NAUGALUBE® APAN



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SECTION 1. IDENTIFICATION

Product name : NAUGALUBE® APAN

Product code : 00000000058318845

Manufacturer or supplier's details

Company : LANXESS Corporation

Product Safety & Regulatory Affairs

111 RIDC Park West Drive

Pittsburgh, Pennsylvania 15275-1112

Responsible Department : (800) LANXESS

(412) 809-1000

lanxesshes@lanxess.com

Emergency telephone : CHEMTREC (800) 424-9300 or

(703) 527-3887 (Outside U.S.A) and mention CCN12916.

Lanxess Emergency Phone (800) 410-3063.

Recommended use of the chemical and restrictions on use

Recommended use : Antioxidant

Lubricants and lubricant additives

Restrictions on use : Reserved for industrial and professional use.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Specific target organ toxicity

: Category 1 (Liver)

- repeated exposure (Oral)

Specific target organ toxicity

: Category 2 (Blood)

- repeated exposure

GHS label elements

Hazard pictograms :

Signal Word : Danger

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Hazard Statements : Causes damage to organs (Liver) through prolonged or repeat-

ed exposure if swallowed.

May cause damage to organs (Blood) through prolonged or

repeated exposure.

Precautionary Statements : Prevention:

Do not breathe mist or vapors. Wash skin thoroughly after handling.

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

Response:

Get medical advice/ attention if you feel unwell.

Disposal:

Dispose of contents/ container to an approved waste disposal

plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Substance name : Alkylated phenyl alpha naphthylamine

Components

Chemical name	CAS-No.	Concentration (% w/w)
Alkylated naphthylamine	ACCN 148506	>= 90 - <= 100
N-1-naphthylaniline	90-30-2	>= 5 - < 10

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4. FIRST AID MEASURES

If inhaled : Remove to fresh air immediately. Get medical attention imme-

diately.

If unconscious, place in recovery position and get medical

attention immediately. Maintain open airway.

Loosen tight clothing such as a collar, tie, belt or waistband. The exposed person may need to be kept under medical sur-

veillance for 48 hours.

If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained per-

sonnel.

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In case of skin contact : Get medical attention immediately.

Wash skin immediately with plenty of water and soap. Subsequent cleansing with polyethyleneglycol 400, then again with

water and soap.

Remove contaminated clothing and shoes.

In case of eye contact : Immediately flush eye(s) with plenty of water.

Remove contact lenses.

Get medical attention if symptoms appear.

If swallowed : Rinse mouth with water.

Do not induce vomiting unless directed to do by medical per-

sonnel.

If vomiting occurs, the head should be kept low so that vomit

does not enter the lungs.

If unconscious, place in recovery position and get medical

attention immediately.

Never give anything by mouth to an unconscious person.

Maintain open airway.

Most important symptoms and effects, both acute and delayed

Symptoms : Skin, Ingestion, Inhalation: May cause methemoglobin for-

mation resulting in a reduced ability of the blood to carry oxy-

gen.

May cause damage to organs through prolonged or repeated

exposure if swallowed.

Effects : Causes damage to organs through prolonged or repeated

exposure if swallowed.

May cause damage to organs through prolonged or repeated

exposure.

Protection of first-aiders : First Aid responders should pay attention to self-protection

and use the recommended protective clothing

If potential for exposure exists refer to Section 8 for specific

personal protective equipment.

Notes to physician : Treat symptomatically.

Immediately give oxygen if signs of cyanosis (lips, ears, fingernails). Spontaneous reversal of methemoglobin can occur after termination of exposure. Cyanosis alone does not require treatment. Provide supportive measures only unless there are clinical signs/symptoms of hypoxia other than cyanosis, or if methemoglobin levels are >30%. Methylene blue may be used if clinically indicated. Hyperbaric oxygen therapy should be considered if methylene blue therapy is not effective or contraindicated (G6PD deficiency). Consider exchange transfusions for severe cases that are refractory to other treatment. Methemoglobin development may be delayed and victim should be observed for at least 6 hours. Hemolysis may appear 24

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hours or more after exposure and may cause acute renal failure and arrhythmias. Patients with significant exposures should be monitored for hypoxia and hemolysis for up to 7 days after exposure

days after exposure.

In case of inhalation of decomposition products in a fire,

symptoms may be delayed.

The exposed person may need to be kept under medical sur-

veillance for 48 hours.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment.

Use water spray, alcohol-resistant foam, dry chemical or car-

bon dioxide.

Unsuitable extinguishing

media

High volume water jet

Specific hazards during fire

fighting

Toxic and irritating gases/fumes may be given off during burn-

ing or thermal decomposition.

Hazardous combustion prod-

ucts

Carbon dioxide (CO2)

Carbon monoxide Nitrogen oxides (NOx)

Further information : Promptly isolate the scene by removing all persons from the

vicinity of the incident if there is a fire.

No action shall be taken involving any personal risk or without

suitable training.

