SAFETY DATA SHEET
according to the Globally Harmonized System

DANADIM PROGRESS® 400 CE

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	23.01.2025	50001279	Date of first issue: 23.01.2025

1. IDENTIFICATION

Product name : DANADIM PROGRESS® 400 CE

Manufacturer or supplier's details

Company : FMC LATINOAMÉRICA S.A. SUCURSAL

Address : AV. CIRCUNVALACIÓN DEL CLUB GOLF LOS INCAS NO. 208, INTERIOR, 705-B, TORRE 111
URBANIZACIÓN CLUB GOLF LOS INCAS
SANTIAGO DE SURCO. LIMA, PERÚ

E-mail address : SDS-Info@fmc.com

Emergency telephone : 1 703 / 741-5970 (CHEMTREC - International)
Peru: 51-17071295 (CHEMTREC)

Medical Emergency Number : Desde Perú: SAMU: 106;
CISPROQUIM®: 080-050-847;
FMC LATINOAMERICA S.A. SUCURSAL: 421-4811;
Desde Bogotá: 288 60 12; Línea Nacional: 01 8000 916012
Desde Ecuador: 1800 593005 (Quito, La Sierra, Centro y Norte).
Desde Venezuela: 0800 1005012

Recommended use of the chemical and restrictions on use

Recommended use : Can be used as insecticide only.

Restrictions on use : Use as recommended by the label.
For professional users only.

2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Acute toxicity (Dermal) : Category 4

Skin corrosion/irritation : Category 2

Serious eye damage/eye irri- : Category 2A

tation

Skin sensitization	:	Category 1
Specific target organ toxicity - repeated exposure	:	Category 1 (Nervous system)
Specific target organ toxicity - repeated exposure (Inhalation)	:	Category 2 (hearing organs)
Aspiration hazard	:	Category 1
Short-term (acute) aquatic hazard	:	Category 1
Long-term (chronic) aquatic hazard	:	Category 1

GHS label elements

Hazard pictograms :

Signal Word : DANGER

Hazard Statements :
H226 Flammable liquid and vapor.
H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.
H304 May be fatal if swallowed and enters airways.
H315 + H319 Causes skin irritation and serious eye irritation.
H317 May cause an allergic skin reaction.
H372 Causes damage to organs (Nervous system) through prolonged or repeated exposure.
H373 May cause damage to organs (hearing organs) through prolonged or repeated exposure if inhaled.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:

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/ lighting/ equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P260 Do not breathe mist or vapors.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or with adequate ventilation.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P301 + P316 IF SWALLOWED: Get emergency medical help immediately.
P303 + P361 + P353 + P317 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Get medical help.
P304 + P340 + P317 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P319 Get medical help if you feel unwell.
P331 Do NOT induce vomiting.
P333 + P317 If skin irritation or rash occurs: Get medical help.
P337 + P317 If eye irritation persists: Get medical help.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391 Collect spillage.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
cyclohexanone	108-94-1	>= 30 - < 50
dimethoate (ISO)	60-51-5	>= 30 - < 50
xylene	1330-20-7	>= 10 - < 20
maleic anhydride	108-31-6	>= 0,25 - < 1

