SAFETY DATA SHEET

Omega 45 EC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	2022/03/04	50000536	Date of first issue: 2022/03/04

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Omega 45 EC
Other means of identification	:	PROCHLORAZ EC 450 G U-WW SPORTAK 450 EC

Recommended use of the chemical and restrictions on use

Recommended use	:	Can be used as fungicide only.
Restrictions on use	:	Use as recommended by the label.

Manufacturer or supplier's details

Company	:	FMC Agro Philippines, Inc.
Address	:	5th Avenue cor. 26th Street, Bonifacio Global City, Taguig City NCR 1634
Telephone	:	+63279443400
National Poison Control Center	:	U.P. PGH, Padre Faura, Manila (+63) 2 8524 1078 East Avenue, Quezon City (+63) 2 8928 0611 Southern Philippines Medical Center (+63) 82 227 2731 (formerly Davao Medical Center Davao City)
Emergency telephone	:	For leak, fire, spill or accident emergencies, call: +(63) 2-395-3308 (CHEMTREC) Medical emergency: All other countries: +1 651 / 632-6793 (Collect)

2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids	:	Category 3
Acute toxicity (Oral)	:	Category 4
Serious eye damage/eye irritation	:	Category 2
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)
Specific target organ toxicity - repeated exposure	:	Category 2 (hearing organs)

(Inhalation)

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 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
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/ sparks/ open flames/ hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe 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.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face 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/ shower.
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.

P314 Get medical advice/ attention if you feel unwell.
P331 Do NOT induce vomiting.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
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)
prochloraz (ISO)	67747-09-5	>= 30 -< 50
xylene	1330-20-7	>= 20 -< 30
ethylbenzene	100-41-4	>= 1 -< 10
Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts	68953-96-8	>= 3 -< 10
1-methoxypropan-2-ol	107-98-2	>= 1 -< 10
2-methylpropan-1-ol	78-83-1	>= 1 -< 3

4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this 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 skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

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 : 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.
May be fatal if swallowed and enters airways.
Causes serious eye irritation.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure if inhaled.

Notes to physician : Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

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.

Hazardous combustion products : Carbon oxides
Nitrogen oxides (NOx)
Chlorine compounds

Specific extinguishing methods : 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 : Wear self-contained breathing apparatus for firefighting if necessary.

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-

tions. Vapors can accumulate in low areas.

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 : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

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.

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.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
xylene	1330-20-7	TWA	100 ppm	PH OEL

			435 mg/m3	
		TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
ethylbenzene	100-41-4	C	100 ppm 435 mg/m3	PH OEL
		TWA	20 ppm	ACGIH
1-methoxypropan-2-ol	107-98-2	TWA	50 ppm	ACGIH
		STEL	100 ppm	ACGIH
2-methylpropan-1-ol	78-83-1	TWA	100 ppm 300 mg/m3	PH OEL
		TWA	50 ppm	ACGIH

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sam-pling time	Permissible concentra-tion	Basis
xylene	1330-20-7	Methylhip-puric acids	Urine	End of shift (As soon as possible after exposure ceases)	1.5 g/g cre-atinine	ACGIH BEI
ethylbenzene	100-41-4	Sum of mandelic acid and phenyl gly-oxylic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.15 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
Wear face-shield and protective suit for abnormal processing problems.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	suspension
Color	:	yellowish-brown
Odor	:	aromatic
pH	:	7 - 8 In a 1% aqueous dispersion
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	28 °C
Self-ignition	:	> 480 °C
Density	:	0.98 g/cm3 (20 °C)
Solubility(ies) Water solubility	:	dispersible
Partition coefficient: n-octanol/water	:	No data available
Viscosity Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing

10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
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.
Incompatible materials	:	Strong oxidizing agents Strong acids and strong bases

Hazardous decomposition products	:	Nitrogen oxides (NOx) Carbon oxides Hydrogen chloride gas

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity	:	LD50 (Rat, female): 2,263 mg/kg Method: OECD Test Guideline 401 LD50 (Rat, male): 1,715 mg/kg Method: OECD Test Guideline 401
Acute dermal toxicity	:	LD50 (Rat, male and female): > 4,100 mg/kg Method: OECD Test Guideline 402

