

SAFETY DATA SHEET

Product: NQ System 1017

Revision: 01

Date: 2017/03/14

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1 - IDENTIFICATION

GHS Product identifier: NQ System 1017
 Recommended use of the chemical and restrictions on use: Manufacture of liquid inks, specially for printing inks for packaging.
 Supplier's details: Alchemix, a Nitro Química Company
 Address: 2300 West Point Ave. College Park, GA. 30337 USA
 Phone number(s): Phone: 1-404-761-0604 Toll free: 1-800-535-2968
 Emergency phone number: CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3887

2 - HAZARD IDENTIFICATION

Classification of the substance or mixture: Flammable Liquids - Category 2
 Eye Damage/Irritation - Category 2A
 Reproductive Toxicity - Category 1A
 Specific Target Organ Toxicity - Single Exposure - Category 3
 Specific Target Organ Toxicity - Repeated Exposure - Category 1
 Hazardous to the Aquatic Environment - Acute Hazard - Category 3
 Hazardous to the Aquatic Environment - Chronic Hazard - Category 3
 Classification system adopted: Globally Harmonized System of Classification and Labeling of Chemicals (GHS), United Nations.

GHS label elements, including precautionary statements

Pictograms:



Signal word: DANGER
 Hazard statement(s): H225 Highly flammable liquid and vapour.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.
 H360 May damage fertility or the unborn child.
 H372 Causes damage to liver through repeated or prolonged exposure if swallowed.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s):

PREVENTION:

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.

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P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical, ventilating and lighting equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P260 Do not breathe mist or aerosol vapors.

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

P264 Wash hands thoroughly after handling.

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

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

P273 Avoid release to the environment.

P280 Wear protective gloves, protective clothing, eye protection and face protection.

RESPONSE:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P312 Call a POISON CENTER or a doctor, if you feel unwell.

P314 Get medical advice/attention if you feel unwell.

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

P370 + P378 In case of fire: Use to extinction: foam, water mist, powder and carbon dioxide (CO₂).

STORAGE:

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.

DISPOSAL:

P501 Dispose of contents and container in accordance with local regulations. It is not expected that product presents specific hazards.

Other hazards which do not result in classification:

3 - COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURES

Components contributing to the hazard:

Product based on nitrocellulose, organic solvents and plasticizer.

Nitrocellulose (CAS 9004-70-0): 35 - 45%*

Ethanol (CAS 64-17-5): 30 - 40%

Ethyl acetate (CAS 141-78-6): 15 - 25%

2-acetoxy-1,2,3-propanetricarboxylic acid tributyl ester (CAS 77-90-7): 3 - 10%

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* The ingredient is not in sufficient concentration to contribute to the danger.

4 - FIRST-AID MEASURES

Routes of exposure

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If the victim feels unwell, contact a TOXICOLOGICAL INFORMATION CENTER or a doctor. Bring this SDS.
Skin:	Wash exposed skin with sufficient amount of water to remove the material. Take off and isolate contaminated clothing and shoes. In case of skin irritation: contact a doctor. Bring this SDS.
Eye:	Wash carefully with water for several minutes. In case of use of contact lenses, remove them, if possible. Keep washing. If eyes irritation continues: Contact a doctor. Bring this SDS.
Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse the victims mouth with water in abundance. If the victim feels unwell, contact a TOXICOLOGICAL INFORMATION CENTER or a doctor. Bring this SDS.
Most important symptoms/effects, acute and delayed:	Irritating to eyes redness and pain. May cause respiratory irritation. May cause drowsiness or dizziness. Repeated exposure causes liver cirrhosis.
Indication of immediate medical attention and special treatment needed, if necessary:	Avoid contact with the product to help the victim. Keep victim warm and quiet. Symptomatic treatment should comprise mainly supportive measures such as correction of electrolyte disturbances, metabolic, and respiratory support. In case of skin contact do not rub the affected site.

5 - FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Appropriate: Compatible with foam, water mist, powder and carbon dioxide (CO ₂) Inappropriate: Water directly onto the burning product.
Specific hazards arising from the chemical:	The combustion or the chemical containers may form toxic and irritant gases such as carbon monoxide and carbon dioxide. Very dangerous when exposed to excessive heat or other sources of ignition such as sparks, open flames or flames of matches and cigarettes, welding operations, pilot lights and electric motors. Can accumulate static charge by flow or agitation. Vapors from heated liquid can be ignited by static discharge. Vapors are heavier than air and tend to accumulate in low or confined areas, such as sewers and basements. Can travel great distances causing retrogression of the flame or new fires both in open environments in as confined ones. Containers may explode if heated.
Special protective actions for fire-fighters:	Use self-contained breathing apparatus (SCBA) operated in positive pressure mode and complete protective clothing. Containers and tanks involved in the fire should be cooled with water mist.