4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.
If inhaled	:	If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If on clothes, remove clothes. Wash off with soap and water. If symptoms persist, call a physician. Wash contaminated clothing before re-use.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
Most important symptoms and effects, both acute and delayed	:	Harmful if swallowed, in contact with skin or if inhaled. May be fatal if swallowed and enters airways. Causes skin irritation and serious eye irritation. May cause an allergic skin reaction. Causes damage to organs through prolonged or repeated exposure. Swallowing or inhaling may result in sudden shortness of breath, coughing, nausea and or abdominal pain. Exposure to skin may result in mild symptoms include itching, hives or rash, and skin redness. More severe symptoms include sneezing, itchy watery eyes, and difficulty breathing.
Protection of first-aiders	:	Avoid inhalation, ingestion and contact with skin and eyes. 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. A specific antidote against this substance is not known. Gastric lavage and/or administration of activated charcoal can be considered. Avoid inhalation, ingestion and contact with skin and eyes.
Notes to physician	:	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Dry chemical, CO2, water spray or regular foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	Do not spread spilled material with high-pressure water streams.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Fire may produce irritating, corrosive and/or toxic gases. Hydrogen cyanide phosphorus oxides Nitrogen oxides (NOx) Carbon oxides Sulfur oxides
Specific extinguishing methods	:	Remove undamaged containers from fire area if it is safe to do so. Use a water spray to cool fully closed containers. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	Firefighters should wear protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Immediately evacuate personnel to safe areas. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Do not touch or walk through the spilled material. If it can be safely done, stop the leak. Use personal protective equipment. Never return spills in original containers for re-use. Mark the contaminated area with signs and prevent access to unauthorized personnel. Only qualified personnel equipped with suitable protective equipment may intervene. For disposal considerations see section 13.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up	:	Never return spills in original containers for re-use. Collect as much of the spill as possible with a suitable absorbent material. Pick up and transfer to properly labeled containers. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Local/Total ventilation	:	Ensure adequate ventilation.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection. If the temperature of the liquid is below 29°C, which is 10°C below its flash point of 39°C, the fire and explosion hazard is considered minor. At higher temperatures the hazard gradually becomes more serious. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.
Advice on safe handling	:	Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Conditions for safe storage	:	No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
Recommended storage temperature	:	< 25 °C
Further information on storage stability	:	Risk of crystallisation or phase separation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
cyclohexanone	108-94-1	STEL	50 ppm 201 mg/m3	PE OEL
		Further information: skin		
		TWA	20 ppm 80 mg/m3	PE OEL
		Further information: skin		
		TWA	20 ppm	ACGIH
		STEL	50 ppm	ACGIH
xylene	1330-20-7	TWA	100 ppm 434 mg/m3	PE OEL
		Further information: skin		
		STEL	150 ppm 651 mg/m3	PE OEL
		Further information: skin		
		TWA	20 ppm	ACGIH
maleic anhydride	108-31-6	TWA	0,1 ppm 0,4 mg/m3	PE OEL
		TWA (Inhalable fraction and vapor)	0,01 mg/m3	ACGIH

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
cyclohexanone	108-94-1	1,2-Cyclohexanediol	Urine	End of shift at end of workweek	80 mg/l	ACGIH BEI
		Cyclohexanol	Urine	End of shift (As soon as possible after exposure ceases)	8 mg/l	ACGIH BEI
dimethoate (ISO)	60-51-5	Acetylcholinesterase activity	In red blood cells	End of shift	70 % of an individual's baseline	ACGIH BEI
		Butyrylcholinesterase activity	In serum or plasma	End of shift	60 % of an individual's baseline	ACGIH BEI

xylene	1330-20-7	Methylhippuric acids	Urine	End of shift (As soon as possible after exposure ceases)	1.5 g/g creatinine	ACGIH BEI

Personal protective equipment

Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

Hand protection
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Protective measures : Plan first aid action before beginning work with this product.
Always have on hand a first-aid kit, together with proper instructions.
The precautions mentioned relate mainly to the handling of the undiluted product and the preparation of the spray solution, but may also be recommended for spraying.

In the context of professional phytosanitary use as recommended, the end user must refer to the indications on the label. In other cases, it is recommended to use the protections above.
Persons working with this product for a longer period should have frequent blood tests of their cholinesterase levels. If the cholinesterase level falls below a critical point, no further exposure should be allowed until it has been determined by means of blood tests that the cholinesterase level has returned to normal
Remove respiratory and skin/eye protection only after vapors have been cleared from the area.

Hygiene measures : Avoid contact with skin, eyes and clothing.
Provide adequate ventilation.
Do not inhale aerosol.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Form	:	liquid
Color	:	blue
Odor	:	acetone-like
Odor Threshold	:	not determined
pH	:	4,3 - 6,6 (1% solution in water)
Melting point/freezing point	:	< 10 °C
Boiling point/boiling range	:	not determined
Flash point	:	39 °C
Evaporation rate	:	No data available
Flammability (liquids)	:	Flammable
Self-ignition	:	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 vapor density	:	No data available
Relative density	:	No data available
Density	:	1,044 g/cm3
Solubility(ies) Water solubility	: :	 emulsifiable
Partition coefficient: n-octanol/water	:	No data available

Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing
Molecular weight	:	Not applicable
Particle size	:	No data available

10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Dimethoate is stable for a long period at temperatures not exceeding 25°C. At higher temperatures decomposition will take place and lower the quality of the product. Expected decomposition during storage for two months at average day and night temperature 30C is approx. 0.35% and at average day and night temperature 25C it is approx. 0.12%. These numbers may vary between batches due to variations in content of impurities. The reactions involve rearrangements and polymerisation. The self-accelerating reactions which dimethoate is capable of, do not occur at these temperatures, but at temperatures of 55 - 60°C and higher. At these temperatures the released heat can raise the temperature further and accelerate the decomposition. Above 80°C dimethoate will decompose rapidly, causing significant risk of explosion. It is strongly advised not to heat dimethoate above 35°C and only heat indirectly and with solvent present.
Possibility of hazardous reactions	:	Vapors may form explosive mixture with air. No decomposition if stored and applied as directed.
Conditions to avoid	:	Avoid extreme temperatures. Avoid formation of aerosol. Heat, flames and sparks. Temperatures greater than recommended storage temperature. Heating of the mixture may evolve harmful and irritant va-

pours.

Incompatible materials : Strong alkalis, amines and strong oxidising compounds. The product can corrode metals (but does not meet the criteria for classification).

Hazardous decomposition products : Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed, in contact with skin or if inhaled.

Product:

Acute oral toxicity : LD50(Rat): ca. 300 - 500 mg/kg
Method: OECD Test Guideline 423
Symptoms: lethargy, ataxia, Tremors
GLP: yes
Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : LC50(Rat): > 2,1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Symptoms: incoordination
Remarks: no mortality

Acute dermal toxicity : LD50(Rat): > 2.000 mg/kg
Method: OECD Test Guideline 402
Symptoms: incoordination
GLP: yes
Remarks: no mortality

Components:

cyclohexanone:

Acute oral toxicity : LD50 (Rat): 1.890 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 6,2 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Assessment: The component/mixture is moderately toxic after short term inhalation.

dimethoate (ISO):

Acute oral toxicity : LD50 (Rat, male and female): 348 - 423 mg/kg
Method: OECD Test Guideline 425
Symptoms: hypoactivity, Tremors

LD50 (Rat, female): 300 - 2.000 mg/kg
Method: OECD Test Guideline 423
Symptoms: hypoactivity, Tremors
GLP: yes
Assessment: The component/mixture is moderately toxic after single ingestion.

LD50 (Mouse, male and female): 160 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): ca. 1,6 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

LC50 (Rat): 3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, female): > 2.000 mg/kg
Symptoms: Tremors
Assessment: The component/mixture is minimally toxic after single contact with skin.
Remarks: no mortality

LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The component/mixture is minimally toxic after single contact with skin.
Remarks: no mortality

xylene:

Acute oral toxicity : LD50 (Rat, male): 3.523 mg/kg
Method: Regulation (EC) No. 440/2008, Annex, B.1 bis

LD50 (Rat, female): > 4.000 mg/kg
Method: Regulation (EC) No. 440/2008, Annex, B.1 bis

Acute inhalation toxicity : LC50 (Rat, male and female): 27,6 mg/l, 6350 ppm
Exposure time: 4 h
Test atmosphere: vapor
Method: Regulation (EC) No. 440/2008, Annex, B.2

Acute dermal toxicity : LD50 (Rabbit, male): > 4.200 mg/kg

maleic anhydride:

Acute oral toxicity : LD50 (Rat, male and female): 1.090 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit, female): 2.620 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Product:

Species	:	Rabbit
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 404
Result	:	Moderate skin irritation
GLP	:	yes

Components:

cyclohexanone:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Skin irritation

dimethoate (ISO):

Species	:	Rabbit
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 404
Result	:	slight or no skin irritation.
GLP	:	yes

xylene:

Species	:	Rabbit
Result	:	Skin irritation
Remarks	:	Based on data from similar materials

maleic anhydride:

Species	:	Rabbit
Exposure time	:	4 h
Result	:	Corrosive after 3 minutes to 1 hour of exposure

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Species	:	Rabbit
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 405
Result	:	Moderate eye irritation
GLP	:	yes
Remarks	:	Vapors are highly irritant to the eyes and upper respiratory system.