Components:

prochloraz (ISO):

Acute oral toxicity	:	LD50 (Rat): 1,023 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 2.16 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rat): > 2,100 mg/kg

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

ethylbenzene:

Acute oral toxicity	:	LD50 Oral (Rat, male and female): 3,500 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 17.8 mg/l Exposure time: 4 h Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rabbit, male): 15,400 mg/kg

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Acute oral toxicity : LD0 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 401
Remarks: no mortality

Acute dermal toxicity : LD50 (Rat, male and female): > 1,000 - 1,600 mg/kg
Method: OECD Test Guideline 402

1-methoxypropan-2-ol:

Acute oral toxicity : LD50 Oral (Rat, male): 3,739 mg/kg

LD50 Oral (Rat, female): 4,277 mg/kg

Acute inhalation toxicity : LC0 (Rat, male and female): > 25.8 mg/l, > 7000 ppm
Exposure time: 6 h
Test atmosphere: vapor
Remarks: no mortality

Acute dermal toxicity : LD50 Dermal (Rat, male and female): > 2,000 mg/kg
Remarks: no mortality

2-methylpropan-1-ol:

Acute oral toxicity : LD50 (Rat): 3,350 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 18.18 mg/l
Exposure time: 6 h
Test atmosphere: vapor
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): 2,460 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Remarks : May cause skin irritation in susceptible persons.

Components:

prochloraz (ISO):

Method : OECD Test Guideline 404
Result : No skin irritation

xylene:

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

ethylbenzene:

Species	:	Rabbit
Remarks	:	Moderate skin irritation

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Species	:	Rabbit
Result	:	Skin irritation

1-methoxypropan-2-ol:

Species	:	Rabbit
Result	:	No skin irritation

2-methylpropan-1-ol:

Species	:	Rabbit
Result	:	Skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 21 days
Method	:	OECD Test Guideline 405
Remarks	:	May cause irreversible eye damage.

Components:

prochloraz (ISO):

Result	:	slight irritation

xylene:

Species	:	Rabbit
Result	:	Moderate eye irritation

ethylbenzene:

Species	:	Rabbit
Result	:	No eye irritation

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Species	:	Rabbit
Result	:	Irreversible effects on the eye

1-methoxypropan-2-ol:

Species	:	Rabbit
Result	:	No eye irritation

2-methylpropan-1-ol:

Species	:	Rabbit
Result	:	Irreversible effects on the eye

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Test Type	:	Buehler Test
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.

Components:

prochloraz (ISO):

Result	:	Not a skin sensitizer.

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.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Test Type	:	Maximization Test
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitization.

1-methoxypropan-2-ol:

Test Type	:	Maximization Test
Routes of exposure	:	Intradermal
Species	:	Guinea pig
Result	:	Does not cause skin sensitization.

2-methylpropan-1-ol:

Routes of exposure	:	Skin contact
Result	:	Not a skin sensitizer.

Germ cell mutagenicity

Not classified based on available information.

Components:

prochloraz (ISO):

Germ cell mutagenicity - Assessment	:	No genotoxic potential

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

ethylbenzene:

Genotoxicity in vitro	:	Test Type: In vitro mammalian cell gene mutation test Result: negative
Genotoxicity in vivo	:	Test Type: In vivo micronucleus test Species: Mouse Method: OECD Test Guideline 474 Result: negative

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Genotoxicity in vitro	:	Test Type: In vitro mammalian cell gene mutation test Result: negative Remarks: Based on data from similar materials Test Type: reverse mutation assay Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: negative
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse (male and female) Application Route: Oral Result: negative Remarks: Based on data from similar materials
Germ cell mutagenicity - Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.

1-methoxypropan-2-ol:

Genotoxicity in vitro : Test Type: reverse mutation assay
Result: negative

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

Test Type: gene mutation test
Test system: Chinese hamster fibroblasts
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Intraperitoneal injection
Result: negative

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

2-methylpropan-1-ol:

Genotoxicity in vitro : Result: negative

Genotoxicity in vivo : Result: negative

Carcinogenicity

Not classified based on available information.

