Safety Data Sheet
NOVACOTE CA-32
Safety Data Sheet dated: 11/30/2020 - version 5
Date of first edition: 6/30/2016

SECTION 1: Identification

Product Identifier

Mixture identification:

Trade name: NOVACOTE CA-32
Trade code: NOVACOTE CA-32
Registration Number N/A

Recommended use of the chemical and restrictions on use

Recommended use: cross-linking agent
Uses advised against: N.A.

Supplier's details

Company: COIM Asia Pacific Pte Ltd
10 Seraya Place
Singapore 627843
Tel: +65 68967068
Fax: +65 68967065

Emergency phone number

+65 68967068 (24hrs)

SECTION 2:Hazards identification

Classification of the substance or mixture

Skin Corr. 1B	Causes severe skin burns and eye damage.
Eye Dam. 1	Causes serious eye damage.
Skin Sens. 1	May cause an allergic skin reaction.

Adverse physicochemical, human health and environmental effects:

No other hazards

GHS label elements, including precautionary statements

Pictograms and Signal Words

Danger

Hazard statements:

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.

Precautionary statements:

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/…
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P501	Dispose of contents/container in accordance with applicable regulations.

Other hazards which do not result in a classification

Other Hazards: No other hazards

SECTION 3:Composition/information on ingredients

Substances

N.A.

Mixtures

Hazardous components within the meaning of Singapore GHS and related classification:

Quantity	Name	Ident. Numb.	Classification
≥ 15 - < 25 %	3-Aminopropyltriethoxysilane	CAS:919-30-2 EC:213-048-4 Index:612-108-00-0	Skin Corr. 1B, H314; Acute Tox. 4, H302; Skin Sens. 1, H317
≥ 5 - < 10 %	Ethanol	CAS:64-17-5 EC:200-578-6 Index:603-002-00-5	Flam. Liq. 2, H225; Eye Irrit. 2A, H319

SECTION 4: First-aid measures

Description of necessary first-aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eye contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

Most important symptoms/effects, acute and delayed

Eye irritation

Eye damages

Skin Irritation

Erythema

Indication of immediate medical attention and special treatment needed, if necessary

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). See also SECTION 11 for any additional information about the contents.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Water.

Carbon dioxide (CO_2).

Unsuitable extinguishing media:

Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products: N.A.

Explosive properties: N.A.

Oxidizing properties: N.A.

Special protective actions for fire-fighters

Fire-fighters should wear positive pressure self-contained breathing apparatus and personal protective equipments, such as jacket (standard: EN469), helmet (standard: EN443), gloves (standard: EN407), boots (standard: EN345-S3 HI WRU HRO).

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorb with inert, absorbent material.

Methods and material for containment and cleaning up

Suitable material for taking up: absorb with inert, absorbent material.

In case of heavy spills: wash with plenty of water.

SECTION 7: Handling and storage

Precautions for safe handling

Avoid contact with skin and eyes, inhaltion of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contamined clothing should be changed before entering eating areas.

Do not eat or drink or smoke while working.

See also section 8 for recommended protective equipment.

Conditions for safe storage, including any incompatibilities

Keep only in the original container, tightly closed; Store at moderate temperature in a dry and well-ventilated place

Incompatible materials:

See Section 10.

Instructions as regards storage premises:

Adequately ventilated premises.

SECTION 8: Exposure controls/personal protection

Control parameters

List of components with OEL value

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Behaviour	Note
Ethanol	ACGIH				1000				A3
	NATIONAL	AUSTRALIA		1880.000	1000.000				SWA
	NATIONAL	AUSTRIA		1900.000	1000.000	3800.000	2000.000		MAK, TRK
	NATIONAL	BELGIUM		1907.000	1000.000				VLEP/GWBB
	NATIONAL	DENMARK		1900.000	1000.000	3800.000	2000.000		
	NATIONAL	FINLAND		1900.000	1000.000	2500.000	1300.000		
	NATIONAL	FRANCE		1900.000	1000.000	9500.000	5000.000		VLE
	NATIONAL	GERMANY		960.000	500.000	1920.000	1000.000		AGW, MAK
	NATIONAL	HUNGARY		1900.000		7600.000			AK
	NATIONAL	IRELAND					1000.000		
	NATIONAL	LATVIA		1000.000					
	NATIONAL	POLAND		1900.000					NDS
	NATIONAL	SPAIN				1910.000	1000.000		VLA
	NATIONAL	SWEDEN		1000.000	500.000	1900.000	1000.000		
	NATIONAL	SWITZERLAND		960.000	500.000	1920.000	1000.000		
	NATIONAL	NETHERLANDS		260.000		1900.000			
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND		1920.000	1000.000				