Components:

cyclohexanone:

Method	:	Hen egg chorioallantoic membrane bioassay
Result	:	Irreversible effects on the eye

dimethoate (ISO):

Species	:	Rabbit
Assessment	:	Mild eye irritation
Method	:	EPA OPP 81-4
Result	:	Mild eye irritation

Species	:	Rabbit
Assessment	:	Irritating to eyes.
Method	:	OECD Test Guideline 405
Result	:	Eye irritation
GLP	:	yes

xylene:

Species	:	Rabbit
Result	:	Moderate eye irritation

maleic anhydride:

Species	:	Rabbit
Result	:	Irreversible effects on the eye

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Based on available data, the classification criteria are not met.

Product:

Test Type	:	Buehler Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Assessment	:	May cause sensitization by skin contact.
Method	:	OECD Test Guideline 406
Result	:	Causes sensitization.
GLP	:	yes
Remarks	:	Causes sensitization. Based on data from a similar product.

Remarks	:	Causes sensitization.

Components:

dimethoate (ISO):

Test Type	:	Maximization Test
Routes of exposure	:	Dermal
Species	:	Guinea pig
Assessment	:	Not a skin sensitizer.
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitization.
GLP	:	yes

Test Type	:	Local lymph node test
Assessment	:	Not a skin sensitizer.
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitization.

xylene:

Test Type	:	Local lymph node assay (LLNA)
Routes of exposure	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitization.

maleic anhydride:

Test Type	:	Local lymph node assay (LLNA)
Routes of exposure	:	Dermal
Species	:	Mouse
Assessment	:	The product is a skin sensitizer, sub-category 1A.
Method	:	OECD Test Guideline 429

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Components:

cyclohexanone:

Genotoxicity in vitro	:	Test Type: in vitro DNA damage and/or repair study Test system: human diploid fibroblasts Method: OECD Test Guideline 482 Result: negative Test Type: reverse mutation assay Method: OECD Test Guideline 471 Result: negative Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative
Genotoxicity in vivo	:	Test Type: chromosome aberration assay Species: Rat (male and female) Application Route: inhalation (vapor) Method: OECD Test Guideline 475 Result: negative

Test Type: dominant lethal test
Species: Rat (male and female)
Application Route: inhalation (vapor)
Method: OECD Test Guideline 478
Result: negative

Species: Drosophila melanogaster (vinegar fly) (male and female)
Application Route: Inhalation
Method: OECD Test Guideline 477
Result: negative

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

dimethoate (ISO):

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: unscheduled DNA synthesis assay
Species: Rat
Cell type: Liver cells
Result: positive

Test Type: dominant lethal test
Species: Mouse
Method: OECD Test Guideline 478
Result: negative
GLP: yes

Test Type: Micronucleus test
Species: Mouse
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Test Type: chromosome aberration assay
Species: Rat
Result: negative

xylene:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Method: Regulation (EC) No. 440/2008, Annex, B.10
Result: negative

Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Result: negative

Genotoxicity in vivo	:	Test Type: Rodent Dominant Lethal Assay Species: Mouse (male) Application Route: Intraperitoneal injection Method: OECD Test Guideline 478 Result: negative

maleic anhydride:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Method: OECD Test Guideline 471 Result: negative Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative Remarks: Based on data from similar materials
Genotoxicity in vivo	:	Test Type: Bone marrow chromosome aberration. Species: Rat (male and female) Application Route: Inhalation Method: OECD Test Guideline 475 Result: negative
Germ cell mutagenicity - Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Based on available data, the classification criteria are not met.

