

CASORON® 4G

EPA Registration Number: 400-168-59807

1. PRODUCT AND COMPANY IDENTIFICATION

Product name CASORON® 4G
EPA Registration No. 400-168-59807
Chemical nature Mixture
Recommended use of the chemical and restrictions on use
Recommended use Herbicide
Restrictions on use Agriculture, For professional users only.
Company information OHP, Inc.
 PO Box 51230
 Mainland, PA 19451
 (800) 659-6745

Emergency telephone number
TRANSPORTATION EMERGENCY (24 hours a day) call Chemtrec: 1-800-424-9300
MEDICAL EMERGENCY (24 hours a day) and Product Information call 1-800-356-4647

SDS Information or Request ohp.com

2. HAZARDS IDENTIFICATION

Emergency Overview
Appearance granular
Colour grey
Odour aromatic
Hazard Summary Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
 Harmful to aquatic life with long lasting effects.

OSHA Regulatory status This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

GHS Classification
Chronic aquatic toxicity Category 3

GHS Label element
Hazard statements H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
Prevention P273 Avoid release to the environment.
Disposal P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects
Inhalation Occupational health effects due to inhalation of mineral dusts incorporating crystalline silica (quartz, cristobalite, tridymite), crystalline silicates (kaolin, talc) graphite or coal.

Skin Contact with dust can cause mechanical irritation or drying of the skin.

Eyes Dust contact with the eyes can lead to mechanical irritation.

Aggravated Medical Condition None known.

Carcinogenicity:
IARC Group 1: Carcinogenic to humans
 kaolin 1332-58-7

Group 2B: Possibly carcinogenic to humans
 titanium dioxide 13463-67-7

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP Known to be human carcinogen
 kaolin 1332-58-7

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture Mixture
Chemical nature Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
silicon dioxide	7631-86-9	>= 50 - < 70
aluminium oxide	1344-28-1	>= 10 - < 20
dichlobenil	1194-65-6	4
diiron trioxide	1309-37-1	>= 1 - < 5
magnesium oxide	1309-48-4	>= 1 - < 5
calcium oxide	1305-78-8	>= 1 - < 5
kaolin	1332-58-7	>= 0.1 - < 1
titanium dioxide	13463-67-7	>= 0.1 - < 1
silicon dioxide	7631-86-9	>= 50 - < 70
aluminium oxide	1344-28-1	>= 10 - < 20
dichlobenil	1194-65-6	>= 1 - < 5
diiron trioxide	1309-37-1	>= 1 - < 5
magnesium oxide	1309-48-4	>= 1 - < 5

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calcium oxide	1305-78-8	>= 1 - < 5
kaolin	1332-58-7	>= 0.1 - < 1
titanium dioxide	13463-67-7	>= 0.1 - < 1

4. FIRST AID MEASURES

- If inhaled** : Move to fresh air.
Give oxygen or artificial respiration if needed.
Obtain medical attention.
- In case of skin contact** : Wash off with soap and water.
Remove contaminated clothing and shoes.
Wash contaminated clothing before re-use.
If symptoms persist, call a physician.
- In case of eye contact** : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- If swallowed** : Call a physician or poison control center immediately.

Do not induce vomiting unless told to do so by the poison control center or doctor.
- If swallowed** : Drink 1 or 2 glasses of water.
Never give anything by mouth to an unconscious person.
Do not give milk, alcoholic beverages or castor oil.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media** : Carbon dioxide (CO2)
Dry powder
Foam
- water fog
- Unsuitable extinguishing media** : Water spray
- Specific extinguishing methods** : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Further information** : Do not discharge extinguishing waters into streams, rivers and lakes.
- Special protective equipment for firefighters** : Body covering protective clothing, full "turn-out" gear.
Self-contained breathing apparatus (EN 133)

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures** . . . : Wear suitable protective equipment.

Environmental precautions

. : Prevent leaks and prevent soil / water pollution caused by leaks.
May be harmful to aquatic life.

Methods and materials for containment and cleaning up

. : Sweep up and shovel into suitable containers for disposal

7. HANDLING AND STORAGE

Advice on safe handling

. : Avoid dust formation.
Use only with adequate ventilation.

