SAFETY DATA SHEET
NYACOL® JL20EG

REVISION: July 26, 2019
SUPERSEDES: September 24, 2018
VERSION NO.: 5

Section 1: Product and Company Identification:

1.1 Product Identifier

Product Form:	Mixture
Identification of Substance:	Antimony pentoxide dispersion in ethylene glycol/water
Product Name:	NYACOL® JL20EG
Synonym:	Antimony (V) oxide (APO)
CAS Number:	1314-60-9
Index Number:	051-003-00-9
EINECS Number:	215-237-7
REACH Registration Number:	01-2119918494-33-0001; See Section 3.
Formula:	Sb_2O_5

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

Recommended Use:	Recommended for use as a catalyst.
Restrictions on Use:	For industrial use only, not for food, drug or home use.

1.3 Details of the supplier of the safety data sheet

Company Identification:	Nyacol Nano Technologies, Incorporated Megunko Road, P.O. Box 349, Ashland, MA 01721 U.S.A. +1 508-881-2220
Email Contact:	info@nyacol.com
Internet:	www.nyacol.com

1.4 Emergency telephone number

In Case of Emergency:	USA/Canada CHEMTREC: +1 (703) 527-3887 International CHEMTREC: +1 (703) 741-5970 24 Hours/Day: 7 Days/Week

Section 2: Hazard(s) Identification

2.1 GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute Tox. 4 H302 Harmful if swallowed; STOT, RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

2.1.1 Classification according to Regulation (EC) No. 1272/2008 (CLP)

Acute Tox. 4 H302 Harmful if swallowed; STOT, RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

2.2 Label Elements - Labelling according to Regulation (EC) No. 1272/2008

Signal Word: Warning

Hazard determining components of labelling:	Ethylene Glycol (Ethane-1,2-diol)
Hazard Statement(s):	H302 - Harmful if swallowed. H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure.

Precautionary Statement(s):

P260 – Do not breathe dust/fumes/gas/mist/vapors/spray.
P264 – Wash skin thoroughly after handling.
P270 – Do not eat, drink or smoke when using this product.
P301+P312+P330 – IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P314 – Get medical advice/attention if you feel unwell.
P501 – Dispose of contents/container to an approved waste disposal plant.

2.3 Other Hazards

Antimony pentoxide does not meet the criteria for a PBT or vPvB substance.

2.4 Unknown acute toxicity (GHS US)

No further relevant information available.

Section 3: Composition / Information on Ingredients

3.1 Chemical characterization: Mixtures

Description: Mixture consisting of the following components.

Component Name:	Product Identifier	GHS Classification	Percent By Weight
Antimony Pentoxide: REACH Registration: 01-2119918494-33-0001	CAS No. 1314-60-9 EC: 215-237-7 Index: 051-003-00-9	Not classified	27
Triethanolamine: REACH Registration: 01-2119486482-31-0042	CAS #: 102-71-6 EC: 203-049-8 Index: Not available.	Not classified	7
Water: REACH: None.	CAS No. 7732-18-5 EC: 231-791-2	Not classified	28 – 30
Ethylene Glycol: REACH Registration: 01-2119456816-28-0202	CAS: 107-21-1 EINECS: 203-473-3 Index: 603-027-00-1	Acute Tox. 4, H302 STOT RE 2; H373	36
Phosphoric Acid: REACH Registration: 01-2119485924-24-0099	CAS #: 7664-38-2 EC: 231-633-2 Index: 015-011-00-6	Skin Corr. 1B, H314	<2

Impurities: Present at a level below that to be taken into account for classification.
Stabilizing Additives: None.

The supplier currently has no knowledge on additional ingredients that are classified and that contribute to the classification of this substance.

See Section 16 for a list of hazards if identified above.

Section 4: First-Aid Measures

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart while flushing to rinse entire surface of the eye and lids with water. Get medical attention.

