TIDE INTERNATIONAL USA, INC.
--A DIVISION OF TIDE GROUP

REVISION DATE: 29-OCT-2021 VERSION 3.0

[1. Identification]

Product name:	Tide Hexazinone 75 WDG
Chemical name:	[3-cyclohexyl-6-(dimethylamino)-1-methyl-1,3,5-triazine-2,4(1*H*,3*H*)-dione]
Chemical family:	Triazinone
EPA Reg. No.:	84229-32
Recommended Use:	Herbicide
Supplier:	Tide International, USA, INC. 21 Hubble, Irvine, CA 92618 1-949-679-3535
For medical or chemical* emergencies: *Spill, leak, fire, exposure or accident	Call CHEMTREC®: 1-800-424-9300 (24 hours/day)
For non-emergency product information:	Call the NATIONAL PESTICIDE INFORMATION CENTER 1-800-858-7378 (Monday - Friday, 8-12 PM Pacific time)

[2. Hazard(s) Identification]

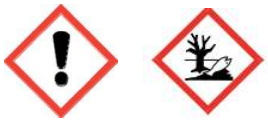
According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR §1910.1200 (2012)

Classification of the substance or mixture

Acute Oral (Category 4)
Acute Dermal (Category 5)
Acute Inhalation (Category 4)
Eye irritation (Category 2A)
Specific Target Organ Toxicity – Repeated Exposure (Category 2)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)

GHS label elements:

GHS pictograms



Signal Word: WARNING

GHS Hazard Statements:

H302	Harmful if swallowed
H313	May be harmful in contact with skin
H332	Harmful if inhaled
H319	Causes serious eye irritation
H371	May cause damage to organs
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Precautionary Statements:

Prevention:

P260 Do not breath dust/fume/gas/mist/vaours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear eye protection/face protection.
P273 Avoid release to the environment correct

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor/if you feel unwell.
P330 Rinse mouth.
P312 Call a POISON CENTER/doctor/if you feel unwell.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention
P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor/...
P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

Routes of exposure: Eyes, skin, ingestion & inhalation.

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC, ACGIH, NTP, and OSHA.

Other hazard information:

NFPA Ratings: Health-2 Flammability-1 Reactivity-0

[3. Composition / Information on Ingredients]

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Active ingredient	**CAS No.**	**Content (w/w,%)**	**ACIGH TWA**
Hexazinone (3-Cyclohexyl-6-(dimethylamino)-1-methyl-1,3,5-triazine-2,4 (1H, 3H)-dione	51235-04-2	≥75.0	NA
Sodium dodecyl sulfate	151-21-3	＜5.0	NA
Ammonium sulfate	7783-20-2	＜6.0	NA
Kaolin	1332-58-7	＜12.0	2mg/m3*
Other ingredients	/	Balanced to 100	/

* Respirable fraction, particulate matter containing no asbestos and ＜1% crystalline silica.

[4. First aid measures]

If poisoning occurs, immediately contact a doctor or Poisons Information Centre, and follow the advice given. Show this Material Safety Data Sheet to the doctor.

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a POISON CENTER or doctor if you feel unwell.

If on skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Get medical advice/attention. Wash contaminated clothing before reuse.

If in eyes: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present,

after first 5 minutes, then continue rinsing eye. If eye irritation persists: Get medical advice/attention.

If swallowed: Immediately call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any thing by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed: No information available.

Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage.

[5. Fire-Fighting measures]

Suitable extinguishing media: Water Spray, Foam, Dry Chemical, CO_2.

Unsuitable extinguishing media: No data available

Special hazards arising from the chemical (hazardous combustion products): Burning will produce hazardous compounds including oxides of carbon, nitrogen,

Special protective equipment and precautions for fire-fighters: Wear protective clothing and self-contained breathing apparatus. Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment. If area is exposed to fire and conditions permit, let fire burn itself out. Burning chemicals may produce by-products more toxic than the original material. If product is on fire, wear self-contained breathing apparatus and full protective equipment. Use water spray. Control runoff.

[6. Accidental release measures]

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal personal protective equipment see section 8.

Environmental precautions: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Methods and materials for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.

[7. Handling and Storage]

Precautions for safe handling:

Use only outdoors or in a well-ventilated area.

Wear eye protection/face protection.