6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

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For non-emergency personnel:	Prevent sparks or flames. Do not smoke. Do not touch damaged containers or spilled material without the use of appropriate clothing. Avoid exposure to the product. Stay in a safe place, with wind from behind. Use personal protective equipment as described in Section 8.
For emergency responders:	Use protective equipment as described in Section 8.
Environmental precautions:	Avoid that the spilled material reaches waterways or sewage system.
Methods and materials for containment and cleaning up:	Use water mist or vapor suppressing foam to reduce the dispersion of vapors. Use natural barriers or spill containment. Collect spilled material and put it into containers. Adsorb the remaining product with dried sand, vermiculite or any other inert material. Put the adsorbed material in appropriate containers and remove them to a safe place. Use tools that do not cause sparks to collect absorbed material. For final destination, proceed pursuant to Section 13 of this SDS.

7 - HANDLING AND STORAGE

Precautions for safe handling

Safe handling of the substance or mixture:	Handle in a well ventilated area or with general system of ventilation/local exhaust. Avoid vapors and mists formation. Avoid exposure to the chemical, since the effects may not be felt immediately.
General hygiene:	Wash hands and face thoroughly after handling and before eating, drinking, smoking or going to the bathroom. Contaminated clothing should be changed and washed before reuse. Remove clothing and protective equipment contaminated before entering eating areas.

Conditions for safe storage, including any incompatibilities

Technical measures for prevention of fire and explosion:	Keep away from heat, sparks, open flames and hot surfaces. - Do not smoke. Keep container tightly closed. Ground the container vessel and the receiver of the product during transfers. Only use anti-sparking tools. Avoid the accumulation of electrostatic charges. Use electrical equipment, ventilation and lighting explosion proof. Use personal protective equipment as described in Section 8.
Adequate conditions:	Store in a well ventilated place, away from sunlight. Keep container closed. Keep away from high temperatures and ignition sources. Keep stored at room temperature not exceeding 35°C (95°F).
Packaging compatibilities:	G7 drum, stainless steel container or HDPE container with anti-static treatment.

8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limit:	-Ethanol: TLV - STEL (ACGIH, 2015): 1000 ppm PEL - TWA (OSHA, 2015): 1000 ppm.
	-Ethyl acetate: TLV - TWA (ACGIH, 2015): 400 ppm PEL - TWA (OSHA, 2015): 400 ppm. (LEL: Lower Explosive Limit)
Biological limit:	Not established.

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Other limits and values:	<u>-Ethanol:</u> IDLH (NIOSH, 2010): 3300 ppm (LEL) <u>-Ethyl acetate:</u> IDLH (NIOSH, 2010): 2000 ppm
Appropriate engineering controls:	Promote direct mechanical ventilation and exhaust system to the outside environment. These measures help reduce exposure to product.
Individual protection measures, such as personal protective equipment (PPE)	
Eye/face protection:	Safety glasses.
Skin protection:	Closed shoes and suitable protective clothing.
Respiratory protection:	A risk assessment should be performed for proper definition of respiratory protection, in view of the product use conditions.
Thermal hazards:	Does not present thermal hazards.

9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid viscous
Color:	Not available.
Odour:	Acetate characteristic.
Melting point/freezing point:	Not available.
Boiling point or initial boiling point and boiling range:	Not available.
Flammability:	Not applicable.
Lower and upper explosion limit/flammability limit:	Not available.
Flash point:	< 23°C - 73,40°F (closed cup)
Auto-ignition temperature:	Information regarding to: <u>-Nitrocellulose:</u> 180°C (356°F)
Decomposition temperature:	Information regarding to: <u>-Nitrocellulose:</u> 180°C (356°F)
pH:	Not available
Kinematic viscosity:	Not available.
Solubility:	Immiscible in water.
Partition coefficient n-octanol/water (log value):	Information regarding to: <u>-Ethanol:</u> log K _{ow} : 0.31
Vapour pressure:	Information regarding to: <u>-Ethanol:</u> 593 mmHg (685.4°F)
Density and/or relative density:	0.9 to 1.1 (water at 4°C=1) at 25°C (77°F)
Relative vapour density:	Not available

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Particle characteristics:	Not available
Other information:	Not applicable.

10 - STABILITY AND REACTIVITY

Reactivity:	-
Chemical stability:	Product is stable under normal conditions of temperature and pressure.
Possibility of hazardous reactions:	Ethanol: Can form explosive Mixtures with air. Risk of explosion in contact with alkali metals, alkaline oxides and nitric acid. Ethyl acetate: React dangerously with strong oxidizing agents and chlorosulfonic acid and can start a fire or explosion.
Conditions to avoid:	Elevated temperatures. Sources of ignition.
Incompatible material:	2,4-dinitrotoluene, sulphuric acid, acids, oxidizing agents, aluminum, amines, ammonia, base, halogen, spontaneous combustion of materials, radioactive materials, alkaline metals and nitrates.
Hazardous decomposition products:	There are not known hazardous decomposition products.