Skin Contact:	Wash skin with plenty of soap and water for several minutes. Get medical attention if skin irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, clear person's airway and give artificial respiration. If breathing is difficult, qualified medical personnel may administer oxygen. Get medical attention immediately.
Ingestion:	If a person is conscious and can swallow, immediately give two glasses of water (16 oz. or 500 ml.) but do not induce vomiting. If vomiting occurs, give fluids again. Have physician determine if condition of person will permit induction of vomiting or evacuation of stomach. Do not give anything by mouth to an unconscious or convulsing person.
First Aid Facilities:	Eye wash station.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed.

Symptomatic treatment is recommended.

Section 5: Fire-Fighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media:	Use water spray, dry chemical, foam or carbon dioxide to extinguish flames. Use water spray to cool fire-exposed containers. Water or foam may cause frothing.
Unsuitable extinguishing media:	None known.

5.2 Special hazards arising from the substance or mixture

Flammability of the product:	Combustible, material will burn in a fire. Containers can build pressure if exposed to heat or fire.
Special Hazard Arising from the Chemical:	No further relevant information available.
Fire Hazard:	No further relevant information available.
Explosion Hazard	No further relevant information available.
Reactivity:	No further relevant information available.

5.3 Advice for firefighters

Special Protective Equipment for Fire-fighters:	Wear standard full firefighter turn-out gear (full bunker gear) and respiratory protection (SCBA).

Section 6: Accidental Release Measures

6.1 Personal precautions, personal protective equipment (PPE) and emergency procedures

6.1.1 For non-emergency personnel

Eye protection and impervious gloves. An approved air-purifying respirator should be worn if vapor or mist is present.

6.2 Environmental precautions

Prevent entry into sewers and waterways.

6.3 Methods and material for containment and cleaning up

Contain spill or leak with sand, clay or absorbents. Recover liquid for recycle or disposal. Do not allow spills into sewers or surface waters. Place absorbents, waste products and contaminated soil into containers for disposal.

If more than 1 pound of product is spilled, then report spill according to SARA 304 and CERCLA 102(A) requirements.

6.4 Reference to other sections

For more information on exposure controls and personal protection or disposal considerations, check section 8 and 13 of this SDS.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Avoid generating mist during use. Ensure good ventilation/ exhaustion at the workplace.

7.1.1 Protective measures

As a precautionary measure, the wearing of standard work gear is suggested.

7.1.2 Advice on general occupational hygiene

Avoid inhalation, ingestion and contact with eyes or skin. General occupational hygiene measures are required to ensure a safe handling of the substance. These measures involve good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices), no eating, drinking and smoking at the workplace and wearing standard working clothes and shoes unless otherwise stated. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas. Shower and change clothes at end of work shift. Do not wear contaminated clothing at home.

7.2 Conditions for safe storage, including any incompatibilities

Keep from freezing. Store in cool, dry area and keep container tightly sealed. Provide sufficient ventilation at store- and workrooms.

7.3 Specific end use(s)

No additional information available. Refer to Section 1.2 of this SDS.

Section 8: Exposure Controls / Personal Protection

8.1 Control Parameters

8.1.1 National Limit Values

Antimony pentoxide CAS# 1314-60-9

Country	Occupational exposure limit (as Sb)	Maximum exposure time	Date	Title	Reference
USA	0.5 mg/m³ (as Sb)	8h TWA	2014	Antimony compounds	https://www.cdc.gov/niosh/idlh/7440360.html
UK	0.5 mg/m³ (as Sb)	8h TWA	2011	Antimony and compounds	http://www.hse.gov.uk/pubns/priced/eh40.pdf
Germany	Not established		2009	Antimony and its inorganic compounds (inhalable fraction)	Senate Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (MAK Commission): http://www.dfg.de/en/dfg_profile/statutory_bodies/senate/health_hazards/index.html

