**SAFETY DATA SHEET**

**1. Identification**

**Product identifier NAP-GC Solvent Blend**

**Other means of identification**

**Product code** 0302577

**Recommended use** Solvent

**Recommended restrictions** None known.

**2. Hazard(s) identification**

**Physical hazards** Flammable liquids Category 4

**Health hazards** Acute toxicity, oral Category 4

Acute toxicity, dermal Category 4

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**

**Signal word** Warning

**Hazard statement**

H227 Combustible liquid.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

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

P264 - Wash hands thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P280 - Wear protective gloves/protective clothing.

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

**Response** P301 + P312 - If swallowed: Call a poison center/doctor if you feel unwell.

P302 + P350 - If on skin: Wash with plenty of water.

P330 - Rinse mouth.

P362 - Take off contaminated clothing and wash before reuse.

P370 + P378 - In case of fire: Use appropriate media to extinguish.

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

**Disposal** P501 - Dispose of contents/container in accordance with local/regional/national/international

regulations.

**3. Composition/information on ingredients**

**Mixtures**

**Chemical name Common name and synonyms CAS number %**

N-Methyl-2-Pyrrolidinone 872-50-4 80-100

2-Butoxyethanol 111-76-2

Non-hazardous and other components below reportable levels 0.1-10

10-30

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

**4. First-aid measures**

**Inhalation** If overexposure to vapors or mist, move to fresh air. Call a physician if breathing becomes difficult.

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**Skin contact** Wash off with soap and plenty of water. Call a POISON CENTER or doctor/physician if you feel

unwell. Get medical attention if irritation develops and persists.

**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. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

**Indication of immediate**

**medical attention and special**

**treatment needed**

Provide general supportive measures and treat symptomatically. In case of shortness of breath,

give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information** In the case of accident or if you feel unwell, seek medical advice immediately (show the label

where possible). Ensure that medical personnel are aware of the material(s) involved, and take

precautions to protect themselves. Wash contaminated clothing before reuse.

**5. Fire-fighting measures**

**Suitable extinguishing media** Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing**

**media**

Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from**

**the chemical**

The product is combustible, and heating may generate vapors which may form explosive vapor/air

mixtures. 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**

In case of fire and/or explosion do not breathe fumes. 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** Combustible liquid.

**6. Accidental release measures**

**Personal precautions,**

**protective equipment and**

**emergency procedures**

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of

low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area).

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.

**Methods and materials for**

**containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep

combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is

possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like

vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use

water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer,

basements or confined areas. 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.

**Environmental precautions** Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling** Keep away from open flames, hot surfaces and sources of ignition. Do not get this material in

contact with skin. Do not taste or swallow. Avoid contact with eyes. Avoid prolonged exposure.

Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective

equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke.

Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

**Conditions for safe storage,**

**including any**

**incompatibilities**

Keep away from heat, sparks and open flame. Store in original tightly closed container. Store in a

cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible

materials (see Section 10 of the SDS). Keep in an area equipped with sprinklers.

**8. Exposure controls/personal protection**

**Occupational exposure limits**

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

**Components Type Value**

2-Butoxyethanol (CAS PEL 240 mg/m3

111-76-2)

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

**Components Type Value**

50 ppm

**US. ACGIH Threshold Limit Values**

**Components Type Value**

2-Butoxyethanol (CAS TWA 20 ppm

111-76-2)

**US. NIOSH: Pocket Guide to Chemical Hazards**

**Components Type Value**

2-Butoxyethanol (CAS TWA 24 mg/m3

111-76-2)

5 ppm

**US. AIHA Workplace Environmental Exposure Level (WEEL) Guides**

**Components Type Value**

N-Methyl-2-Pyrrolidinone TWA 40 mg/m3

(CAS 872-50-4)

10 ppm

**Biological limit values**

**ACGIH Biological Exposure Indices**

**Components Value Determinant Specimen Sampling Time**

200 mg/g Butoxyacetic

acid (BAA),

with hydrolysis

Creatinine in

urine

2-Butoxyethanol (CAS \*

111-76-2)

100 mg/l 5-Hydroxy-N-m

ethyl-2-pyrrolid

one

N-Methyl-2-Pyrrolidinone Urine \*

(CAS 872-50-4)

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

**Exposure guidelines**

**US - California OELs: Skin designation**

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

**US - Minnesota Haz Subs: Skin designation applies**

2-Butoxyethanol (CAS 111-76-2) Skin designation applies.