Special protective equipment:

for fire-fighters

Fire-fighters should wear appropriate protective equipment

and self-contained breathing apparatus (SCBA) with a full

face-piece operated in positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emer-

gency procedures

No action shall be taken involving any personal risk or without

suitable training.

Put on appropriate personal protection equipment. Do not touch or walk through spilled material.

Evacuate personnel to safe areas.

Keep unnecessary and unprotected personnel from entering.

Provide adequate ventilation.

Do not breathe vapors, aerosols.

Environmental precautions : Prevent product from entering drains.

Prevent further leakage or spillage if safe to do so.

If the product contaminates rivers and lakes or drains inform

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respective authorities.

Methods and materials for containment and cleaning up

Stop leak if safe to do so.

Move containers from spill area.

Wash spillages into an effluent treatment plant or proceed as

follows.

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local /

national regulations (see section 13).

Dispose of wastes in an approved waste disposal facility. Do not allow into the sewerage system, surface waters or

groundwater or into the soil.

Contaminated absorbent material may pose the same hazard

as the spilled product.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling

Remove contaminated clothing and protective equipment before entering eating areas.

Workers should wash hands and face before eating, drinking

and smoking.

Put on appropriate personal protection equipment.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Persons with a history of skin sensitization to this product should not be employed in any process in which this product

is used.

Conditions for safe storage

Store in accordance with local regulations.

Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible

materials (see Section 10) and food and drink.

Keep container closed when not in use.

Containers that have been opened must be carefully resealed

and kept upright to prevent leakage. Do not store in unlabeled containers.

Use appropriate container to avoid environmental contamina-

tion.

Empty containers retain residue and can be dangerous.

Do not reuse container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Good general ventilation should be sufficient to control work-

er exposure to airborne contaminants.

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Personal protective equipment

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory

equipment.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe

working limits of the selected respirator.

A NIOSH approved air purifying respirator with organic vapor cartridges and particulate prefilter can be used to minimize

exposure.

Hand protection

Material : Nitrile rubber - NBR

Material : Neoprene

Remarks : Permeation resistant gloves.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Before removing gloves clean them with soap and water. Gloves should be discarded and replaced if there is any indication of degradation or

chemical breakthrough.

Eye protection : Safety glasses with side-shields

Skin and body protection : Wear suitable protective clothing.

Hygiene measures : Wash hands, forearms and face thoroughly after handling

chemical products, before eating, smoking and using the

lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially

contaminated clothing.

Wash contaminated clothing before reusing.

Ensure that eyewash stations and safety showers are close

to the workstation location.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : viscous liquid

Physical state : liquid

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Color : red

Odor : slight

Odor Threshold : No data available

pH : No data available

Melting point/range : No data available

Boiling point/boiling range : $> 752 \, ^{\circ}\text{F} / > 400 \, ^{\circ}\text{C}$

Flash point : 493 °F / 256 °C

Method: ASTM D 92

Evaporation rate : No data available

Self-ignition : No data available

Burning number : No data available

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapor pressure : No data available

Relative density : No data available

Density : No data available

Solubility(ies)

Water solubility : 1.96 mg/l (68 °F / 20 °C)

Solubility in other solvents : No data available

Partition coefficient: n- : I

octanol/water

: log Pow: 4.11

GLP: yes

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

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Viscosity, kinematic : No data available

Explosive properties : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

No dangerous reaction known under conditions of normal use.

Conditions to avoid : Extremes of temperature and direct sunlight.

Incompatible materials : Strong oxidizing agents

Strong acids and strong bases

Hazardous decomposition

products

Carbon oxides

Nitrogen oxides (NOx)

SECTION 11. TOXICOLOGICAL INFORMATION

The most important known symptoms and effects are described in Section 2 and/or Section 4.

Information on likely routes of exposure

Inhalation

Eye contact

Skin contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

Components:

N-1-naphthylaniline:

Acute oral toxicity : LD50 (Rat, male): 1,625 mg/kg

Acute dermal toxicity : LD50 (Rabbit, male): > 5,000 mg/kg

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Skin corrosion/irritation

Not classified based on available information.

Components:

N-1-naphthylaniline:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

GLP : no

Serious eye damage/eye irritation

Not classified based on available information.

Components:

N-1-naphthylaniline:

Species : Rabbit

Result : No eye irritation

Method : OECD Test Guideline 405

GLP : no

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Test Type : Maximization Test

Species : Guinea pig

Result : Does not cause skin sensitization.

Components:

N-1-naphthylaniline:

Test Type : Maximization Test Routes of exposure : Skin contact

Species : Guinea pig

Method : OECD Test Guideline 406

Result : The product is a skin sensitiser, sub-category 1B.

GLP : no

Germ cell mutagenicity

Not classified based on available information.

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Components:

N-1-naphthylaniline:

Genotoxicity in vitro : Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

GLP: No information available.

Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

GLP: No information available.

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

GLP: No information available.

Genotoxicity in vivo : Test Type: dominant lethal test

Species: Mouse (male)

Application Route: Intraperitoneal Method: OECD Test Guideline 478

Result: negative

GLP: No information available.