Finland	0.5 mg/m³	8h TWA	2009	Antimony and its compounds	The Ministry of Social Affairs and Health- http://pre20090115.stm.fi/hm1113394626349/passthru.pdf
Belgium	0.5 mg/m³ (as Sb)	8h TWA	2010	Antimony and its compounds	Service public fédéral Emploi, Travail et Concertation sociale: http://www.emploi.belgique.be/WorkArea/showcontent.aspx?id=23914
France	0.5 mg/m³ (as Sb)	8h TWA	2012	Antimony and its compounds	Institut National de Recherche et de Sécurité - http://www.inrs.fr/accueil/produits/mediatheque/doc/publications.html?refINRS=ED%20984
Spain	0.5 mg/m³ (as Sb)	8h TWA	2010	Antimony and antimony compounds	http://www.insht.es/InshtWeb/Contenidos/Documentacion/TextosOnline/Valores_Limite/Limites2010/LEP%202010%20ActualizadoMayo(1).pdf
Austria	0.5 mg/m³ (as Sb)	8h TWA	2011	Antimony compounds	http://www.arbeitsinspektion.gv.at/NR/rdonlyres/F173280B-D4FB-44D2-8269-8DB2CB1D2078/0/GKV2011.pdf

8.1.2 DNELs and PNECs

Antimony Pentoxide (1314-60-9)

DNEL (Derived No Effect Level)

Descriptor	Route of Exposure/Environmental protection target	DNEL
	Inhalation - Long term/systemic effects	10 mg/m^3

PNEC (Predicted No Effect Concentration)

Descriptor	Route of Exposure/Environmental protection target	PNEC
	Freshwater	0.113 mg Sb/L
	Marine	0.0113 mg Sb/L
	Sediment freshwater	7.8 mg Sb/kg wwt
	Sediment marine	1.56 mg Sb/kg wwt
	Soil	37 mg Sb/kg dw (32.6 mg Sb/kg wwt)
	STP (Sewerage Treatment Plant)	2.55 mg Sb/L
USA ACGIH	ACGIH Ceiling (mg/M^3)	0.5 mg/m^3
USA OSHA	OSHA PEL Ceiling (mg/M$^{3)}$	0.5 mg/m^3

Ethylene Glycol (107-21-1)

DNEL (Derived No Effect Level)

Exposure Route	Exposure Pattern	DNEL
Inhalation	Long term systemic	As no long term systemic toxicity hazard has been identified, there is no requirement to derive long term DNELs

	Acute systemic	As no acute toxicity hazard has been identified, there is no requirement to derive acute DNELs
	Long term local	35 mg/m^3 (workers) 7 mg/m^3 (general population)
Dermal	Long term systemic	106 mg/kg bw/day (workers) 53/mg/kg bw/day (general population)
	Acute systemic	As no acute toxicity hazard has been identified, there is no requirement to derive acute DNELs
	Local	As no local toxicity hazard has been identified, there is no requirement to derive local DNELs

PNEC (Predicted No Effect Concentration)

PNEC	Value
Aqua (freshwater)	10 mg/L
Aqua (marine water)	1 mg/L
STP	199.5 mg/L
Sediment (freshwater)	37 mg/kg sediment dw
Sediment (marine water)	3.7 mg/kg sediment dw
Soil	1.53 mg/kg soil dw
Secondary poisoning	No potential for bioaccumulation

8.2 Exposure Controls

Engineering Controls: Ventilation adequate to meet occupational exposure limits. The OSHA ceiling is 50 ppm: ACGIH ceiling is 50 ppm.

Hygiene Measures: Workers should wash exposed skin several times daily with soap and water. Soiled work clothing should be laundered or dry-cleaned.

Respiratory: Airborne concentrations should be kept to lowest levels possible. If vapor, mist or dust is generated and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH or MSHA approved air purifying or air supplied respirator after determining the airborne concentration of the contaminant. Air-supplied respirators should always be worn when airborne concentrations of the contaminant or oxygen content is unknown.