Components:

cyclohexanone:

Species	:	Rat
Application Route	:	Oral
Exposure time	:	104 weeks
Dose	:	(462 and 910 mg/kg/d
LOAEL	:	3.300 ppm
Result	:	positive
Carcinogenicity - Assessment	:	Weight of evidence does not support classification as a carcinogen

xylene:

Species	:	Rat
Application Route	:	Oral
Exposure time	:	103 weeks
Result	:	negative

maleic anhydride:

Species	:	Rat, male and female

Application Route	:	Oral
Exposure time	:	2 Years
Dose	:	0, 10, 32, 100 mg/kg body weight
NOEL	:	10 mg/kg body weight
Method	:	OECD Test Guideline 451
Result	:	negative
Carcinogenicity - Assessment	:	Weight of evidence does not support classification as a carcinogen

Reproductive toxicity

Based on available data, the classification criteria are not met.

Components:

cyclohexanone:

Effects on fertility	:	Test Type: Two-generation study Species: Rat Application Route: inhalation (vapor) Dose: 1.02, 2.04, 4.1 mg/l General Toxicity Parent: NOAEC: 4,1 mg/l General Toxicity F1: NOAEC: 2,04 mg/l General Toxicity F2: NOAEC: 2,04 mg/l Result: negative
Effects on fetal development	:	Species: Rabbit Application Route: Oral Dose: 50, 250, 500 mg/kg b.w. General Toxicity Maternal: NOAEL: 250 mg/kg body weight Teratogenicity: NOAEL: 500 mg/kg body weight Method: OECD Test Guideline 414 Result: No teratogenic effects.
Reproductive toxicity - Assessment	:	Animal testing did not show any effects on fertility.

dimethoate (ISO):

Effects on fertility	:	Test Type: Two-generation study Species: Rat Dose: 1, 15, 65 parts per million General Toxicity F1: LOAEL: 15 ppm Symptoms: Effects on mating performance GLP: yes Test Type: Two-generation study Species: Rat Dose: 0.2, 1, 6.5 mg/kg bw/day General Toxicity Parent: NOAEL: 1 mg/kg body weight Early Embryonic Development: NOAEL: 6,5 mg/kg body weight Method: OECD Test Guideline 416 GLP: yes

Test Type: one-generation reproductive toxicity
Species: Rat
Application Route: Oral
Dose: 6.5 mg/kg bw/day
General Toxicity Parent: LOAEL: 6,5 mg/kg bw/day
Symptoms: Effects on mating performance
Method: OECD Test Guideline 415
GLP: yes

xylene:

Effects on fertility : Test Type: Two-generation study
Species: Rat
Application Route: inhalation (vapor)
General Toxicity F1: NOAEC: 2,171 mg/l
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Pre-natal
Species: Rat
Application Route: inhalation (vapor)
Symptoms: Maternal effects.
Result: negative
Remarks: Based on data from similar materials

maleic anhydride:

Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female
Application Route: Oral
Dose: 0, 20, 55, and 150 milligram per kilogram
General Toxicity Parent: LOAEL: 20 mg/kg body weight
Fertility: NOEL: 55 mg/kg body weight
Method: OECD Test Guideline 416
Result: negative

Effects on fetal development : Species: Rat
Application Route: Oral
Duration of Single Treatment: 15 d
General Toxicity Maternal: NOAEL: >= 140 mg/kg body weight
Teratogenicity: NOAEL: >= 140 mg/kg body weight
Embryo-fetal toxicity.: NOAEL: >= 140 mg/kg body weight
Method: OECD Test Guideline 414
Result: negative

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

STOT-single exposure

Based on available data, the classification criteria are not met.

Components:

xylene:

Assessment : May cause respiratory irritation.

STOT-repeated exposure

Causes damage to organs (Nervous system) through prolonged or repeated exposure.
May cause damage to organs (hearing organs) through prolonged or repeated exposure if inhaled.

Components:

cyclohexanone:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

dimethoate (ISO):

Target Organs : Nervous system
Assessment : Causes damage to organs through prolonged or repeated exposure.

xylene:

Routes of exposure : Inhalation
Target Organs : hearing organs
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

maleic anhydride:

Routes of exposure : inhalation (dust/mist/fume)
Target Organs : Respiratory system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Repeated dose toxicity

Components:

cyclohexanone:

Species : Rat, male and female
NOAEL : 143 mg/kg
Application Route : Oral
Exposure time : 90 d
Dose : 40, 143 and 407 mg/kg b.w.
Method : OECD Test Guideline 408

dimethoate (ISO):

