

SAFETY DATA SHEET

according to the Hazardous Products Regulations



CYGON® 400 g/L EC

Version	Revision Date:	SDS Number:	Date of last issue: 05/30/2024
1.1	12/03/2024	50000663	Date of first issue: 05/30/2024

SECTION 1. IDENTIFICATION

Product identifier

Product name CYGON® 400 g/L EC

Other means of identification

Product code 50000663

Chemical nature Mixture

Product Registration Number 35268

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.

Manufacturer or supplier's details

Manufacturer

FMC Corporation
2929 WALNUT ST
PHILADELPHIA PA 19104
USA
Phone (AgHotline): 1-833-FMC-PPAC (1-833-362-7722),
Web: <https://ag.fmc.com/ca/en>
SDS-Info@fmc.com

Supplier Address

FMC of Canada Limited
6755 Mississauga Road, Suite 204
Mississauga, ON L5N 7Y2
Canada

Emergency telephone

For leak, fire, spill or accident emergencies, call:
1 800 / 424-9300 (CHEMTREC - U.S.A.)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)

Medical emergency:
U.S.A. & Canada: +1 800 / 331-3148
All other countries: +1 651 / 632-6793 (Collect)

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SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Flammable liquids : Category 3
Acute toxicity (Oral) : Category 4
Acute toxicity (Inhalation) : Category 4
Eye irritation : Category 2A
Respiratory sensitization : Category 1
Skin sensitization : Sub-category 1B
Aspiration hazard : Category 1

GHS label elements

Hazard pictograms : 

Signal Word : DANGER

Hazard Statements : H226 Flammable liquid and vapor.
H302 + H332 Harmful if swallowed or if inhaled.
H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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.
P261 Avoid breathing mist or vapors.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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P284 Wear respiratory protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331 Do NOT induce vomiting.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
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.

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

Very toxic to aquatic life with long lasting effects.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
cyclohexanone	cyclohexanone	108-94-1	$\geq 30 - < 60$ *
dimethoate (ISO)	dimethoate (ISO)	60-51-5	$\geq 30 - < 60$ *
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified	Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified	64742-95-6	$\geq 5 - < 10$ *

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maleic anhydride	maleic anhydride	108-31-6	>= 0.1 - < 1 *
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* Actual concentration or concentration range is withheld as a trade secret

SECTION 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 : Move to fresh air.
If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance.
If not breathing, give artificial respiration.
If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : Take off all contaminated clothing immediately.
Wash contaminated clothing before re-use.
Wash off immediately with plenty of water for at least 15 minutes.
Get medical attention immediately if irritation develops and persists.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : If accidentally swallowed obtain immediate medical attention.
Rinse mouth with water.
Drink 1 or 2 glasses of water.
Do not give milk or alcoholic beverages.
Keep respiratory tract clear.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : On contact, the first symptoms to appear may be irritation.
Symptoms of cholinesterase inhibition: nausea, headache, vomiting, cramps, weakness, blurred vision, pin-point pupils, tightness in chest, labored breathing, nervousness, sweating, watering of eyes, drooling or frothing of mouth and nose, muscle spasms and coma.

Active ingredient is a cholinesterase inhibitor affecting the central and peripheral nervous systems producing respiratory

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depression.
Harmful if swallowed or if inhaled.
May be fatal if swallowed and enters airways.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
Avoid inhalation, ingestion and contact with skin and eyes.
If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Notes to physician : This product contains a reversible cholinesterase inhibitor. Atropine sulfate is antidotal. Support respiration as needed with removal of secretions, maintenance of a patent airway and, if necessary, artificial ventilation. If cyanosis is absent: Adults - start treatment by giving 2 mg atropine intravenously or intramuscularly, if necessary, and repeat with 0.4 - 2.0 mg atropine at 15 minute intervals until atropinization occurs (tachycardia, flushed skin, dry mouth, mydriasis); Children under 12 - initial dose = 0.05 mg/kg body weight and repeat dose = 0.02 - 0.05 mg/kg body weight. Start 2-PAM at the same time, following manufacturer's recommended dosages and administration. Morphine, reserpine, phenothiazines and theophylline are probably contraindicated.