Hands: Wear impervious gloves such as neoprene.

Eyes: Safety glasses, chemical type goggles, or face shield recommended to prevent eye contact.

Skin:	Wear clean body-covering clothing; impervious gloves such as neoprene. Workers should wash exposed skin several times daily with soap and water. Soiled work clothing should be laundered or dry-cleaned.

8.2.3 Environmental Exposure Controls

Adverse effects of this material on the environment have not been evaluated. Proper disposal techniques to isolate and recover material should be implemented.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance (Physical State, Color):	Clear yellow liquid
Upper/lower flammability or explosive limits:	Not determined
Volatile by Weight:	70%
Odor:	Slightly sweet
Vapor Pressure:	Not determined
Odor Threshold:	No data available
Vapor Density:	Not determined
pH:	2 – 4
Density:	1420 – 1520 kg/m^3
Melting Point:	Not determined
Solubility in Water:	Soluble in all proportions
Initial boiling point and boiling range:	110°C (230°F) water
Flashpoint:	Not determined
Evaporation Rate:	Slow (Butyl Acetate = 1)
Flammability (solid, gas):	Not flammable
Partition Coefficient:	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	<30 cP
Specific Gravity:	1.42 – 1.52 (water = 1)
Freezing Point:	Not determined
Explosion Limits:	No data available; there are no chemical groups associated with explosive properties present in the molecule.
Oxidizing Properties:	No data available; there are no chemical groups associated with oxidizing properties present in the molecule.

9.2 Other information

No further relevant information available.

Section 10: Stability and Reactivity

10.1 Reactivity

Reactive with water reactive chemicals. Exposure to acidic reducing conditions may form the poisonous gas stibine.

10.2 Chemical Stability

Stable under normal ambient and anticipated storage and handling conditions.

10.3 Possibility of hazardous reactions

Reacts with acids, alkalis and oxidizing agents.

10.4 Conditions to avoid

Acidic reducing environments.

10.5 Incompatible materials

Use of the product under acidic reducing conditions may form a poisonous gas stibine.

10.6 Hazardous decomposition products

Toxic levels of carbon monoxide, carbon dioxide, irritating aldehydes and ketones may be formed on burning. Heating in air may produce irritating aldehydes, acids and ketones.

Section 11: Toxicological Information

11.1 Information on toxicological effects

Antimony Pentoxide, CAS 1314-60-9

Toxicokinetics	The oral absorption of soluble pentavalent antimony compounds is less than 1% (Felicetti, 1974; ICRP, 1981). Together with particle-size derived respiratory deposition and 100% absorption from the pulmonary fraction, an inhalation absorption factor of 0.7% may be assumed. Based on read-across and analogies with other metals HERAG (2007), a conservative default dermal absorption factor of 1% is appropriate for diantimony pentoxide.
Acute toxicity	**Oral:** LD50 rat > 2000 mg/kg bw (Robertson, 2005) The classification criteria according to regulation (EC) 1272/2008 as acutely toxic are not met for APO since the ATE is above 2000 mg/kg body weight, hence no classification required. **Inhalation:** LC50 rat> 5.4 mg/L (Leuschner, 2010) The classification criteria according to regulation (EC) 1272/2008 as acutely toxic are not met for sodium hexahydroxoantimonate (SHHA) (CAS 33908-66-6) since the ATE for dusts and mists is above 5.0 mg/L, hence no classification required. Based on read across from SHHA, APO does not require a classification as acutely toxic, inhalation. **Dermal:** APO does not require a classification as acutely toxic via dermal route. Conduct of an acute dermal toxicity study is unjustified as inhalation of the substance is considered as major route of exposure and physicochemical properties of the substance do not suggest a significant rate of absorption through the skin (cf. Annex VIII section 8.5 Column 2 of regulation (EC) 1907/2006).
Skin corrosion/irritation	May cause irritation, avoid contact with skin.
Serious eye damage/irritation	May cause irritation, avoid contact with skin.
Respiratory or skin sensitization	Based on available data, the classification criteria as skin sensitizer are not met for diantimony pentoxide (Robertson, 2005). Based on the results of the histopathological and macroscopic investigations and on an industry survey, sodium hexahydroxoantimonate (SHHA) (CAS 33908-66-6) does not require a classification for respiratory irritation/sensitization. Based on read across from SHHA, and an industry survey, APO does not require classification for respiratory irritation/sensitization.