Species : Rat
LOAEL : 2.5 mg/kg bw/day
Exposure time : 90 days

Symptoms	:	cholinesterase inhibition

Species	:	Rat
NOAEL	:	0.06 - 0.08 mg/kg bw/day
LOAEL	:	3.22 - 3.78 mg/kg bw/day
Exposure time	:	90d
Symptoms	:	cholinesterase inhibition

xylene:

Species	:	Rat
NOAEC	:	3,515 mg/l
Application Route	:	Inhalation
Exposure time	:	13 weeks

maleic anhydride:

Species	:	Dog, male and female
NOAEL	:	60 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Dose	:	0, 20, 40, or 60 mg/kg bw/day
Method	:	OECD Test Guideline 409

Species	:	Rat, male and female
NOEL	:	10 mg/kg
Application Route	:	Oral
Exposure time	:	2 years
Dose	:	0, 10, 32, and 100 mg/kg bw/day
Method	:	OECD Test Guideline 452

Species	:	Rat, male and female
LOAEC	:	0,0011 mg/l
Application Route	:	Inhalation
Exposure time	:	6 months
Target Organs	:	Respiratory system

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

dimethoate (ISO):

The substance does not have properties associated with aspiration hazard potential.

xylene:

May be fatal if swallowed and enters airways.

Experience with human exposure

Components:

xylene:

General Information : Target Organs: inner ear
Symptoms: hearing loss

Target Organs: Central nervous system
Symptoms: Drowsiness, Dizziness

Further information

Product:

Remarks : Solvents may degrease the skin.

Components:

dimethoate (ISO):

Remarks : Dimethoate is rapidly absorbed and excreted following oral administration. It is extensively metabolized. Dimethoate and its metabolites are primarily found in the liver and kidneys. There is no evidence for accumulation.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

cyclohexanone:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 527 - 732 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to microorganisms	:	EC50 (activated sludge): > 1.000 mg/l Exposure time: 30 min Method: OECD Test Guideline 209

dimethoate (ISO):

Toxicity to fish	:	NOEC (Cyprinodon variegatus (sheepshead minnow)): 2,4 mg/l Test Type: Early-life Stage GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0,48 - 0,66 mg/l Exposure time: 48 h Test Type: static test NOEC (Daphnia magna (Water flea)): 0,04 mg/l Exposure time: 21 d LC50 (Mysidopsis bahia (opossum shrimp)): 15 mg/l Exposure time: 96 h Test Type: static test Method: US EPA Test Guideline OPP 72-3 GLP: yes EC50 (Daphnia magna (Water flea)): 1,6 - 2,5 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes NOEC (Crassostrea virginica (atlantic oyster)): 46 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants	:	EC50 (Selenastrum capricornutum (green algae)): 117 mg/l End point: Growth inhibition Exposure time: 72 h Method: OECD Test Guideline 201 EC50 (Pseudokirchneriella subcapitata (algae)): > 95 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 EC50 (Navicula pelliculosa (Diatom)): > 98 mg/l Exposure time: 72 h Method: US EPA Test Guideline OPPTS 850.5400 GLP: yes NOEC (Lemna gibba (duckweed)): 41,5 mg/l Exposure time: 7 d Test Type: Static renewal test Method: OECD Test Guideline 221

		GLP: yes
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to fish (Chronic toxicity)	:	NOEC: 0,4 mg/l Exposure time: 21 d Species: Oncorhynchus mykiss (rainbow trout) NOEC: 2,4 mg/l Species: Cyprinodon variegatus (sheepshead minnow) Test Type: Early-life Stage GLP: yes NOEC: 1,25 mg/l Species: Oncorhynchus mykiss (rainbow trout) Test Type: Early Life-Stage Method: OECD Test Guideline 210 GLP: yes LOEC: 96 mg/l Exposure time: 21 d Species: Pimephales promelas (fathead minnow) Method: OECD Test Guideline 229 GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0,04 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) NOEC: 0,14 mg/l Exposure time: 32 d Species: Americamysis bahia (mysid shrimp) Test Type: flow-through test GLP: yes
M-Factor (Chronic aquatic toxicity)	:	1
Toxicity to soil dwelling organisms	:	LC50: 31 mg/kg Exposure time: 14 d Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 GLP: yes NOEC: 2,87 mg/kg Exposure time: 28 d End point: reproduction Species: Eisenia fetida (earthworms) GLP: yes
Toxicity to terrestrial organisms	:	LD50: 44 mg/kg End point: Acute oral toxicity

