



## PRODUCT SAFETY DATA SHEET

### **1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY**

**PRODUCT** : **Industrial Nitrocellulose wetted with alcohol (UN2556)**

**USE** : Industrial Nitrocellulose is used as a binder and or film former in the manufacture of coatings, inks and Ancillary. Printing materials and paints.

**MANUFACTURER** : TNC Chemicals Phils., Inc.

**ADDRESS** : Km. 56 Brgy. Turbina, Calamba City

**Telephone** : (049) 545-5523 / (049) 545-1646

**Facsimile** : (049) 545-1960

### **2. COMPOSITION/INFORMATION ON INGREDIENTS**

	%	CAS No.	EC Number	Index
<b>Nitrocellulose (cellulose nitrate) (&lt;12.2% N)</b>	<b>65-75</b>	<b>9004-70-0</b>	<b>Not applicable</b>	<b>603-037-01-3</b>
<b>or Isopropyl alcohol</b>	<b>25-35</b>	<b>67-63-0</b>	<b>200-661-7</b>	<b>603-117-00-0</b>

	<b>HAZARD SYMBOL</b>	<b>R PHASES</b>
<b>Nitrocellulose</b> (cellulose nitrate) (<12.2% N)	<b>F</b>	<b>R11 HIGHLY FLAMMABLE</b>
<b>Isopropyl alcohol</b>	<b>F, Xi</b>	<b>R11 Highly flammable</b> <b>R36 Irritating to eyes</b> <b>R67 Vapours may cause drowsiness and dizziness</b>

### **3. HAZARDS IDENTIFICATION**

Nitrocellulose can be ignited by flame, heat, shock, impact, friction, sparks or static electricity.  
Burning nitrocellulose will produce toxic fumes.

### **4. FIRST-AID MEASURES**

**Inhalation of Vapour & Materials of Combustion :**

Remove to fresh air.  
If not breathing, give artificial respiration.  
If breathing is difficult, give oxygen.  
Call a physician.

**Skin Contact :**

Immediately flush skin with plenty of water.  
Remove contaminated clothing.  
Call a physician if irritation persists. Wash clothing before re-use.

**Eye Contact :**

Immediately flush eyes with an eye-wash-solution or plenty of water, holding the eyelids apart, for at least 10 minutes.  
Call a physician.

**Ingestions :**

Do not induce vomiting.  
Give large quantities of water.  
Never give anything by mouth to an unconscious person  
Get medical attention immediately

## **5. FIRE-FIGHTING MEASURES**

Burning nitrocellulose can only be extinguished by large quantities of water applied as mist or spray.

Drum lids can be blown off.

Fumes emitted from burning nitrocellulose may contain toxic gases. Fire-fighters must work from the windward side and should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. After the fire is extinguished material may be unstable and could re-ignite by itself. Therefore ensure residential material is thoroughly wetted.

## **6. ACCIDENTAL RELEASE MEASURES (SPILLAGES)**

Remove sources of ignition. No smoking!

Ensure sufficient ventilation or fresh air.

Avoid contact with eyes or skin.

Avoid inhalation of vapours.

Wear suitable protective equipment/clothing. Check with the PPE manufacturer.

Tools used with nitrocellulose should be non-ferrous materials such as copper or brass or wood i.e. non-sparking.

Spilled nitrocellulose must be thoroughly wetted with plenty of water, swept up carefully and kept in tightly closed watertight container.

Prevent spilled nitrocellulose from contaminating water courses, sewers, soil or vegetation.

## **7. HANDLING & STORAGE**

### **Handling**

Keep away from flame, heat, shock, impact friction, sparks or static electricity.

Do not allow wetted nitrocellulose to dry out.

Ensure adequate ventilation.

NC in drums: Do not drop, slide, roll or bang the drums

Pull polyethylene liner, if present, carefully down over the outside of the Container. Ensure package is completely grounded /earthed during emptying.

Tools used with nitrocellulose should be of non-ferrous materials such as copper, brass or wood. Tools made of plastic material must not be used because of their tendency to produce static electricity.

Avoid contact with strong alkaline and acidic materials, amines or oxidizing agents.

Keep quantity of product in the processing area to a minimum. This would not be expected to exceed the amount necessary for one shift.

## **Storage**

Store in a cool and well ventilated place appropriate to the packaging material.

Keep in original containers. Maximum recommended continuous storage Temperature is 40°C.

Keep away from heat including direct sunlight, flame or any source of ignition.

Nitrocellulose is not to be stored together with incompatible materials for instance strong alkaline and acidic materials, amines or oxidizing agents.

Rotate inventory on a "First in/first out" basis. The recommended shelf life of two years from month of manufacture, for unopened packages, should not be exceeded.

Once a package has been opened, the entire contents should be used as quickly as possible.

Do not open or empty containers within the storage area.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Exposure Limits:**

	<b>Long Term Exposure Limit (8 hour TWA) <math>\text{mgm}^{-3}</math></b>	<b>Short Term Exposure Limit (15 min ref) <math>\text{mgm}^{-3}</math></b>
<b>Isopropyl alcohol</b>	999	1250

Concentration of solvent in the workplace atmosphere should be monitored. Ensure good ventilation or use local exhaust to maintain ambient vapor concentrations below the exposure limits.