Germ cell mutagenicity	Based on available data, sodium hexahydroxoantimonate (SHHA) (CAS 33908-66-6) does not require a classification as germ cell mutagen. SHHA (CAS# 33908-66-6) did not induce micronuclei in cultured human lymphocytes (Whitwell, 2010) and gene mutation in the tk locus of the L5178Y mouse lymphoma cell line (Stone, 2010). Therefore SHHA is considered as non-clastogenic and non-mutagenic. Based on read across from SHHA, APO does not require a classification as germ cell mutagen.
Carcinogenicity	No data indicating any concern for carcinogenicity.
Reproductive toxicity	Data lacking - testing proposal issued in the REACH registration dossier of sodium hexahydroxoantimonate (CAS 33908-66-6). Data will be read-across to APO.
STOT-single exposure	Based on available data, the classification criteria as STOT, single exposure, oral and inhalation are not met for APO since no reversible or irreversible adverse health effects were observed immediately or delayed after exposure and no effects were observed at the guidance value.
STOT-repeated exposure	Data lacking - testing proposal issued in the REACH registration dossier of sodium hexahydroxoantimonate (CAS 33908-66-6). Data will be read-across to APO.

Ethylene Glycol, CAS 107-21-1

Acute toxicity, oral (human)	LD50: 1400-1600 mg/kg
Acute toxicity, oral (rat)	LD50: >4000 mg/kg
Acute toxicity, dermal (rabbit)	LD50: >6000 mg/kg
Skin corrosion/irritation	Not irritating
Serious eye damage/irritation	Not irritating
Respiratory or skin sensitization	Not sensitizing
Germ cell mutagenicity	Not considered to be mutagenic (weight of evidence approach)
Carcinogenicity	Not considered to be carcinogenic (weight of evidence approach)
Reproductive toxicity	Not considered to be reproductive or developmental toxicant (weight of evidence approach)
STOT-single exposure	Not considered to induce specific organ toxicity after single exposure
STOT-repeated exposure	NOEL 150 mg/kg bw/day - kidneys found to be the target organ at high doses (oral)
Aspiration hazard	Not considered to cause an aspiration hazard

Section 12: Ecological Information

12.1 Toxicity

Ethylene Glycol, CAS 107-21-1

Toxicological endpoint	Value	Species, Method
Acute (short-term toxicity):		
Fish	LC50 (96h) > 72860 mg/L	Pimephales promelas, EPA 600/4-90/027

Crustacea	EC50 (48h) > 100 mg/L	Daphnia magna, OECD 202
Algae/aquatic plants	EC10 (96h) > 100 mg/L	Weight of evidence approach
Activated sludge respiration	EC20 > 1995 mg/L	Read across approach from supporting substance, ISO 8192

Chronic (long-term toxicity):

Fish	NOEC (7d) 15380 mg/L	Weight of evidence approach
Crustacea	NOEC (7d) 8590 mg/L	Weight of evidence approach

Antimony Pentoxide, CAS 1314-60-9

Antimony metal and antimony containing compounds may dissolve and generate antimony ions (Vangheluwe et al., 2001). The environmental section will therefore discuss the fate of antimony in general.