Species: Anas platyrhynchos (Mallard duck)
Method: US EPA Test Guideline OPPTS 850.2100

NOEC: 35,4 ppm
End point: Reproduction Test
Species: Anas platyrhynchos (Mallard duck)
Method: OECD Test Guideline 206
GLP: yes

LD50: 17,3 mg/kg
End point: Acute oral toxicity
Species: Colinus virginianus (Bobwhite quail)
Method: EPA OPP 71-2 (Avian Dietary Toxicity Test)
GLP: yes

NOEC: 10,1 ppm
End point: Reproduction Test
Species: Colinus virginianus (Bobwhite quail)
Method: OECD Test Guideline 206
GLP: yes

LD50: 12 µg/bee
End point: Acute contact toxicity
Species: Apis mellifera (bees)
Method: OECD Test Guideline 214
GLP: yes

LD50: 4 µg/bee
End point: Acute oral toxicity
Species: Apis mellifera (bees)
Method: OECD Test Guideline 213
GLP: yes

xylene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2,6 mg/l
Exposure time: 96 h
Test Type: Static renewal test
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 2,2 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOEC (Pseudokirchneriella subcapitata (green algae)): 0,44 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC (activated sludge): 16 mg/l
Exposure time: 28 h
Method: OECD Test Guideline 301F

Toxicity to fish (Chronic toxicity) : NOEC: > 1,3 mg/l
Exposure time: 56 d
Species: Oncorhynchus mykiss (rainbow trout)
Test Type: flow-through test
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,96 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia (water flea)
Remarks: Based on data from similar materials

Toxicity to soil dwelling organisms : NOEC: 16 mg/kg
Exposure time: 14 d
Species: Eisenia fetida (earthworms)
Remarks: Based on data from similar materials

maleic anhydride:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 42,81 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC10 (Pseudokirchneriella subcapitata (green algae)): 11,8 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

EC50 (Pseudokirchneriella subcapitata (green algae)): 74,35 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC10 (Pseudomonas putida): 44,6 mg/l
Exposure time: 18 h
Method: DIN 38 412 Part 8

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 10 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

Persistence and degradability

Components:

cyclohexanone:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301F

dimethoate (ISO):

Biodegradability : Result: Not readily biodegradable.

xylene:

Biodegradability : aerobic
Inoculum: activated sludge, non-adapted
Concentration: 16 mg/l
Result: Readily biodegradable.
Biodegradation: 98 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

aerobic
Inoculum: activated sludge, non-adapted
Concentration: 16 mg/l
Result: Readily biodegradable.
Biodegradation: 94 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

aerobic
Inoculum: activated sludge, non-adapted
Concentration: 16,2 mg/l
Result: Readily biodegradable.
Biodegradation: 90 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

maleic anhydride:

Biodegradability : Inoculum: activated sludge, non-adapted
Result: Readily biodegradable.
Biodegradation: > 90 %
Exposure time: 25 d
Method: OECD Test Guideline 301B
Remarks: Based on data from similar materials

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Remarks: No data available

Components:

cyclohexanone:

Partition coefficient: n-octanol/water : log Pow: 0,86 (25 °C)

dimethoate (ISO):

Bioaccumulation : Species: Salmo gairdneri
Bioconcentration factor (BCF): > 1.000
Remarks: The product/substance has a potential to bioaccumulate.
See section 9 for octanol-water partition coefficient.