### **Employee Protection Recommendations**

#### Respiratory Protection:

-Where suitable engineering controls are not fitted or are inadequate wear suitable respiration equipment e.g. an approved organic vapour respirator.

#### Hand protection:

-Wear solvent resistant gloves. Butyl rubber has been shown to be effective against heavy exposure to both IPA and ethanol, with a breakthrough time in excess of 8 hours.

#### Eye protection:

-Protective goggles and/or full shield.

#### Skin protection:

-Non-flammable, antistatic protective clothing antistatic.

It should be noted that glove performance can vary widely and it is recommended that appropriate advice on the selection of gloves and other PPE is obtained from the PPE manufacturer.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

Form	:	Fibrous
Colour	:	white to off white
Odour	:	of wetting alcohols
Bulk density	:	500-600 Kg/m <sup>3</sup>
Specific Gravity	:	1.4 (Solvent Damped)
Solubility in water	:	NC is soluble in esters, ketones and glycol ethers. Alcohols are completely miscible in water.
Decomposition Temperature	:	higher than 180°C

## **10. STABILITY AND REACTIVITY**

Stability	:	Stable under recommended storage and handling conditions.
Conditions to Avoid	:	Avoid exposure to heat, shock and friction. Stability decreases and deterioration starts with increasing temperatures. Observe recommended storage conditions.
Materials to Avoid	:	Nitrocellulose decomposes when in contact with strong Alkaline and acidic materials, amines or oxidizing agents.
Hazardous Decomposition Product.	:	CO <sub>1</sub> CO <sub>2</sub> , oxides of nitrogen and their potentially toxic fumes

## **11. TOXICITY DATA**

Nitrocellulose has been in use for many years with no evidence of adverse effects. The toxicity is dependant on the wetting agent.

	<b>Isopropanol</b>	<b>Nitrocellulose</b>
Oral LD50, Rat	5045	> 5000 mg/kg
Inhalation LD50, Rat	16,000 ppm 8hr	-
Dermal Rabbit	12800 mg/kg	-
Eye Contact	Irritant	Not Irritating
Skin Contact	Irritant	Not Irritating

## **12. ECOLOGY DATA**

There is no evidence to suggest that nitrocellulose has any detrimental effect on the environment.

## **13. DISPOSAL CONSIDERATIONS**

### **Product disposal**

It is recommended that small quantities of nitrocellulose should be dissolved prior to destruction as waste NC-lacquer.

Alternatively destroy by burning small quantities outside at a safe place in an open fire under competent control. Ignite remotely.

Waste disposal should be in accordance with national, state and local environmental regulations.

## Container disposal

Empty container retains hazardous residue. Observe all label precautions. Keep away from heat, sparks and flames. Do not weld or use cutting torch on or near container (for NC in drums).

Do not distribute, make available, furnish or re-use empty container except for storage and shipment of original product.

Remove all hazardous residue from container eg. Wiping with damp rag: cleaning should include inside of lid and closure ring (for NC in drums). Dispose of rag as for spilled nitrocellulose.

Remove or erase all labels. Then offer container for recycling/reconditioning or puncture or otherwise destroy empty container and dispose of in facility permitted for non hazardous waste.

## 14. TRANSPORT INFORMATION

Proper Shipping Name	UN No.	Packing Groups	Hazard Class
Nitrocellulose with alcohol	2556	II	4.1

ADR/RID				
Proper Shipping Name	Substance Identification No	Hazard Class	Packing Group	Classification Code
Nitrocellulose with alcohol	2556	4.1	II	D



<b>IATA/IMDG</b>				
<b>Proper Shipping Name</b>	<b>UN No.</b>	<b>Packing Group</b>	<b>Hazard Class</b>	<b>Marine Pollutant</b>
Nitrocellulose with alcohol	2556	II	4.1	No

## **15. REGULATORY INFORMATION**

### ISOPROPANOL WET

EEC Classification : Flammable, irritant

Hazard Symbol : F : Hazard description: highly flammable  
Xi: Hazard description: irritant

Risk Phrases : R11 Highly Flammable  
R36 Irritating to eyes  
R67 Vapours may cause drowsiness and dizziness

Safety Phrases : S7: Keep Container tightly closed  
S16: Keep away from Sources of Ignition - No Smoking.  
S24/25 : Avoid contact with skin and eyes  
S26: In the case of contact with eyes, rinse Immediately with plenty of water and seek medical advice.  
S33: Take Precautionary Measures Against Static Discharge  
S37/39: Wear Suitable Gloves and Eye/Face Protection

## **16. OTHER INFORMATION**

The technical information provided in this safety data sheet should only be used for the purposes of assessing hazards with respect to safety or the environment. It should not be used as a technical specification or for engineering calculations for the customer to satisfy itself of the suitability for its own particular purpose. The information provided is intended to describe the product for the purposes of health, safety and environmental requirements only. It is not intended, and should not be constructed as a warranty. TNC Chemicals Philippines Inc. should be consulted for further information.