At first sign of pulmonary edema, the patient should be given supplemental oxygen and treated symptomatically. Observe patient to ensure that these symptoms do not recur as atropinization wears off. If in eyes, instill one drop of homatropine.

At first sign of pulmonary oedema the patient should be given supplementary oxygen and treated symptomatically.

If any of the signs of cholinesterase inhibition occurs, call a doctor (physician), clinic or hospital immediately. Explain that the victim has been exposed to an organophosphorus insecticide.

Describe his/her condition and the extent of exposure. Immediately remove the exposed person from the area where the product is present.

Decontamination procedures such as whole body washing, gastric lavage and administration of activated charcoal are often required.

Obidoxime chloride (Toxogonin), alternatively pralidoxime chloride (2-PAM), may be administered as an adjunct to, but not a substitute for atropine sulphate. Treatment with oxime should be maintained as long as atropine sulphate is administered.

Much information on (acetyl)cholinesterase inhibition by organophosphate insecticides and its treatment can be found on

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the internet. Decontamination procedures such as whole body washing, gastric lavage and administration of activated charcoal are often required.

ANTIDOTE: If symptoms of cholinesterase inhibition (see subsection 4.2.) are present, administer atropine sulphate, which often is a lifesaving antidote, in large doses, TWO to FOUR mg intravenously or intramuscularly as soon as possible. Repeat at 5 to 10 minute intervals until signs of atropinisation appear and maintain full atropinisation until the chemical product is fully metabolised.

Relapse can occur after initial improvement. VERY CLOSE SUPERVISION OF THE PATIENT IS INDICATED FOR AT LEAST 48 HOURS, DEPENDING ON THE SEVERITY OF POISONING.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Dry chemical, CO₂, water spray or regular foam.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
The product may decompose rapidly when heated, which can result in explosion.
- Hazardous combustion products : Hydrogen cyanide
phosphorus oxides
Nitrogen oxides (NO_x)
Carbon oxides
Sulfur oxides
- Further information : 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.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.
- Special protective equipment for fire-fighters : Firefighters should wear protective clothing and self-contained breathing apparatus.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapors accumulating to form explosive concentra-
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tions. Vapors can accumulate in low areas.
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 product from entering drains.
Prevent further leakage or spillage if safe to do so.
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. Pick up and transfer the spilled material to a properly labeled container without creating dust. For spills on concrete or other non-porous surfaces, the area can be cleaned using a small quantity of soap and water. Do not allow the cleaning solution to enter drains. Use an inert absorbent material to soak up the cleaning solution and transfer it to the properly labeled container. When the spill occurs on soil, the only effective way to decontaminate the area is to remove the top 5 to 7 centimeters of soil.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. 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.
Melting of dimethoate may induce explosion and should never be used for emptying drums. Do not heat dimethoate above 35°C. Heat only indirectly and with solvent present. Local heating with for e.g. electric heating equipment or steam may

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significantly increase the risk of explosion and should never take place.

Before further processing takes place, it is recommended to solve dimethoate at ambient temperature in the solvent to be used in the formulation. If necessary, solvent preheated to 35°C can be used. Circulation of the solvent may speed up the solving.

Wear personal protective equipment.

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.

Materials to avoid : Do not store near acids.