**US - Tennesse OELs: Skin designation**

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

**US NIOSH Pocket Guide to Chemical Hazards: Skin designation**

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

**US WEEL Guides: Skin designation**

N-Methyl-2-Pyrrolidinone (CAS 872-50-4) Can be absorbed through the skin.

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

2-Butoxyethanol (CAS 111-76-2) 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.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear eye/face protection. Wear safety glasses with side shields (or goggles).

**Hand protection** Wear protective gloves.

**Skin protection**

**Other** Wear appropriate chemical resistant clothing.

**Respiratory protection** If engineering controls do not maintain airborne concentrations below recommended exposure

limits (where applicable) or to an acceptable level (in countries where exposure limits have not

been established), an approved respirator must be worn.

**General hygiene**

**considerations**

When using, do not eat, drink or smoke. 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.

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**9. Physical and chemical properties**

**Appearance** Clear.

**Physical state** Liquid.

**Form** Liquid.

**Color** Colorless.

**Odor** Typical Solvent.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** -94 °F (-70 °C) estimated

**Initial boiling point and**

**boiling range**

336.2 °F (169 °C) estimated

**Flash point** 161.6 °F (72.0 °C) Lowest Flashing component

**Evaporation rate** > 1 (Butyl Acetate = 1)

**Flammability (solid, gas)** Not available.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower**

**(%)**

1.1 % estimated

**Flammability limit -**

**upper (%)**

10.6 % estimated

**Explosive limit - lower**

**(%)**

Not available.

**Explosive limit - upper**

**(%)**

Not available.

**Vapor pressure** 0.47 hPa 1 hPa = 0.75006 mmHg estimated

**Vapor density** > 1 (Air = 1)

**Relative density** Not available.

**Solubility(ies)**

**Solubility (water)** Soluble.

**Partition coefficient**

**(n-octanol/water)**

Not available.

**Auto-ignition temperature** 471.2 °F (244 °C) estimated

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Other information**

**Density** 1.01 g/cm3

**Flash point class** Combustible IIIA

**Percent volatile** 100 %

**Pounds per gallon** 8.42 lb/gal

**Specific gravity** 1.01

**VOC (Weight %)** 100 %

**10. Stability and reactivity**

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** Stable under normal conditions.

**Possibility of hazardous**

**reactions**

No hazardous reaction known under normal conditions of use.

**Conditions to avoid** Avoid heat, sparks, open flames and other ignition sources. Suitable precautions should be utilized

if using this product at temperatures above the flash point. Contact with incompatible materials.

**Incompatible materials** Strong oxidizers and strong acids. Peroxides. Phenols.

**Hazardous decomposition**

**products**

No hazardous decomposition products are known if stored and applied as directed.

**11. Toxicological information**

**Information on likely routes of exposure**

**Ingestion** Harmful if swallowed.

**Inhalation** Prolonged inhalation may be harmful.

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**Skin contact** Harmful in contact with skin.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and

prolonged. These effects have not been observed in humans.

**Eye contact** Direct contact with eyes may cause temporary irritation.

**Symptoms related to the**

**physical, chemical and**

**toxicological characteristics**

Direct contact with eyes may cause temporary irritation.

**Information on toxicological effects**

**Acute toxicity** Harmful if swallowed. Harmful in contact with skin. Expected to be a low hazard for usual industrial

or commercial handling by trained personnel.

**Components Species Test Results**

2-Butoxyethanol (CAS 111-76-2)

LD50 Rabbit

Dermal

**Acute**

400 mg/kg

LC50 Mouse

Inhalation

700 ppm, 7 Hours

Rat 450 ppm, 4 Hours

LD50 Guinea pig

Oral

1.2 g/kg

Mouse 1.2 g/kg

Rabbit 0.32 g/kg

Rat 560 mg/kg

LD50 Mouse

Other

1130 mg/kg

Rabbit 280 mg/kg

Rat 340 mg/kg

N-Methyl-2-Pyrrolidinone (CAS 872-50-4)

LD50 Rabbit

Dermal

**Acute**

8000 mg/kg

LD50 Mouse

Oral

5130 mg/kg

Rat 3914 mg/kg

4.2 ml/kg

LD50 Mouse

Other

54.5 mg/kg

Rat 80.5 mg/kg

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

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye**

**irritation**

Direct contact with eyes may cause temporary irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not available.