Components:

prochloraz (ISO):

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

xylene:

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

ethylbenzene:

Species : Mouse, male and female
Application Route : Inhalation
Exposure time : 104 weeks
Result : positive

1-methoxypropan-2-ol:

Species : Rat, male and female
Application Route : inhalation (vapor)
Exposure time : 2 years

Dose	:	300, 1000, 3000 ppm
	:	300 ppm
Method	:	OECD Test Guideline 453
Result	:	negative
Species	:	Mouse, male and female
Application Route	:	inhalation (vapor)
Exposure time	:	2 years
Dose	:	300, 1000, 3000 ppm
	:	1,000 ppm
Method	:	OECD Test Guideline 453
Result	:	negative
Carcinogenicity - Assessment	:	Weight of evidence does not support classification as a carcinogen

Reproductive toxicity

Not classified based on available information.

Components:

prochloraz (ISO):

Reproductive toxicity - Assessment	:	No toxicity to reproduction

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

ethylbenzene:

Effects on fertility	:	Species: Rat, male and female Application Route: Inhalation Method: OECD Test Guideline 415 Result: negative
Effects on fetal development	:	Test Type: Embryo-fetal development Species: Rat, female Application Route: Inhalation Method: OECD Test Guideline 414 Result: negative

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Effects on fertility	:	Test Type: Three-generation study Species: Rat, male and female Application Route: Oral Dose: 14, 70, 350 mg/kg bw d General Toxicity Parent: NOAEL: 350 mg/kg body weight General Toxicity F1: NOAEL: 350 mg/kg bw/day General Toxicity F2: NOAEL: 350 mg/kg bw/day Result: negative Remarks: Based on data from similar materials
Effects on fetal development	:	Test Type: reproductive and developmental toxicity study Species: Rat Application Route: Oral Dose: 0.2, 2.0, 300 and 600 mg/kg Duration of Single Treatment: 20 d General Toxicity Maternal: LOAEL: 600 mg/kg body weight Teratogenicity: LOAEL: 600 mg/kg bw/day Result: negative Remarks: Based on data from similar materials
Reproductive toxicity - Assessment	:	Weight of evidence does not support classification for reproductive toxicity

1-methoxypropan-2-ol:

Effects on fertility	:	Test Type: Two-generation study Species: Rat, male and female Application Route: inhalation (vapor) Dose: 300, 1000, 3000 parts per million General Toxicity Parent: LOAEL: 1,000 General Toxicity F1: LOAEL: 3,000 General Toxicity F2: 3,000 Method: OECD Test Guideline 416 Result: negative
Effects on fetal development	:	Test Type: reproductive and developmental toxicity study Species: Rabbit Application Route: Inhalation Dose: 0, 500, 1500, 3000 parts per million Duration of Single Treatment: 29 d General Toxicity Maternal: LOAEL: 3,000 part per million Teratogenicity: NOAEL: 3,000 part per million Method: OECD Test Guideline 414 Result: negative
Reproductive toxicity - Assessment	:	Weight of evidence does not support classification for reproductive toxicity

2-methylpropan-1-ol:

Effects on fertility	:	Species: Rat Application Route: Inhalation Fertility: NOAEC Mating/Fertility: 7.5 mg/l

STOT-single exposure

May cause respiratory irritation.

Components:

prochloraz (ISO):

Remarks : No significant adverse effects were reported

xylene:

Assessment : May cause respiratory irritation.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

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

1-methoxypropan-2-ol:

Assessment : May cause drowsiness or dizziness.

2-methylpropan-1-ol:

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

STOT-repeated exposure

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

Components:

prochloraz (ISO):

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

ethylbenzene:

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

Repeated dose toxicity

Components:

prochloraz (ISO):

Species : Rat

LOAEL	:	60 mg/kg
Symptoms	:	increased liver weight, Reduced body weight

xylene:

Species	:	Rat
	:	3.515 mg/l
Application Route	:	Inhalation
Exposure time	:	13 weeks

ethylbenzene:

Species	:	Rat, male and female
NOAEL	:	75 mg/kg
Application Route	:	Oral
Exposure time	:	28 days
Method	:	OECD Test Guideline 407