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Avoid breathing dust/vapours/spray. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Do not eat, drink or smoke when using this products.

Wash hands thoroughly after handling.

Avoid release to the environment.

Conditions for safe storage:

Keep pesticide in original container. Store in a cool, dry place. Do not contaminate water, other pesticides, fertilizer, food or feed in storage.

[8. Exposure controls / Personal protection]

Control parameters:

Components.	CAS-No	Control parameters	Basis
Hexazinone	51235-04-2	NA	NA
Kaolin	1332-58-7	10 mg/m3 TWA (total dust) 5 mg/cm3 TWA (respirable dust)	NIOSH

Components.	CAS-No	Control parameters	Basis
		15 mg/m3 TWA (total dust) 5 mg/m3 TWA (respirable dust)	OSHA Final PELs

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Individual protection measures, such as personal protective equipment (PPE)

Applicators and other handlers must wear:

Protective eyewear (goggles, face shield, or safety glasses)

Long-sleeved shirt and long pants

Shoes plus socks

Chemical resistant gloves

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining personal PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Respiratory protection When respiratory protection is necessary under the conditions of use, wear a respirator approved for pesticides by the National Institute for Occupational Safety and Health (NIOSH).

Hand protection Chemical resistant protective gloves.

Eye protection Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses with side-shields. Tightly fitting safety goggle.

Skin and body protection To avoid contact with skin, wear long pants, long-sleeved shirt, shoes and socks. An emergency shower or water supply should be readily accessible to the work area.

General protective measures: Handle in accordance with good industrial hygiene and safety practice. Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Hands and/or face should be washed before breaks and at the end of the shift. Store work clothing separately.

[9. Physical and chemical properties]

Appearance: White granular solid

Odor: Pleasant-mild odor

Odor threshold: No Data Available

PH: 7.7 ±0.03

Melting point/freezing point: 113.6~116.8°C for Technical

Initial boiling point and boiling range: No Data Available

Flashpoint: Non-flammable

Evaporation rate: No Data Available

Flammability: Non-flammable

Vapor pressure: $<1.33 \times 10^{-5}$ Pa at 25 °C for technical

Vapor density: No Data Available

Density: 1.068±0.05g/mL

Solubility: n water 29.8 g/l at 25°C at pH 7;Acetone, 792 g/l at 20°C; Chloroform, 3880 g/l at 20°C; Dimethylformamide, 836 g/l at 20°C ;Methanol, 2650 g/l at 20°C; Toluene, 386 g/l at 20°C; Hexane, 3 g/l at 20°C.

Partition coefficient: n-octanol/water: log Kow = 1.2 at 25 °C and pH 7 for technical

Auto-ignition temperature: Not determined

Decomposition temperature: No Data Available

Viscosity: No Data Available

Note: Physical data are typical values based on material test but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis or as a specification.

[10. Stability and reactivity]

Reactivity: Product will not undergo polymerization
Chemical Stability: Stable under normal conditions.
Possibility of hazardous reactions: Will not occur hazardous polymerization.
Conditions to avoid: No data available.
Incompatible Materials: Strong oxidizing agents
Hazardous decomposition products: Burning will produce hazardous compounds including oxides of carbon, nitrogen,

[11. Toxicological information]

Exposure routes: Eyes, skin, ingestion & inhalation.
Toxicity:
Acute toxicity:
Acute oral (rats): LD_{50} 1000 mg/kg b.w.
Acute dermal (rats): LD_{50} >2000 mg/kg b.w.
Acute inhalation (Rats): LC_{50} >4.36 mg/l air
Acute eye irritation (rabbits): Severely irritating
Acute dermal irritation (rabbits): Non-irritating.
Skin sensitization (mice): Not a skin sensitizer.
Chronic effects: Over a 2-week period, male rats receiving dietary doses of 300 mg/kg/day showed no evidence of cumulative toxicity. Male rats receiving doses of 50 mg/kg/day over 90 days showed no effects, but higher doses caused decreased body weights. Body weight gain was seen in dogs at doses of about 35 mg/kg/day and higher over 1 year. Very high doses for 8 weeks did not affect hamsters and caused only increased liver weights in mice.
Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC, ACIGH, NTP, and OSHA.
Mutagenicity: Negative for mutagenic.
Reproductive toxicity: The NOEL and LOEL for reproductive toxicity were also 200 ppm and 2000 ppm, respectively. Available evidence suggests that hexazinone is unlikely to cause reproductive effects in humans.
Teratogenicity: Pregnant female rats receiving doses up to 100 mg/kg/day during gestation, and rabbits receiving up to 125 mg/kg/day, evidenced no fetal abnormalities. Teratogenic effects were observed in rats only at maternal doses greater than 400 mg/kg/day during gestation. It is unlikely that hexazinone would pose a teratogenic effects in humans under normal conditions.
Organ toxicity: Target organs affected in lab animals by chronic hexazinone exposure include the liver.