Conditions for safe storage

. : Keep in a dry, cool place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters/ Permissible concentration	Basis
silicon dioxide	7631-86-9	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	OSHA Z-3
		TWA	6 mg/m3 (Silica)	NIOSH REL
aluminium oxide	1344-28-1	TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
		TWA (Respirable fraction)	1 mg/m3 (Aluminium)	ACGIH
diiron trioxide	1309-37-1	TWA (Respirable fraction)	5 mg/m3	ACGIH
		TWA (Fumes)	10 mg/m3	OSHA Z-1

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Components with workplace control parameters *continued*

Components	CAS-No.	Value type (Form of exposure)	Control parameters/ Permissible concentration	Basis
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (dust and fume)	5 mg/m3 (Iron)	NIOSH REL
		TWA (Fumes)	10 mg/m3	OSHA PO
magnesium oxide	1309-48-4	TWA (Inhalable fraction)	10 mg/m3	ACGIH
		TWA (fume, total particulate)	15 mg/m3	OSHA Z-1
		TWA (Fume - total particulate)	10 mg/m3	OSHA PO
calcium oxide	1305-78-8	TWA	2 mg/m3	ACGIH
		TWA	5 mg/m3	OSHA Z-1
		TWA	5 mg/m3	OSHA PO
		TWA	2 mg/m3	NIOSH REL
kaolin	1332-58-7	TWA (Respirable fraction)	2 mg/m3	ACGIH
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (Total dust)	10 mg/m3	OSHA PO
		TWA (respirable dust fraction)	5 mg/m3	OSHA PO
titanium dioxide	13463-67-7	TWA	10 mg/m3	ACGIH

Components with workplace control parameters *continued*

Components	CAS-No.	Value type (Form of exposure)	Control parameters/ Permissible concentration	Basis
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (Total dust)	10 mg/m3	OSHA PO

Personal protective equipment

Respiratory protection . . . : In the case of dust or aerosol formation use respirator with an approved filter.

Hand protection

Remarks : Impervious gloves

Eye protection : Safety glasses with side-shields

Skin and body protection . . . : Preventive skin protection

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : granular

Colour : grey

Odour : aromatic

Odour Threshold : No data available

pH : Not applicable

Melting point/range : No data available

Boiling point/boiling range : Not applicable

Flash point : Not applicable

Evaporation rate : Not applicable

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : Not applicable

Relative vapour density : Not applicable

Relative density : No data available

Density : No data available

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : slightly soluble

Partition coefficient: n-octanol/water : No data available

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Auto-ignition temperature . . . : > 400 °C

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : Not applicable

Viscosity, kinematic : Not applicable

Self-Accelerating decomposition

temperature (SADT) : Method: No information available.

10. STABILITY AND REACTIVITY

Possibility of hazardous reactions

Hazardous polymerisation does not occur.

Incompatible materials : Oxidizing agents
Strong acids and strong bases

Hazardous decomposition products

Nitrogen oxides (NOx)
Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : Remarks: Not applicable

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Components:

silicon dioxide:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
GLP: no

aluminium oxide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

diiron trioxide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

calcium oxide:

Acute oral toxicity : LD50 (Rat): 500 - 2,000 mg/kg

kaolin:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

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

titanium dioxide:

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg

Acute inhalation toxicity: LC50 (Rat): > 6.8 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 10,000 mg/kg

Skin corrosion/irritation

Product:

Species : Rabbit

Assessment : No skin irritation

Components

silicon dioxide

Method : OECD Test Guideline 404

Result : No skin irritation

aluminium oxide:

Species : Rabbit

Method : OECD-Guideline No. 404

Result : No skin irritation

magnesium oxide:

Species : Humans

Result : No skin irritation

calcium oxide:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

GLP : yes

titanium dioxide:

Species : Rabbit

Result : No skin irritation

Serious eye damage/eye irritation

Product:

Species : Rabbit

Assessment : No eye irritation

Components:

silicon dioxide:

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Result: No eye irritation

aluminium oxide:

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

magnesium oxide:

Result: Eye irritation

calcium oxide:

Result: Risk of serious damage to eyes.

titanium dioxide:

Species: Rabbit

Result: No eye irritation

Respiratory or skin sensitisation

Product:

Remarks: Non sensitizing.

Components:

silicon dioxide:

Test Type: Maximisation Test (GPMT)

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

diiron trioxide:

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

calcium oxide:

Species: Human

Assessment: Did not cause sensitisation on laboratory animals.

titanium dioxide:

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Product:

Germ cell mutagenicity -

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

Components:

silicon dioxide:

Genotoxicity in vitro

: Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative
GLP: no

: Test Type: Unscheduled DNA synthesis (UDS)
Result: negative

Genotoxicity in vivo

: Test Type: in vivo assay
Species: Rat (male)
Application Route: Oral
Result: negative
GLP: no

Test Type: in vivo assay
Species: Rat (male and female)
Application Route: Oral
Result: negative
GLP: no

Germ cell mutagenicity - Assessment

: Animal testing did not show any mutagenic effects.

aluminium oxide:

Genotoxicity in vitro

: Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

Germ cell mutagenicity - Assessment

: In vitro tests did not show mutagenic effects

diiron trioxide:

Genotoxicity in vitro

: Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

calcium oxide:

Genotoxicity in vitro

: Test Type: In Vitro mammalian Cell Gene Mutation Test
Result: negative

: Test Type: in vitro assay
Metabolic activation: with and without metabolic activation