Recommended storage temperature : < 25 °C

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 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	TWA	20 ppm 80 mg/m ³	CA AB OEL
		STEL	50 ppm 200 mg/m ³	CA AB OEL
		TWA	20 ppm	CA BC OEL
		STEL	50 ppm	CA BC OEL
		TWAEV	25 ppm 100 mg/m ³	CA QC OEL
		TWA STEL	20 ppm 50 ppm	ACGIH ACGIH
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified	64742-95-6	TWAEV	200 mg/m ³	CA QC OEL
		TWA	200 mg/m ³ (total hydrocarbon vapor)	ACGIH
maleic anhydride	108-31-6	TWA	0.1 ppm	CA AB OEL

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		0.4 mg/m ³	
	TWA	0.1 ppm	CA BC OEL
	TWAEV (inhalable fraction and vapour)	0.01 mg/m ³	CA QC OEL
	TWA (Inhalable fraction and vapor)	0.01 mg/m ³	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 work-week	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

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.
In the case of respirable dust, use self-contained breathing apparatus.
The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust).

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

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with the producers of the protective 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.

- Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.
Ensure that eyewash stations and safety showers are close to the workstation location.
- Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Dust impervious protective suit
Remove and wash contaminated clothing before re-use.
- Protective measures : Always have on hand a first-aid kit, together with proper instructions.
Plan first aid action before beginning work with this product.
Wear suitable protective equipment.
Ensure that eye flushing systems and safety showers are located close to the working place.
- Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : liquid
- Color : colorless
light yellow
- Odor : bitter almond
- Odor Threshold : not determined
- pH : 3.12
(1% solution in water)
- Melting point/freezing point : < 0 °C

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Initial boiling point and boiling range : not determined

Flash point : ca. 48 °C
Method: closed cup

Flammability (liquids) : Sustains combustion

Upper explosion limit / Upper flammability limit : not determined

Lower explosion limit / Lower flammability limit : not determined

Vapor pressure : not determined

Relative vapor density : not determined

Density : 1.06 g/cm³ (20 °C)

Solubility(ies)
Water solubility : emulsifiable

Partition coefficient: n-octanol/water : not determined

Autoignition temperature : 310 °C

Decomposition temperature : not determined

Viscosity
Viscosity, dynamic : ca. 6.4 mPa.s (20 °C)
ca. 4.0 mPa.s (40 °C)

Viscosity, kinematic : not determined

Explosive properties : Not explosive

Oxidizing properties : Non-oxidizing

Particle size : not determined

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

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Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed. Vapors may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks. Heating of the mixture will evolve flammable, toxic or harmful and irritant vapours.
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	:	See subsection 5.2.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed or if inhaled.

Product:

Acute oral toxicity	:	LD50 (Rat): ca. 550 mg/kg Method: OECD Test Guideline 425
Acute inhalation toxicity	:	LC50 (Rat): 3 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: FIFRA 81.03
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402

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
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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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Acute oral toxicity : LD50 (Rat, female): 3,492 mg/kg
Method: OECD Test Guideline 401

LD50 (Rat, male): 6,984 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male and female): > 6.193 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: no mortality

Acute dermal toxicity : LD50 (Rabbit, male and female): > 3,160 mg/kg
Assessment: The component/mixture is minimally toxic after single contact with skin.

maleic anhydride:

Acute oral toxicity : LD50 (Rat, male and female): 1,090 mg/kg

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Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit, female): 2,620 mg/kg

Skin corrosion/irritation

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

Product:

Method : OECD Test Guideline 404
Result : No skin irritation
Remarks : Based on data from a similar product.

Remarks : May cause skin irritation and/or dermatitis.

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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Mild skin irritation

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:

Result : Moderate eye irritation
Method : OECD Test Guideline 405
Remarks : Based on data from a similar product.

Remarks : May cause irreversible eye damage.

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Components:

cyclohexanone:

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

dimethoate (ISO):

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

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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Species : Rabbit
Result : No 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

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Product:

Method : OECD Test Guideline 429
Result : Probability or evidence of low to moderate skin sensitization rate in humans

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.

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GLP : yes

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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Test Type : Maximization Test
Routes of exposure : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Not a skin sensitizer.

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.

Product:

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

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

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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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Genotoxicity in vitro : Test Type: in vitro DNA damage and/or repair study
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: reverse mutation assay
Metabolic activation: with and without metabolic activation
Result: negative

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Genotoxicity in vivo : Test Type: Bone marrow chromosome aberration.
Species: Rat (male and female)
Application Route: Inhalation
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.