Species	:	Rat, male and female
NOAEL	:	250 ppm
LOAEL	:	75 ppm
Application Route	:	inhalation (vapor)
Exposure time	:	728 days
Method	:	OECD Test Guideline 453

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Species	:	Rat, male and female
NOAEL	:	40 mg/kg bw/day
LOAEL	:	115 mg/kg bw/day
Application Route	:	Oral - feed
Exposure time	:	6 months
Dose	:	40, 115, 340, 1030 mg/kg bw d
Remarks	:	Based on data from similar materials

1-methoxypropan-2-ol:

Species	:	Rat, male
LOAEL	:	2757 mg/kg bw/day
Application Route	:	Oral
Exposure time	:	35 d
Dose	:	91.9,275.7,919,2757mg/kg

Species	:	Rat, male and female
NOEL	:	300 ppm
Application Route	:	inhalation (vapor)
Exposure time	:	2 years
Dose	:	300, 1000, 3000ppm
Method	:	OECD Test Guideline 453

Species	:	Rabbit, male
LOAEL	:	3676 mg/kg bw/day
Application Route	:	Dermal
Exposure time	:	90d
Dose	:	1838,3676, 6433, 9190mg/kg

2-methylpropan-1-ol:

Species	:	Rat
	:	1450 mg/kg
Application Route	:	Oral
Species	:	Rat
	:	7.5 mg/l
Application Route	:	Inhalation

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

prochloraz (ISO):

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

xylene:

May be fatal if swallowed and enters airways.

ethylbenzene:

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

Experience with human exposure

Components:

xylene:

General Information	:	Target Organs: inner ear Symptoms: hearing loss Target Organs: Central nervous system Symptoms: Drowsiness, Dizziness

ethylbenzene:

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

Further information

Product:

Remarks	:	Solvents may degrease the skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity	:	Very toxic to aquatic life.
Chronic aquatic toxicity	:	Very toxic to aquatic life with long lasting effects.

Components:

prochloraz (ISO):

Toxicity to fish	:	LC50 (Cyprinodon variegatus (sheepshead minnow)): 1.2 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 4.3 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): > 0.032 mg/l Exposure time: 72 h ErC50 (Lemna gibba (duckweed)): 0.109 mg/l Exposure time: 7 d
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 0.0485 mg/l Exposure time: 36 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.0222 mg/l Exposure time: 21 d
M-Factor (Chronic aquatic toxicity)	:	1

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 fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): > 1.3 mg/l Exposure time: 56 d Test Type: flow-through test Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Ceriodaphnia dubia (water flea)): 0.96 mg/l Exposure time: 7 d 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 soil dwelling organisms	:	NOEC (Eisenia fetida (earthworms)): 16 mg/kg Exposure time: 14 d Remarks: Based on data from similar materials

ethylbenzene:

Toxicity to fish	:	LC50 (Menidia menidia (Atlantic silverside)): 5.1 mg/l Exposure time: 96 h LC50 (Oncorhynchus mykiss (rainbow trout)): 4.2 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1.8 mg/l Exposure time: 48 h EC50 (Ceriodaphnia dubia (water flea)): 3.2 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (algae)): 3.6 mg/l Exposure time: 96 h EC50 (Skeletonema costatum (marine diatom)): 7.7 mg/l Exposure time: 96 h
Toxicity to fish (Chronic toxicity)	:	NOEC (Fish): 0.25 - 3.4 mg/l Method: QSAR
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Ceriodaphnia dubia (water flea)): 0.96 mg/l Exposure time: 7 d
Toxicity to microorganisms	:	Method: OECD Test Guideline 209
Toxicity to soil dwelling or-	:	(Eisenia fetida (earthworms)): 0.047 mg/cm2

ganisms

Exposure time: 48 d
Method: OECD Test Guideline 207

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 31.6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 62 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 29 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.5 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.23 mg/l
Exposure time: 72 d
Test Type: flow-through test
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1.18 mg/l
Exposure time: 21 d
Test Type: flow-through test
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (activated sludge): 550 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Toxicity to soil dwelling organisms : NOEC (Eisenia fetida (earthworms)): 250 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 207
Remarks: Based on data from similar materials

LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 207
Remarks: Based on data from similar materials

Plant toxicity : EC50: 167 mg/kg
Exposure time: 21 d
Species: Sorghum bicolor (sorghum)

80 mg/kg
Exposure time: 14 d
Species: Avena sativa (oats)

Toxicity to terrestrial organ- : EC10 (Hypoaspis aculeifer): 82 mg/kg

isms		Exposure time: 21 d Remarks: Information given is based on data obtained from similar substances.