11 - TOXICOLOGICAL INFORMATION

Acute toxicity:	It is not expected that the product presents acute toxicity. Acute Toxicity Estimate (ATE) ATEm (oral): > 5000 mg/kg
Skin corrosion/irritation: Serious eye damage/irritation:	It is not expected that the product presents skin corrosion/irritation. Causes serious eye irritation with redness and pain.
Respiratory or skin sensitization:	It is not expected that the product causes respiratory or skin sensitization.
Germ cell mutagenicity:	It is not expected that the product presents germ cell mutagenicity.
Carcinogenicity:	It is not expected that the product presents carcinogenicity.
Reproductive toxicity:	May damage fertility or the unborn child.
STOT - Single exposure:	May cause drowsiness or dizziness may cause dizziness and nausea. May cause respiratory irritation may cause cough and sneezing. Information regarding to: <u>-Ethanol:</u> In high Concentrations may cause hypotension, tachycardia, vasodilatation, dizziness, incoordination, headache, confusion, stupor and coma.
STOT - Repeated exposure:	Causes damage to liver through repeated or prolonged exposure if swallowed may cause liver cirrhosis.
Aspiration Hazard:	It is not expected that the product presents aspiration hazard.

12 - ECOLOGICAL INFORMATION

Toxicity:	Harmful to aquatic life with long lasting effects. Information regarding to: <u>-2-acetoxy-1,2,3-propanetricarboxylic acid tributyl ester:</u> LC ₅₀ (<i>Pimephales promelas</i> , 96h): 2.8 mg/L
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Persistence and degradability: Bioaccumulative potential: Mobility in soil: Other adverse effects:	EC ₅₀ (<i>Daphnia sp</i> , 48h): 7.82 mg/L Due to the lack of data, it is expected that the product presents persistence and it is not considered readily biodegradable. It is not expected that the product presents bioaccumulative potential in aquatic organisms. Not determined. There are not known other environmental effects for this product.
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13 - DISPOSAL CONSIDERATIONS

Disposal methods

Must be disposed of as hazardous waste in compliance with local regulations. The treatment and disposal should be evaluated for each specific product. Keep the product remains in its original and properly closed containers. Disposal should be performed as established for the product.

14 - TRANSPORT INFORMATION

Road: UN number: UN Proper Shipping Name: Transport hazard class(es): Packing group: Railway regulations: UN number: UN Proper Shipping Name: Transport hazard class(es): Packing group: Sea: UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: EmS: Air: UN number:	UN - "United Nations" Recommendations on the TRANSPORT OF DANGEROUS GOODS. Model Regulations 2059 NITROCELLULOSE SOLUTION, FLAMMABLE 3 II Convention concerning International Carriage by Rail (COTIF) Appendix C - Regulations concerning the International Carriage of Dangerous Goods by Rail - RID 2059 NITROCELLULOSE SOLUTION, FLAMMABLE 3 II IMO - International Maritime Organization International Maritime Dangerous Goods Code (IMDG Code) 2059 NITROCELLULOSE SOLUTION, FLAMMABLE 3 II The product is not considered a marine pollutant. F-E,S-D IATA - International Air Transport Association Dangerous Goods Regulation (DGR) 2059
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UN proper shipping name: Transport hazard class(es): Packing group: Special precautions for user: Transport in bulk according to MARPOL 73/78, Annex II, and the IBC Code:	NITROCELLULOSE SOLUTION, FLAMMABLE 3 II There is no need of special precautions. Consult regulations: - International Maritime Organization. MARPOL: Articles, protocols, annexes, unified interpretations of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, consolidated edition. IMO, London, 2006. - International Maritime Organization. IBC code: International code for the construction and equipment of shipping carrying dangerous chemicals in bulk: With Standards and guidelines relevant to the code. IMO, London, 2007.
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15 - REGULATORY INFORMATION

Convention concerning Safety in the use of Chemicals at Work (Convention 170) - International Labour Organization, 1990;
 International Organization for Standardization - ISO 11014:2009.

16 - OTHER INFORMATION

This SDS was prepared based on current knowledge about the proper product handling and under normal conditions of use, in accordance with the application specified on the packaging. Any other use of the product involving their combination with other materials, and use various forms of those indicated, are the responsibility of the user. Warns that the handling of any chemical substance requires the prior knowledge of its hazards for the user. In the workplace it is for the user company's product promotes training of its collaborators about the possible risks arising from exposure to the chemical.

SDS elaborated in August 2016.

Change control:

Version	Publication Date	Changes
01	2016/08/18	Elaboration

In accordance with Globally Harmonized System of
Classification and Labelling of Chemicals (GHS)-
Chapter 1.5 and Annex 4

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Abbreviations:

ACGIH - *American Conference of Governmental Industrial Hygienists*

CAS - *Chemical Abstracts Service*

EC₅₀ - *Effective Concentration 50%*

IDLH - *Immediately Dangerous to Life or Health*

LC₅₀ - *Lethal Concentration 50%*

LEL - *Lower Explosive Limit*

NIOSH - *National Institute for Occupational Safety and Health*

OSHA - *Occupational Safety & Health Administration*

PEL - *Permissible Exposure Limit*

STEL - *Short Term Exposure Limit*

TLV - *Threshold Limit Value*

TWA - *Time Weighted Average*

Bibliographic references:

Globally Harmonized System of Classification and Labelling of Chemicals (GHS). 6. rev. ed. New York: United Nations, 2015.