**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** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

2-Butoxyethanol (CAS 111-76-2) 3 Not classifiable as to carcinogenicity to humans.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

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**Reproductive toxicity** Possible reproductive hazard.

**Specific target organ toxicity**

**- single exposure**

Not classified.

**Specific target organ toxicity**

**- repeated exposure**

Not classified.

**Aspiration hazard** Not available.

**Chronic effects** Prolonged inhalation may be harmful. May be harmful if absorbed through skin.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and

prolonged. These effects have not been observed in humans.

**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**

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

2-Butoxyethanol (CAS 111-76-2)

**Aquatic**

Fish LC50 Inland silverside (Menidia beryllina) 1250 mg/l, 96 hours

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

**Partition coefficient n-octanol / water (log Kow)**

2-Butoxyethanol 0.83

N-Methyl-2-Pyrrolidinone -0.54

**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. This material and

its container must be disposed of as hazardous waste. Do not allow this material to drain into

sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used

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

regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**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** Empty containers should be taken to an approved waste handling site for recycling or disposal.

Since emptied containers may retain product residue, follow label warnings even after container is

emptied.

**14. Transport information**

**DOT BULK**

**UN number** NA1993

**Proper shipping name** Compounds, Cleaning Liquid (Ethylene Glycol Monobutyl Ether, N-Methyl Pyrrolidone)

**Hazard class** Combustible Liquid

**Packing group** III

**ERG code** 128

**DOT NON-BULK**

Not regulated as dangerous goods.

**15. Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard,

29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

2-Butoxyethanol (CAS 111-76-2) Listed.

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**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes

Delayed Hazard - Yes

Fire Hazard - Yes

Pressure Hazard - No

Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312**

**Hazardous chemical**

Yes

**SARA 313 (TRI reporting)**

**Chemical name CAS number % by wt.**

N-Methyl-2-Pyrrolidinone 872-50-4 80-100

2-Butoxyethanol 111-76-2 10-30

Ethylene Glycol 107-21-1 0.1-10

**Other federal regulations**

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

Not regulated.

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

Not regulated.

**Safe Drinking Water Act**

**(SDWA)**

Not regulated.

**US state regulations**

**US. Massachusetts RTK - Substance List**

2-Butoxyethanol (CAS 111-76-2)

N-Methyl-2-Pyrrolidinone (CAS 872-50-4)

**US. New Jersey Worker and Community Right-to-Know Act**

2-Butoxyethanol (CAS 111-76-2) 500 LBS

N-Methyl-2-Pyrrolidinone (CAS 872-50-4) 500 LBS

**US. Pennsylvania RTK - Hazardous Substances**

2-Butoxyethanol (CAS 111-76-2)

N-Methyl-2-Pyrrolidinone (CAS 872-50-4)

**US. Rhode Island RTK**

N-Methyl-2-Pyrrolidinone (CAS 872-50-4)

**US. California Proposition 65**

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

harm.

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

N-Methyl-2-Pyrrolidinone (CAS 872-50-4) Listed: June 15, 2001

**International Inventories**

**Country(s) or region Inventory name On inventory (yes/no)\***

Australia Australian Inventory of Chemical Substances (AICS) Yes

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 Yes

(EINECS)

Europe European List of Notified Chemical Substances (ELINCS) No

Japan Inventory of Existing and New Chemical Substances (ENCS) Yes

Korea Existing Chemicals List (ECL) Yes

New Zealand New Zealand Inventory Yes

Philippines Philippine Inventory of Chemicals and Chemical Substances Yes

(PICCS)

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).

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

**Issue date** 09-09-2014

**Version #** 01

**Disclaimer** This information is based on data available to us and is accurate and reliable to the best of our

knowledge at the time of printing. However, no warranty is expressed or implied regarding the

accuracy or completeness of the information contained herein. Final determination of the suitability

of this material for the use contemplated is the sole responsibility of the user. Buyer assumes all

risk and liabilities. Buyer accepts and uses this material on these conditions.

**Revision Information** Physical & Chemical Properties: Multiple Properties

Transport Information: Material Transportation Information

Regulatory Information: United States

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