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	Result: negative		
	: Test Type: Ames test		
	Metabolic activation: with and without metabolic activation		
	Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)		
	Result: negative		
Germ cell mutagenicity - Assessment	: In vitro tests did not show mutagenic effects	diiron trioxide:	
titanium dioxide:		Carcinogenicity	
Genotoxicity in vitro	: Test Type: Ames test	- Assessment	: Animal testing did not show any carcinogenic effects.
	Metabolic activation: with and without metabolic activation		
	Result: negative	kaolin:	
	: Test Type: Unscheduled DNA synthesis (UDS)	Carcinogenicity	
	Result: negative	- Assessment	: Weight of evidence does not support as a carcinogen
	: Test Type: in vitro assay	titanium dioxide:	
	Metabolic activation: with and without metabolic activation	Carcinogenicity	
	Result: negative	- Assessment	: Not classifiable as a human carcinogen.
	: Test Type: Chromosome aberration test in vitro	Limited evidence of carcinogenicity in animal studies, Tumors were noticed after prolonged inhalation toxicity testing on rats., Considered carcinogenic to animals in certain countries.	
	Metabolic activation: with and without metabolic activation		
	Result: negative	Reproductive toxicity	
Genotoxicity in vivo	: Test Type: in vivo assay	Product:	
	Species: Rat (female)	Reproductive toxicity	
	Application Route: Oral	- Assessment	: Weight of evidence does not support classification or reproductive toxicity
	Result: negative	Components:	
Germ cell mutagenicity - Assessment	: Animal testing did not show any mutagenic effects. Carcinogenicity	silicon dioxide:	
		Reproductive toxicity	
		- Assessment	: No toxicity to reproduction
		No effects on or via lactation	
Carcinogenicity		calcium oxide:	
Product:		Reproductive toxicity	
Carcinogenicity		- Assessment	: No toxicity to reproduction
- Assessment	: Weight of evidence does not support classification as a carcinogen	No effects on or via lactation	
Components:		STOT - single exposure	
silicon dioxide:		Components:	
Carcinogenicity		calcium oxide:	
- Assessment	: Animal testing did not show any carcinogenic effects.	Exposure routes	: Inhalation
		Assessment	: May cause respiratory irritation.
		calcium oxide:	
		Exposure routes	: Inhalation
		Assessment	: May cause respiratory irritation.
		STOT - repeated exposure	
		Components:	
		diiron trioxide:	
		Exposure routes	: Oral

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

titanium dioxide:

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

Exposure time: 48 h

titanium dioxide:

Toxicity to fish

: LC0 (Leuciscus idus (Golden orfe)): 1,000 mg/l
Exposure time: 48 h
Test Type: static test

LC50 (Cyprinodon variegatus (sheepshead minnow)): 240 - 370 mg/l
Exposure time: 96 h

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50: 317 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 155 mg/l
Exposure time: 48 h

Toxicity to algae : IC50 (Algae): 50 mg/l
Exposure time: 72 h

Components:

silicon dioxide:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 5,000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 5,000 mg/l
Exposure time: 24 h

Toxicity to algae : EC50 (Algae): 440 mg/l
Exposure time: 72 h
Remarks: Information given is based on data obtained from similar substances.

calcium oxide:

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 1,070 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50: 159.6 mg/l
Exposure time: 24 h

kaolin:

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 1,100 mg/l

Persistence and degradability

Components:

silicon dioxide:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

silicon dioxide:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential

.: No data available

Mobility in soil: No data available

Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues: Dispose of waste material in compliance with all federal, state, and local regulations.
The product should not be allowed to enter drains, water courses or the soil.

14. TRANSPORT INFORMATION

International Regulation

UNRTDG: Not regulated as a dangerous good

IATA-DGR: Not regulated as a dangerous good

IMDG-Code: Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code . . .: Not applicable for product as supplied.

National Regulations

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49 CFR: Not regulated as a dangerous good

16. OTHER INFORMATION

15. REGULATORY INFORMATION

OSHA Hazards: No OSHA Hazards

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
dichlobenil	1194-65-6	100	2387

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

kaolin	1332-58-7
titanium dioxide	13463-67-7
quartz (SiO ₂)	14808-60-7

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

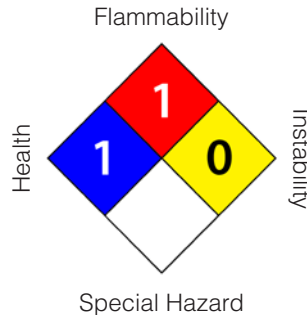
methanol	67-56-1
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FIFRA Hazard Information:

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The pesticide label also includes other important information, including directions for use.

Further information

NFPA:



HMIS III:

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = Not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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