Product:

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

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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.

Product:

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

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

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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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Effects on fertility : Test Type: Three-generation study
Species: Rat
Application Route: inhalation (vapor)
Fertility: NOAEC Mating/Fertility: 7.5 mg/l
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Species: Mouse
Application Route: inhalation (vapor)
General Toxicity Maternal: LOAEC: 500 part per million
Symptoms: Maternal effects.

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: \geq 140 mg/kg body weight
Teratogenicity: NOAEL: \geq 140 mg/kg body weight
Embryo-fetal toxicity.: NOAEL: \geq 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

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STOT-single exposure

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

Product:

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

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Assessment : May cause respiratory irritation., May cause drowsiness or dizziness.

STOT-repeated exposure

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

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.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

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

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

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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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Species : Rat, male and female
NOAEC : 0.8 - 0.9 mg/l
Application Route : Inhalation
Test atmosphere : vapor
Remarks : Based on data from similar materials

Species : Rat, male
NOAEL : 600 mg/kg
Application Route : Oral
Remarks : Based on data from similar materials

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.

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Product:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be re-garded as if it causes a human aspiration toxicity hazard.

Components:

dimethoate (ISO):

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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

May be fatal if swallowed and enters airways.

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.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): > 100 mg/l
Exposure time: 96 h
Remarks: (Data on the product itself)

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 8.9 mg/l
aquatic invertebrates : Exposure time: 48 h
Remarks: (Data on the product itself)

EC50 (Daphnia magna (Water flea)): 2.0 mg/l
Exposure time: 48 h
Remarks: Active ingredient

NOEC (Daphnia magna (Water flea)): 0.04 mg/l
Exposure time: 21 Days
Remarks: Active ingredient

Toxicity to algae/aquatic : IC50 (Pseudokirchneriella subcapitata (green algae)): 246
plants : mg/l
Exposure time: 72 h

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Remarks: (Data on the product itself)

Toxicity to soil dwelling organisms : LC50 (*Eisenia fetida* (earthworms)): 31 mg/kg dry weight (d.w.)
Exposure time: 14 d
Remarks: Information refers to the main ingredient.

Toxicity to terrestrial organisms : LC50 (*Apis mellifera* (bees)): 0.29 µg/bee
Exposure time: 48 h
End point: Acute oral toxicity
Remarks: (Data on the product itself)

LC50 (*Apis mellifera* (bees)): 0.37 µg/bee
Exposure time: 48 h
End point: Acute contact toxicity
Remarks: (Data on the product itself)

LD50 (*Colinus virginianus*): 10.5 mg/kg
Remarks: Active ingredient

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

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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

Toxicity to fish (Chronic toxicity) : NOEC (*Oncorhynchus mykiss* (rainbow trout)): 0.4 mg/l
Exposure time: 21 d

NOEC (*Cyprinodon variegatus* (sheepshead minnow)): 2.4 mg/l
Test Type: Early-life Stage
GLP: yes

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NOEC (Oncorhynchus mykiss (rainbow trout)): 1.25 mg/l
Test Type: Early Life-Stage
Method: OECD Test Guideline 210
GLP: yes

LOEC (Pimephales promelas (fathead minnow)): 96 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 229
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.04 mg/l
Exposure time: 21 d

NOEC (Americamysis bahia (mysid shrimp)): 0.14 mg/l
Exposure time: 32 d
Test Type: flow-through test
GLP: yes

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): 31 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 207
GLP: yes

NOEC (Eisenia fetida (earthworms)): 2.87 mg/kg
Exposure time: 28 d
End point: reproduction
GLP: yes

Toxicity to terrestrial organisms : LD50 (Anas platyrhynchos (Mallard duck)): 44 mg/kg
End point: Acute oral toxicity
Method: US EPA Test Guideline OPPTS 850.2100