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency	Remark
3-Aminopropyltriethoxysilane	919-30-2	0.330 mg/l	Fresh Water		
		0.033 mg/l	Marine water sediments		
		0.260 mg/kg			sediment
		0.040 mg/kg	Fresh Water		
Ethanol	64-17-5	0.960 mg/l	Fresh Water		
		0.790 mg/l	Marine water sediments		
		2.750 mg/l			intermittent release

580.000 mg/l			STP
3.600 mg/kg	Food chain		
2.900 mg/kg	Fresh Water		
0.630 mg/kg	Fresh Water		

Derived No Effect Level. (DNEL)

Component	CAS-No.	Worker Industry	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
3-Aminopropyltriethoxysilane	919-30-2	8.300 mg/kg		5.000 mg/kg	Human Dermal	Long Term, systemic effects	
		8.300 mg/kg		5.000	Human Dermal	Short Term, systemic effects	
		0.059 mg/l			Human Inhalation	Long Term, systemic effects	
		0.059 mg/l		0.017 mg/l	Human Inhalation	Short Term, systemic effects	
				5.000 mg/kg	Human Oral	Short Term, systemic effects	
				5.000 mg/kg	Human Oral	Long Term, systemic effects	
Ethanol	64-17-5	1.900 mg/l			Human Inhalation	Short Term, local effects	
		0.950 mg/l			Human Inhalation	Long Term, systemic effects	
		343.000 mg/kg			Human Dermal	Long Term, systemic effects	

Appropriate engineering controls

N.A.

Individual protection measures, such as personal protective equipment (PPE)

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber (EN374).

Respiratory protection:

N.A.

SECTION 9: Physical and chemical properties

Physical State: Liquid
Appearance and colour: colorless-amber
Odour: Like: Amines
Odour threshold: N.A.
pH: N.A.
Melting point / freezing point: N.A.
Initial boiling point and boiling range: N.A.
Flash point: 82 °C (180 °F)
Evaporation rate: N.A.
Flammability (Solid, Gas) N.A.
Upper/lower flammability or explosive limits: 27.70 (UEL) 3.10 (LEL)
Vapour pressure: 5.8 kPa at 25°C
Vapour density (air = 1): N.A.
Density: 1.01 g/cm3 Notes at 20°C
Solubility in water: Soluble
Solubility in other solvents: Soluble
Partition coefficient (n-octanol/water): N.A.
Auto-ignition temperature: 425.00 °C
Decomposition temperature: N.A.
Viscosity: 17-22 SEC at 25°C
Specific Gravity: N.A.
Volatile Organic compounds - VOCs = N.A.

Other information

Substance Groups relevant properties N.A.

Miscibility: N.A.

Conductivity: N.A.

SECTION 10: Stability and reactivity

Reactivity

Reaction with alkalis; Reaction with amines; Reaction with strong reducing agents

Chemical stability

Data not available.

Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid

Avoid contact with combustive or reducing agents

Incompatible materials

Bases, alkalis (inorganic); Bases, alkalis (organic); Strong combustive substances; Strong reducing agents

Hazardous decomposition products

In case of thermal degradation or combustion, toxic gases - such as carbon dioxide, carbon monoxide, nitrogen oxides - may be formed.

SECTION 11: Toxicological information

Information on toxicological effects

Toxicological information of the mixture:

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Toxicological information on main components of the mixture:

3-Aminopropyltriethoxysilane	Generic information:	Do NOT induce vomiting.	
		Therapy as for chemical burn. After ingestion: Immediate endoscopy for the evaluation of any mucosal lesions in the esophagus and stomach. If necessary aspiration of the residual substance. Allergic reactions can not be excluded. If necessary, treatment of the allergic reaction.	
	a) acute toxicity	LD50 Oral Rat >= 1490.00000 mg/kg	1490 (female), 2690 (male)
		LD50 Skin Rabbit 4076.00000 mg/kg	
		LC50 Inhalation Rat > 5.00000 ppm 6h	>= 16 (female), > 5 (male)
Ethanol	Generic information:	None specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.	
	a) acute toxicity	LD50 Oral Rat > 2000.00000 mg/kg	
		LC50 Inhalation Rat 20.00000 mg/l	
		LD50 Skin Rabbit > 2000.00000 mg/kg	

If not differently specified, the information required in the regulation and listed below must be considered as N.A.

a) acute toxicity

b) skin corrosion/irritation

c) serious eye damage/irritation

d) respiratory or skin sensitisation

e) germ cell mutagenicity

f) carcinogenicity

g) reproductive toxicity

h) STOT-single exposure

Toxicological kinetics, metabolism and distribution information

i) STOT-repeated exposure

j) aspiration hazard

SECTION 12: Ecological information

Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of components with eco-toxicological properties