[12. Ecological information]

Ecotoxicity:
Avian toxicity:
LD_{50} for Bobwhite quail = 2251 mg/kg b.w.
Aquatic organism toxicity:
LC_{50} for rainbow trout >320 ppm LC_{50} for bluegill sunfish > 370 ppm
EC_{50} for daphnia 151.6 ppm
Other targeted organism toxicity:
Bees: Dermal LD_{50} for honey bees > 100 μg/bee
Macrophytes: Duckweed (lamna gibba): EC_{50} 37.4 ppb (14 days)
Unicellular althea, Green algae (Selenastrum capricormutum) EC_{50} = 7 ppb (12 hours)
Unicellular althea, Blue-green algae (Anabaena flos-aquae) EC_{50} =0.21 ppm (12 hours)
Persistence/Degradability: Hexazinone is of moderate to high persistence in the soil environment. Measured field half-lives range from less than 30 to 180 days, with a representative value of about 90 days. Hexazinone is broken down by soil microbes, which release carbon dioxide in the process. Sunlight may also break down the compound via photodegradation. The rate of breakdown under natural field conditions will depend on many site-specific variables,

including sunlight, rainfall, soil type, and rate of application.

Bioaccumulative potential: No Data Available

Mobility in soil: Hexazinone is very poorly adsorbed to soil particles, very soluble in water and slowly degraded, so it is likely to be mobile in most soils and has the potential to contaminant groundwater.

Other adverse effects: Practically non-toxic to birds and bees. Slight toxic to fish and invertebrates.

Environmental Precautions: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

[13. Disposal considerations]

Dispose of product containers, water containers, and residues according to local regulations.

Pesticide Disposal:

Pesticide wastes may be hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Container Disposal:

Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. If not emptied in this manner, the bag may be considered an acute hazardous waste and must be disposed of in accordance with local, state and federal regulations. When completely empty, offer for recycling if available. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner.

[14. Transport information]

DOT (US)

Not regulated as a dangerous material by DOT.

IMDG

UN number: 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Hexazinone)
Hazard class: 9
Packing group: III
Marine pollutant: Yes
EMS-No: F-A, S-F

IATA

UN number: 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Hexazinone)
Hazard class: 9
Packing group: III

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packaging and combination packaging containing inner packaging with Dangerous Goods > 5L for liquids or > 5kg for solids.

[15. Regulatory information]

FIFRA

This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

EPA Reg. No.: 84229-32

EPA Signal word: DANGER

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER. Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDOUS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

The active ingredient hexazinone, in this product is known to leach through soil into ground water under certain conditions as a result of agriculturafuse. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

US Federal Regulations

TSCA list: The ingredients of this product are listed on the TSCA inventory or are exempt.

SARA Title III - section 302 - notification and information None

SARA Title III - section 313 - toxic chemical release reporting

Hexazinone (75.0%) CAS 51235-04-2

This material contains Kaolin (CAS# 1332-58-7) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

SARA Title III - section 311/312 - hazard identification

Acute (immediate) health hazardous

This product contains none of the components listed as Extremely Hazardous substances.

US States Regulatory Reporting

CA Prop65

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

State information:

Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities.

CAS# 51235-04-2 can be found on the following states right to know lists: PA, NJ

CAS#7783-20-2 can be found on the following states right to know lists: NJ, PA, MA.

CAS# 1332-58-7 can be found on the following states right to know lists: PA, MN, MA.

Canadian Regulations

All ingredients are on the inventory or exempt from Canadian's DSL list.

Environmental

CERCLA

None

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

[16. Other information]

The information and recommendations contained herein are based upon data believed to be correct. However, no

guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. Tide International, USA, INC. assumes no responsibility for results obtained or for incidental or consequential damages arising from the use of these data.