NOEC (Anas platyrhynchos (Mallard duck)): 35.4 ppm
End point: Reproduction Test
Method: OECD Test Guideline 206
GLP: yes

LD50 (Colinus virginianus (Bobwhite quail)): 17.3 mg/kg
End point: Acute oral toxicity
Method: EPA OPP 71-2 (Avian Dietary Toxicity Test)
GLP: yes

NOEC (Colinus virginianus (Bobwhite quail)): 10.1 ppm
End point: Reproduction Test
Method: OECD Test Guideline 206
GLP: yes

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

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

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Toxicity to fish : NOEC (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

LL50 (Pimephales promelas (fathead minnow)): 8.2 mg/l
Exposure time: 96 h
Test Type: semi-static test
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 4.5 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (microalgae)): 3.1 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOELR (Pimephales promelas (fathead minnow)): 2.6 mg/l
Exposure time: 14 d
Method: OECD Test Guideline 204
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 2.6 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50 (Tetrahymena pyriformis): 15.41 mg/l
Exposure time: 40 h
Test Type: Growth inhibition
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

maleic anhydride:

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

Toxicity to microorganisms : EC10 (Pseudomonas putida): 44.6 mg/l
Exposure time: 18 h
Method: DIN 38 412 Part 8

Persistence and degradability

Components:

cyclohexanone:

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

dimethoate (ISO):

Biodegradability : Result: Not readily biodegradable.

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Biodegradability : Concentration: 49.2 mg/l
Result: Inherently biodegradable.
Biodegradation: 77.05 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

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

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Bioaccumulative potential

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

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.
Toxic to aquatic life.
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.

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Very toxic to aquatic life with long lasting effects.

SECTION 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 : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

- UN number : UN 1993
Proper shipping name : FLAMMABLE LIQUID, N.O.S.
(Cyclohexanone, Solvent naphtha (petroleum), light aromatic, 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, Solvent naphtha (petroleum), light aromatic, 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, Solvent naphtha (petroleum), light aromatic, Dimethoate)
- Class : 3
Packing group : III

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Labels : 3
EmS Code : F-E, S-E
Marine pollutant : yes

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

Not applicable for product as supplied.

Domestic regulation

TDG

UN number : UN 1993
Proper shipping name : FLAMMABLE LIQUID, N.O.S.
(Cyclohexanone, Solvent naphtha (petroleum), light aromatic,)
Class : 3
Packing group : III
Labels : 3
ERG Code : 128
Marine pollutant : no
Remarks : Display "inhalation hazard" mark on package in accordance with TDG 4.23.

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.

SECTION 15. REGULATORY INFORMATION

NPRI Components : Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified maleic anhydride

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
Alkoxylated surfactant
DIMETHOATE TECHNICAL
ENCS : Not in compliance with the inventory
ISHL : Not in compliance with the inventory

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KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : Not in compliance with the inventory

NZIoC : Not in compliance with the inventory

TECI : Not in compliance with the inventory

Canadian lists

No substances are subject to a Significant New Activity Notification.

PMRA/PCPA Information

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label: Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product

CAUTION

Avoid breathing dust or spray mist., Avoid contact with skin, eyes and clothing., Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet., Very toxic to aquatic life with long lasting effects., There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)

CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)

CA BC OEL : Canada. British Columbia OEL

CA QC OEL : Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants

ACGIH / TWA : 8-hour, time-weighted average

ACGIH / STEL : Short-term exposure limit

CA AB OEL / TWA : 8-hour Occupational exposure limit

CA AB OEL / STEL : 15-minute occupational exposure limit

CA BC OEL / TWA : 8-hour time weighted average

CA BC OEL / STEL : short-term exposure limit

SAFETY DATA SHEET

according to the Hazardous Products Regulations



CYGON® 400 g/L EC

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CA QC OEL / TWAEV : Time-weighted average exposure value

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, Bioaccumulative 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

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CA / EN

Prepared by:

FMC Corporation

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End of Material Safety Data Sheet