Acute aquatic toxicity test results:		
Marine fish [*Pagrus major*]	96 h LC50	6.9 mg Sb/L (Takayanagi, 2001)
Freshwater fish [*Pimephales promelas*]	96 h LC50	14.4 mg Sb/L (Brooke et al, 1986)
Invertebrates [*Chlorohydra viridissimus*]	96 h LC50	1.77 mg Sb/L (TAI, 1990)
Algae [*Pseudokirchneriella subcapitata*]	72 h ErC50 (growth rate)	> 36.6 mg Sb/L (Heijerick et al, 2004)
Plants [*Lemna minor*]	4 d EC50	> 25.5 mg Sb/L (Brooke et al, 1986)
Chronic aquatic toxicity test results:		
Fish [*Pimephales promelas*]	28 d NOEC/LOEC (growth; length)	1.13/2.31 mg Sb/L (Kimball, 1978)
Invertebrates [*Daphnia magna*]	21 d NOEC/LOEC (reproduction)	1.74/3.13 mg Sb/L (Heijerick et al, 2003)
Algae [*Pseudokirchneriella subcapitata*]	72 h NOEC/LOEC (growth rate)	2.11/4.00 mg Sb/L (Heijerick et al, 2004)
Chronic sediment toxicity test results:		
Midge [*Chironomus riparius]*	14 d NOEC (growth)	78 mg Sb/kg ww (Heijerick et al, 2005)
Chronic terrestrial toxicity test results (values were determined in a soil spiked with Sb_2O_3 and aged for 31 weeks before testing):		
Soil invertebrates	NOEC	999 mg Sb/kg dw (Moser, 2007)
Plants	NOEC	999 mg Sb/kg dw (Smolders et al., 2007)
Soil microorganisms	NOEC	2930 mg Sb/kg dw (Smolders et al., 2007)
Toxicity tests for microorganisms (for STP)		
Aquatic microorganisms	NOEC	2.55 mg Sb/L (EPAS, 2005)
Inhibition of nitrification	EC50	27 mg Sb/L (EPAS, 2005)

12.2 Persistence and degradability

Whereas antimony formally meets the criterion for persistence based on the absence of any degradation, this criterion is considered not to be applicable to inorganic elements. In addition, under conditions of a standard EUSES lake and the median partition coefficient for suspended matter, Sb meets the criteria for rapid removal from the water column.

Ethylene glycol is considered to be readily biodegradable.

12.3 Bioaccumulative potential

Antimony does not meet the criteria for bioaccumulation: a BCF for aquatic organisms of 40 and a BSAF of 1 for earthworms are derived, and are all much lower than the threshold of 2,000 l/kg. Also, there is evidence to support that antimony does not biomagnify in the food chain. Therefore, antimony is not considered bioaccumulative (B) or very bioaccumulative (vB) based on the definitive criteria.

Ethylene Glycol is not considered to be bioaccumulative.

12.4 Mobility in soil

Antimony pentoxide: A log K_p of 2.07 has been determined for soil.
Ethylene Glycol: Based upon a calculated log Koc (=0), adsorption to solid soil phase is not expected.

12.5 Results of PBT and vPvB Assessment

The PBT and vPvB criteria of Annex XIII to the Regulation do not apply to inorganic substances, such as antimony and its inorganic compounds. However, the available data have been compared to the criteria:
See 12.2 for (P) and 12.3 for (B). For (T): Chronic NOEC values are available for fish, invertebrates and algae (see Section 12). The lowest NOEC is 1.13 mg Sb/L for fish (Kimball, 1978). Antimony and antimony compounds do not meet any of the toxicity criteria based on carcinogenicity, mutagenicity or reproductive toxicity and there is no evidence of other chronic concerns. Therefore, antimony is not considered toxic (T) based on the definitive criteria. Antimony, and therefore APO, is not PBT or vPvB.

Ethylene Glycol is not considered to be PBT or vPvB.

12.6 Other adverse effects

Antimony pentoxide is not expected to contribute to ozone depletion, ozone formation, global warming or acidification.

Section 13: Disposal Considerations

This information presented only applies to the materials 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. Disposal should be in accordance with applicable regional, national and local laws and regulations.