Component	Ident. Numb.	Ecotox Infos
3-Aminopropyltriethoxysilane	CAS: 919-30-2 - EINECS: 213-048-4 - INDEX: 612-108-00-0	a) Aquatic acute toxicity : LC50 Fish Brachydanio rerio > 934.00000 mg/L 96h
		a) Aquatic acute toxicity : EC50 Daphnia 331.00000 mg/L 48h
		a) Aquatic acute toxicity : IC50 Algae Scenedesmus subspicatus > 1000.00000 mg/L 72h
		a) Aquatic acute toxicity : NOEC Algae Scenedesmus subspicatus 1.30000 mg/L 72h
Ethanol	CAS: 64-17-5 - EINECS: 200-578-6 - INDEX: 603-002-00-5	a) Aquatic acute toxicity : LC50 Fish Salmo gairdneri 13000.00000 mg/L 96h
		a) Aquatic acute toxicity : LC50 Fish Pimephales promelas >= 13500.00000 mg/L 96h 13500-15300
		a) Aquatic acute toxicity : EC50 Daphnia 12300.00000 mg/L 48h
		a) Aquatic acute toxicity : IC50 Algae Chlorella vulgaris 275.00000 mg/L 72h - 26 38 mg/L
		a) Aquatic acute toxicity : IC50 Algae Selenastrum capricornutum 12900.00000 mg/L 72h

Persistence and degradability

Component	Persitence/Degradability:
3-Aminopropyltriethoxysilane	Non-readily biodegradable
Ethanol	Readily biodegradable

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

SECTION 13: Disposal considerations

Disposal methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

UN number

3267

UN proper shipping name

ADR/RID-Shipping Name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.

IATA-Technical name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (aminosilane)

IMDG-Technical name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (aminosilane)

Transport hazard class(es)

ADR/RID-Class: 8

IATA-Class: 8

IMDG-Class: 8

Packing group, if applicable

ADR/RID-Packing Group: III

IATA-Packing group: III

IMDG-Packing group: III

Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

Special precautions for user

Road and Rail (ADR-RID) :

ADR-Label: 8

ADR - Hazard identification number: 80

ADR-Special Provisions: 274

ADR-Transport category (Tunnel restriction code): 3 (E)

Air (IATA) :

IATA-Passenger Aircraft: 852

IATA-Cargo Aircraft: 856
IATA-Label: 8
IATA-Subsidiary hazards: -
IATA-Erg: 8L
IATA-Special Provisioning: A3 A803

Sea (IMDG) :

IMDG-Stowage Code: Category A
IMDG-Stowage Note: Clear of living quarters. "Separated from" acids.
IMDG-Subsidiary hazards: -
IMDG-Special Provisioning: 223 274
IMDG-Page: N/A
IMDG-Label: N/A
IMDG-EMS: F-A, S-B
IMDG-MFAG: N/A

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

N.A.

SECTION 15: Safety, health and environmental regulations specific for the product in question

This Safety Data Sheet has been prepared according to:

SS 586 : Part 1 (2014)
SS 586 : Part 2 (2014)
SS 586 : Part 3 (2014)

SECTION 16: Other information

Code	Description
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

Key/legend to the abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ATE: Acute Toxicity Estimate
ATP: Adaptation to Technical Progress
ATEmix: Acute toxicity Estimate (Mixtures)
BCF: Biological Concentration Factor
BEI: Biological Exposure Index
BOD: Biochemical Oxygen Demand
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CAV: Poison Center
CE: European Community
CLP: Classification, Labeling, Packaging.
CMR: Carcinogenic, Mutagenic and Reprotoxic
COD: Chemical Oxygen Demand
COV: Volatile Organic Compound
CSA: Chemical Safety Assessment
CSR: Chemical Safety Report
DMEL: Derived Minimal Effect Level
DNEL: Derived No Effect Level.
DPD: Dangerous Preparations Directive
DSD: Dangerous Substances Directive
EC50: Half Maximal Effective Concentration
ECHA: European Chemicals Agency
EINECS: European Inventory of Existing Commercial Chemical Substances.
ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
IC50: Half maximal inhibitory concentration
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: Keep away from heat
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NEN1: ND: National emergency telephone number: not available
NEN2: ND: National emergency telephone number: not available
NEN3: ND: National emergency telephone number: not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
NOEC: No Observed Effect Concentration
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.
UFI: UFI

Date of revision of this SDS

Safety Data Sheet dated: 11/30/2020 - version 5

Paragraphs modified from the previous revision:

- SECTION 1: Identification of the substance/mixture and of the company/undertaking
- SECTION 2: Hazards identification
- SECTION 3: Composition/information on ingredients
- SECTION 5: Firefighting measures
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 14: Transport information