Partition coefficient: n-octanol/water : Pow: 5,7 (20 °C)
log Pow: 0,75 (20 °C)
Method: OECD Test Guideline 107

xylene:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Exposure time: 7 d
Concentration: 1,3 mg/l
Bioconcentration factor (BCF): > 4,9
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 3,2 (20 °C)
pH: 7
Remarks: Based on data from similar materials

log Pow: 3,12 (20 °C)
pH: 7
Remarks: Based on data from similar materials

log Pow: 3,15 (20 °C)
pH: 7
Remarks: Based on data from similar materials

log Pow: 3,15 (20 °C)
pH: 7
Remarks: Based on data from similar materials

maleic anhydride:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water	:	log Pow: -2,61

Mobility in soil

Components:

dimethoate (ISO):

Distribution among environmental compartments	:	Remarks: Highly mobile in soils
Stability in soil	:	Remarks: Not expected to adsorb on soil.

Other adverse effects

Product:

Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

Components:

dimethoate (ISO):

Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	It is prohibited to reuse, bury, burn, or sell containers. Rinsable containers: Triple rinse containers of less than 20 liters and pressure rinse containers of 20 liters or more. Triple rinsing: Add water up to ¼ of the container's capacity, close and shake for 30 seconds. Pour the rinse water into the mixing tank, considering this volume of water within the recommended volume for mixing preparation. Perform this procedure three times. Pressure rinsing: Activate the pressure rinsing device for 30 seconds, considering the volume of water used as part of the recommended volume for mixing preparation. In both procedures, punctured the container on its base without damaging the label. In all cases, take the empty containers to collection points indicated by the local empty containers program.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 1993
Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (Cyclohexanone, Xylene, Dimethoate)
Class	:	3
Packing group	:	III
Labels	:	3
Environmentally hazardous	:	yes

IATA-DGR

UN/ID No.	:	UN 1993
Proper shipping name	:	Flammable liquid, n.o.s. (Cyclohexanone, Xylene, Dimethoate)
Class	:	3
Packing group	:	III
Labels	:	Flammable Liquids
Packing instruction (cargo aircraft)	:	366
Packing instruction (passenger aircraft)	:	355
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 1993
Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (Cyclohexanone, Xylene, Dimethoate)
Class	:	3
Packing group	:	III
Labels	:	3
EmS Code	:	F-E, S-E
Marine pollutant	:	yes

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. REGULATORY INFORMATION

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

Control Act of precursor chemicals and controlled products.	:	Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified

The ingredients of this product are reported in the following inventories:

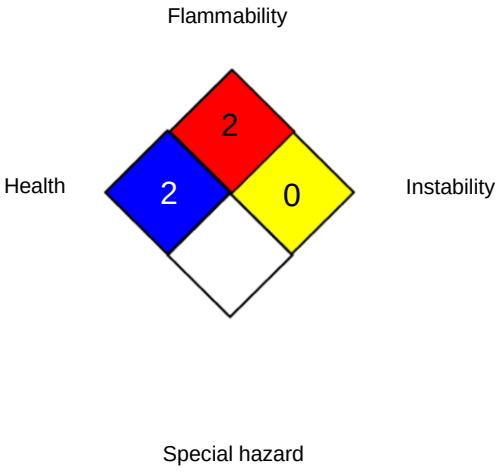
TCSI	:	Not in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AIIC	:	Not in compliance with the inventory
DSL	:	This product contains the following components that are not on the Canadian DSL nor NDSL. alkoxylated short fatty alcohol dimethoate (ISO)
ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	Not in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory
NZIoC	:	On the inventory, or in compliance with the inventory
TECI	:	Not in compliance with the inventory

16. OTHER INFORMATION

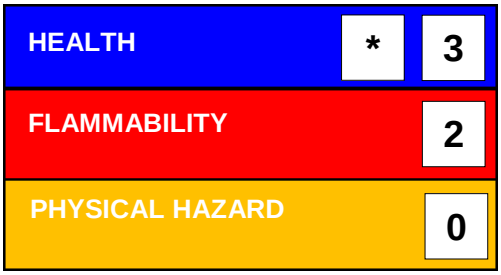
Revision Date	:	23.01.2025
Date format	:	dd.mm.yyyy

Further information

NFPA:



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

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
PE OEL	:	Peru. Regulation adopting Limit Values for Chemical Agents in the Working Environment.
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
PE OEL / TWA	:	Time Weighted Average
PE OEL / STEL	:	Short Term Exposure Limit

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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, Bioaccumu-

lative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

Disclaimer

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