Carcinogenicity

Not classified based on available information.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

OSHANo component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Components:

N-1-naphthylaniline:

Effects on fetal development : Test Type: Pre-natal

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Species: Rat, female Application Route: Oral

Dose: 15 - 50 - 150 milligram per kilogram

General Toxicity Maternal: NOAEL: 50 mg/kg bw/day Developmental Toxicity: NOAEL: 150 mg/kg bw/day

Method: OECD Test Guideline 414

GLP: yes

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Causes damage to organs (Liver) through prolonged or repeated exposure if swallowed. May cause damage to organs (Blood) through prolonged or repeated exposure.

Product:

Target Organs : Blood

Assessment : The substance or mixture is classified as specific target organ

toxicant, repeated exposure, category 2.

Remarks : The data is based on the toxicological properties of individual

components of the product.

Components:

Alkylated naphthylamine:

Routes of exposure : Oral Target Organs : Liver

Assessment : The substance or mixture is classified as specific target organ

toxicant, repeated exposure, category 1.

N-1-naphthylaniline:

Routes of exposure : Oral

Target Organs : Blood, Kidney

Assessment : The substance or mixture is classified as specific target organ

toxicant, repeated exposure, category 2.

Repeated dose toxicity

Product:

Species : Rat, male and female

LOAEL : 15 mg/kg/day

Application Route : Oral
Exposure time : 28 days
GLP : yes
Target Organs : Liver

Assessment : The substance or mixture is classified as specific target organ

toxicant, repeated exposure, category 1.

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Components:

N-1-naphthylaniline:

Rat, male and female Species

LOAEL 5 mg/kg Application Route Oral Exposure time 90 d Number of exposures daily

Dose 5 - 25 - 125 mg/kg bw/day **OECD Test Guideline 408** Method

GLP

Target Organs Blood, Kidney

Assessment The substance or mixture is classified as specific target organ

toxicant, repeated exposure, category 2.

Remarks Subchronic toxicity

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Chronic aquatic toxicity : May cause long lasting harmful effects to aquatic life.

Components:

N-1-naphthylaniline:

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): 0.44 mg/l

> Exposure time: 96 h Analytical monitoring: no

Remarks: nominal concentration

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.3 mg/l

End point: Immobilization Exposure time: 48 h Analytical monitoring: no

Remarks: nominal concentration

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.93

End point: Growth rate Exposure time: 96 h Analytical monitoring: no Remarks: nominal concentration

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Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 0.032 mg/l

End point: Reproduction Exposure time: 21 d Analytical monitoring: no

Method: OECD Test Guideline 211

GLP: yes

Remarks: nominal concentration

Toxicity to microorganisms EC50 (activated sludge): > 10,000 mg/l

End point: Respiration inhibition

Exposure time: 3 h

Method: OECD Test Guideline 209

Persistence and degradability

Components:

N-1-naphthylaniline:

Biodegradability Result: Not readily biodegradable.

> Biodegradation: 0 % Exposure time: 14 d

Method: OECD Test Guideline 301C

Bioaccumulative potential

Components:

N-1-naphthylaniline:

Bioaccumulation Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): >= 427

Exposure time: 56 d

Method: OECD Test Guideline 305C

Partition coefficient: n-

octanol/water

: log Pow: 4.28

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

RCRA - Resource Conserva- : tion and Recovery Authoriza-

tion Act

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to

determine at the time of disposal, whether a material contain-

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ing the product or derived from the product should be classi-

fied as a hazardous waste. (40 CFR 261.20-24)

Waste from residues : The generation of waste should be avoided or minimized

wherever possible.

This material and its container must be disposed of in a safe

way.

Empty containers retain product residue; observe all precau-

tions for product.

Avoid dispersal of spilled material and runoff and contact with

soil, waterways, drains and sewers.

Waste disposal should be in accordance with existing federal,

state, provincial and/or local environmental controls.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

Hazard and Handling Notes.

Not dangerous cargo, Keep separated from foodstuffs

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Specific target organ toxicity (single or repeated exposure)

SARA 313 : This material does not contain any chemical components with

known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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US State Regulations

Massachusetts Right To Know

N-1-naphthylaniline 90-30-2 >= 5 - < 10

Pennsylvania Right To Know

Alkylated naphthylamine ACCN 148506 90 - 100 N-1-naphthylaniline 90-30-2 5 - 10

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

TSCA inventory

TSCA : All substances listed as active on the TSCA inventory

TSCA list

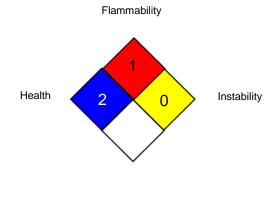
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



Special hazard

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

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AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration: ICAO - International Civil Aviation Organization: IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance: PICCS - Philippines Inventory of Chemicals and Chemical Substances: (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals: RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The data contained in this Safety Data Sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered to be a guidance for processing and does not contain any warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.