

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

### 4 First-Aid Measures

**· Description of first aid measures****· After inhalation:**

Supply fresh air. If required, provide artificial respiration. Consult doctor if symptoms persist.  
In case of unconsciousness place patient stably in side position for transportation.

**· After skin contact:**

Wash with soap and water.  
If skin irritation occurs, consult a doctor.

**· After eye contact:**

Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.  
If easy to do so, remove contact lenses if worn.  
If eye irritation occurs, consult a doctor.

**· After swallowing:**

Rinse out mouth and then drink plenty of water.  
Do not induce vomiting without medical advice.  
If vomiting does occur, repeat fluid administration  
If swallowed and symptoms occur, consult a doctor.

**· Information for doctor****· Most important symptoms and effects, both acute and delayed:**

No further relevant information available.

**· Indication of any immediate medical attention and special treatment needed:**

No further relevant information available.

### 5 Fire-Fighting Measures

**· Extinguishing media**

· **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **Special hazards arising from the substance or mixture:** Carbon Oxides.

**· Advice for firefighters****· Special protective equipment for firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

### 6 Accidental Release Measures

**· Personal precautions, protective equipment and emergency procedures:**

Ensure adequate ventilation.  
Avoid contact with skin, eyes and clothing.  
Keep away from ignition sources  
Keep people at a distance and stay upwind.

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*Wear protective equipment. Keep unprotected persons away.  
Mount respiratory protective device.*

• **Environmental precautions:**

*Dilute with plenty of water.  
Do not allow to enter sewers/surface or ground water.*

• **Methods and material for containment and cleaning up:**

*Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to section 13.*

*Ensure adequate ventilation.*

*Dispose of the collected material according to regulations.*

• **Reference to other sections:**

*See Section 7 for information on safe handling.*

*See Section 8 for information on personal protection equipment.*

*See Section 13 for disposal information.*

• **Protective Action Criteria for Chemicals**

• **PAC-1:**

Proprietary Solvent	200 ppm
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• **PAC-2:**

Proprietary Solvent	3200* ppm
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• **PAC-3:**

Proprietary Solvent	5700* ppm
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### 7 Handling and Storage

• **Handling**

• **Precautions for safe handling:**

*Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.*

• **Information about protection against explosions and fires:**

*Do not cut, grind or weld on container that contains or contained product.*

*Keep ignition sources away - Do not smoke.*

*Protect from heat.*

*Protect against electrostatic charges.*

• **Conditions for safe storage, including any incompatibilities**

*Store away from strong acids, strong bases, strong oxidizing agents and strong reducing agents.*

• **Storage**

• **Requirements to be met by storerooms and receptacles:** *Store in a cool location.*

• **Information about storage in one common storage facility:** *Not required.*

• **Further information about storage conditions:**

*Keep receptacle tightly sealed.*

*Store in cool, dry conditions in well sealed receptacles.*

*Protect from heat and direct sunlight.*

• **Specific end use(s):** *No further relevant information available.*

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### 8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.

- **Control parameters:**

All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

- **Components with occupational exposure limits:**

**Proprietary Solvent**

PEL	Long-term value: 610 mg/m <sup>3</sup> , 200 ppm
REL	Short-term value: 760 mg/m <sup>3</sup> , 250 ppm Long-term value: 610 mg/m <sup>3</sup> , 200 ppm
TLV	Short-term value: 757 mg/m <sup>3</sup> , 250 ppm Long-term value: 606 mg/m <sup>3</sup> , 200 ppm

**Proprietary Solvent**

PEL	Long-term value: 2400 mg/m <sup>3</sup> , 1000 ppm
REL	Long-term value: 590 mg/m <sup>3</sup> , 250 ppm
TLV	Short-term value: 1187 mg/m <sup>3</sup> , 500 ppm Long-term value: 594 mg/m <sup>3</sup> , 250 ppm BEI

- **Ingredients with biological limit values:**

**Proprietary Solvent**

BEI	50 mg/L urine end of shift Acetone (nonspecific)
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- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

- **Exposure controls:**

- **Personal protective equipment**

- **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing and wash before reuse.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure, use respiratory protective device that is independent of circulating air.

- **Protection of hands:** Not required.

- **Material of gloves:** Not required.

- **Penetration time of glove material:** Not applicable.

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· **Eye protection:**



Safety glasses

· **Body protection:** Not required.

### 9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:

Liquid

Color:

Clear, colorless

· **Odour:**

Solvent-like

· **Odor threshold:**

Not determined.

· **pH-value:**

Not applicable.

· **Change in condition**

Melting point/Melting range:

Not determined.

Boiling point/Boiling range:

56 °C (132.8 °F)

· **Flash point:**

-10 °C (14 °F)

· **Flammability (solid, gaseous):**

Not applicable.

· **Ignition temperature:**

455 °C (851 °F)

· **Decomposition temperature:**

Not determined.

· **Auto igniting:**

Product is not self-igniting.

· **Danger of explosion:**

Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower:

2.6 Vol %

Upper:

16.0 Vol %

· **Vapor pressure @ 20 °C (68 °F):**

233 hPa (174.8 mm Hg)

· **Density @ 20 °C (68 °F):**

0.892 g/cm<sup>3</sup> (7.4437 lbs/gal)

· **Relative density:**

Not determined.