13.1 Waste treatment methods

APO containing waste shall be handled as non-hazardous waste and removed by licensed waste removal company, incinerated or recycled in accordance with federal, state and local requirements. Sewage disposal is not recommended.
Suitable disposal of non-hazardous waste for manufacturing and industrial use: Disposal of wastes is possible via incineration (operated according to Directive 2000/76/EC on the incineration of waste) or landfilling (operated according to Reference Document on the Best available Techniques for Waste Industries of August 2006 and Council Directive 1999/31/EC and Council Decision 19 December 2002).
Suitable disposal of waste for professional use: Waste from end-of-life articles can be disposed of as municipal waste, except when they are separately regulated, like electronic devices, batteries, vehicles, etc. Disposal of wastes is possible via incineration (operated according to Directive 2000/76/EC on the incineration of waste) or landfilling (operated according to Reference Document on the Best available Techniques for Waste Industries of August 2006 and Council Directive 1999/31/EC and Council Decision 19 December 2002).

In the United States should the product become a waste, an EPA TCLP test should be performed. If test is not done then waste should be treated as an EP toxic material and given EPA waste numbers D004 and D008.

Section 14: Transport Information

The product is not restricted for transportation.

Sections 14.1 - 14.4

Regulations

U.S. D.O.T.: Not regulated.

ICAO/IATA: Not regulated.

IMO/IMDG: Not regulated in non-bulk quantities (<5000 lbs.).

ADR: Not regulated.

14.5 Environmental Hazards

Not an environmental hazard for transport.

14.6 Special precautions for user

None.

14.7 Transport bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Section 15: Regulatory Information

15. 1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Worldwide Chemical Inventories

TSCA (USA):	All ingredients listed
EINECS (EU):	All ingredients listed
DSL (Canada):	All ingredients listed
AICS (Australia):	All ingredients listed
ENCS (Japan):	All ingredients listed
ECL (Korea):	All ingredients listed
PICCS (Philippines):	All ingredients listed
IECSC (China):	All ingredients listed

SARA Section 311/312 (40 CFR 370) Hazard: Acute Toxicity. Specific target organ toxicity, repeated exposure.

SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372:

Chemical Name:	CAS #:	Percent by Weight:
Antimony Pentoxide	1314-60-9	27
Phosphoric acid	7664-38-2	<2
Ethylene Glycol	107-21-1	36

California Proposition 65: No ingredients listed.

State Right-to-Know Laws: Section 3 of this SDS lists all components of the product.

Water hazard class: Water hazard class 2: hazardous for water.

15. 2 Chemical safety assessment

A chemical safety assessment has not been carried out.

Section 16: Other Information

List of hazard phrases:

H302 – Harmful if swallowed.
H314 – Causes severe skin burns and eye damage.
H373 – May cause damage to organs (kidneys) through prolonged or repeated exposure.

National Fire Protection Association (U.S.A.) 704 Hazard Rating: Health-2, Flammability-1, Reactivity-0, Special-None

HMIS® Hazard Rating: Health-2, Flammability-1, Reactivity-0, Protective Equipment – E; safety glasses, gloves, dust respirator.

Recommended Use: The product is recommended for use as a catalyst. Other uses have not been investigated and may have other hazards. For industrial use only, not for food, drug or home use.

Work Alert: Workers using the product should read and understand this SDS and be trained in the proper use of this material.

Other Special Considerations: None known.

SDS Prepared By: Andrew Guzelian
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Supersedes: September 24, 2018

This SDS has been prepared with data from Nyacol Nano Technologies, Inc.'s laboratories, raw material suppliers, and government publications. Information herein is accurate to the best of our knowledge. Suggestions are made without warranty or guarantee of results. Before using, the user should determine the suitability of the products for the intended use, and the user assumes the risk and liability in connection therewith. We do not suggest violation of any existing patents or give permission to practice any patented invention without license.