1-methoxypropan-2-ol:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): >= 1,000 mg/l Exposure time: 96 h Test Type: semi-static test LC50 (Pimephales promelas (fathead minnow)): 20,800 mg/l Exposure time: 96 h Test Type: static test LC50 (Leuciscus idus (Golden orfe)): 6,812 mg/l Exposure time: 96 h Test Type: static test Method: DIN 38412
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 21,100 - 25,900 mg/l Exposure time: 48 h Test Type: static test
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l Exposure time: 7 d Test Type: static test
Toxicity to microorganisms	:	IC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

2-methylpropan-1-ol:

Toxicity to fish	:	LC50: 1,430 mg/l Exposure time: 4 d
Toxicity to daphnia and other aquatic invertebrates	:	EC50: 1,100 mg/l Exposure time: 48 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 20 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	EC50 (Anabaena flos-aquae (cyanobacterium)): 593 - 1,799 mg/l Exposure time: 72 h IC50 (Natural microorganism): 1,000 mg/l Exposure time: 16 h

Persistence and degradability

Components:

prochloraz (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

ethylbenzene:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 79 %
Exposure time: 10 d

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Biodegradability : Inoculum: activated sludge, non-adapted
Result: Not readily biodegradable.
Biodegradation: 2.9 %
Exposure time: 28 d
Method: OECD Test Guideline 301E

Result: Inherently biodegradable.
Biodegradation: > 35 - 45 %
Exposure time: 10 d

1-methoxypropan-2-ol:

Biodegradability : Inoculum: activated sludge
Result: Readily biodegradable.
Method: OECD Test Guideline 301E

2-methylpropan-1-ol:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Components:

prochloraz (ISO):

Bioaccumulation : Remarks: See section 9 for octanol-water partition coefficient.
The product may be accumulated in organisms.

Partition coefficient: n-octanol/water : log Pow: 4.12 (25 °C)

xylene:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): > 4.9
Exposure time: 7 d
Concentration: 1.3 mg/l
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

ethylbenzene:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 110

Partition coefficient: n-octanol/water : Pow: 4,170 (20 °C)
log Pow: 3.03 - 3.6 (20 °C)
pH: 7.84

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Bioaccumulation : Bioconcentration factor (BCF): 3.16
Method: QSAR

Partition coefficient: n-octanol/water : log Pow: 4.595 (20 °C)

1-methoxypropan-2-ol:

Partition coefficient: n-octanol/water	:	log Pow: < 1 (20 °C) pH: 6.8

2-methylpropan-1-ol:

Bioaccumulation	:	Remarks: No bioaccumulation is to be expected (log Pow <= 4).
Partition coefficient: n-octanol/water	:	Pow: 10 (25 °C)

Mobility in soil

Components:

prochloraz (ISO):

Distribution among environmental compartments	:	Remarks: immobile

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.

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.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 1993
Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (prochloraz, Xylene)
Class	:	3
Packing group	:	III
Labels	:	3

IATA-DGR

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

IMDG-Code

UN number	:	UN 1993
Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (prochloraz, Xylene)
Class	:	3
Packing group	:	III
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.

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

Priority Chemical List (PCL)	:	Not applicable
Chemical Control Order (CCO)	:	Not applicable

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

TCSI	:	On the inventory, or 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. N-PROPYL-N-[2-(2,4,6-TRICHLOROPHENOXY)ETHYL]IMIDAZOLE-1-

CARBOXAMIDE

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	:	Not in compliance with the inventory
TECI	:	Not in compliance with the inventory

16. OTHER INFORMATION

Date format	:	yyyy/mm/dd

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
PH OEL	:	Philippines. Threshold Limit Values For Airborne Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
PH OEL / TWA	:	Threshold limit for airborne contaminants
PH OEL / C	:	Ceiling 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, 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

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