· **Vapor density:**

Not determined.

· **Evaporation rate:**

Not determined.

· **Solubility in / Miscibility with:**

Water:

Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic:

Not determined.

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|-----------------------------|--|
| <b>Kinematic:</b>           | Not determined.                            |
| <b>· Solvent content:</b>   |  |
| <b>Organic solvents:</b>    | 100.0 %                                    |
| <b>VOC content:</b>         | 0 g/l                                      |
| <b>· Other information:</b> | No further relevant information available. |

### 10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:**  
Strong acids, strong bases, strong oxidizing agents and strong reducing agents.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

<b>Proprietary Solvent</b>		
Oral	LD50	>5000 mg/kg (Rat) 3705 mg/kg (Rabbit)
Dermal	LD50	>5000 mg/kg (Rabbit)
<b>Proprietary Solvent</b>		
Oral	LD50	5800 mg/kg (Rat)
Dermal	LD50	20000 mg/kg (Rabbit)
Inhalative	LC50/4 h	5549 mg/l (Trout) (96 hr)

- **Primary irritant effect:**
- **On the skin:** No irritating effect.
- **On the eye:** Irritating effect.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant
- **Carcinogenic categories:**
- **IARC (International Agency for Research on Cancer):**  
Group 1 - Carcinogenic to humans  
Group 2A - Probably carcinogenic to humans  
Group 2B - Possibly carcinogenic to humans  
Group 3 - Not classifiable as to its carcinogenicity to humans  
Group 4 - Probably not carcinogenic to humans

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None of the ingredients are listed.

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

### 12 Ecological Information

· **Toxicity:**

· **Aquatic toxicity:**

**Proprietary Solvent**

EC50 6100 mg/l (Pimephales) (48 hr)

· **Persistence and degradability:** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential:** No further relevant information available.

· **Mobility in soil:** No further relevant information available.

· **Additional ecological information:**

· **General notes:** Generally not hazardous for water.

· **Results of PBT and vPvB assessment:**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects:** No further relevant information available.

### 13 Disposal Considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Observe all federal, state and local environmental regulations when disposing of this material.

· **Uncleaned packaging**

· **Recommendation:**

Dispose of as unused product.

Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport Information

· **UN-Number:**

· **DOT, ADR/ADN, IMDG, IATA**

UN1993

· **UN proper shipping name:**

· **DOT**

Flammable liquids, n.o.s. (Methyl acetate)

· **ADR/ADN**

UN1993 Flammable liquids, n.o.s. (Methyl acetate)

· **IMDG, IATA**

FLAMMABLE LIQUID, N.O.S. (METHYL ACETATE)

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**Trade Name: NuSolv AR 2V4**

· **Transport hazard class(es):**

· **DOT**



- **Class:** 3 Flammable liquids
- **Label:** 3

· **ADR/ADN**



- **Class:** 3 (F1) Flammable liquids
- **Label:** 3

· **IMDG, IATA**



- **Class:** 3 Flammable liquids
- **Label:** 3
- **Packing group:** II
- **DOT, ADR/ADN, IMDG, IATA** II
- **Environmental hazards:** Not applicable.
- **Special precautions for user:** Warning: Flammable liquids
- **Danger code (Kemler):** 33
- **EMS Number:** F-E,S-E
- **Stowage Category** B
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.
- **Transport/Additional information:**
- **DOT**
- **Quantity limitations:** On passenger aircraft/rail: 5 L  
On cargo aircraft only: 60 L

· **ADR/ADN**

- **Excepted quantities (EQ):** Code: E2  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

· **IMDG**

- **Limited quantities (LQ):** 1L

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**Trade Name: NuSolv AR 2V4**

<ul style="list-style-type: none"> <li>· <b>Excepted quantities (EQ):</b></li> <li>· <b>UN "Model Regulation":</b></li> </ul>	<p>Code: E2            Maximum net quantity per inner packaging: 30 ml            Maximum net quantity per outer packaging: 500 ml            UN 1993 FLAMMABLE LIQUIDS, N.O.S. (METHYL ACETATE), 3, II</p>
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### 15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed or exempt from listing.

· **California Proposition 65:**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **New Jersey Right-to-Know List:**

All ingredients are listed.

· **New Jersey Special Hazardous Substance List:**

Proprietary Solvent	F3
Proprietary Solvent	F3

· **Pennsylvania Right-to-Know List:**

All ingredients are listed.

· **Pennsylvania Special Hazardous Substance List:**

Proprietary Solvent	E
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· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency):**

Proprietary Solvent	I
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· **TLV (Threshold Limit Value established by ACGIH):**

Proprietary Solvent	A4
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· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**



GHS02 GHS07

· **Signal word: Danger**

· **Hazard-determining components of labeling:**

Proprietary Solvent

Proprietary Solvent

· **Hazard statements:**

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

· **Precautionary statements:**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a poison center/doctor if you feel unwell.

P337+P313 If eye irritation persists: Get medical advice/attention.

P370+P378 In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

None of the ingredients are listed.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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**Trade Name: NuSolv AR 2V4**

### 16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

• **Date of preparation / last revision:** 11/01/2018 / -

• **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety & Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

• **\* Data compared to the previous version altered.**

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