Safety Data Sheet

1 IDENTIFICATION

Product Name:	Velpar®DF CU Herbicide
EPA Reg. No.:	61842-48
Chemical Family:	Triazine
Manufacturer/Supplier:	Tessenderlo Kerley Inc. 2255 N. 44th Street, Suite 300 Phoenix, Arizona 85008-3279 Information:(602) 889-8300
For 24-Hour Emergency Assistance (Spill, Leak, Fire, or Exposure), Call CHEMTREC®:	(800) 424-9300 (CHEMTREC) (866) 374-1975 (Tessenderlo Kerley)

2 HAZARD(S) IDENTIFICATION

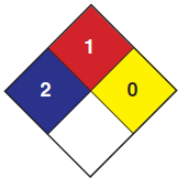
Classification of the substance or mixture

Pictogram	Hazard Statements	Precautionary Statements
	May cause damage to organs through prolonged or repeated exposure (Respiratory system, Kidney).	Do not breathe dust/spray. Wash hands and face thoroughly after handling. Do not eat, drink or smoke when using this product.
	Corrosive. Causes irreversible eye damage	Wear goggles or face shield. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or a doctor.
	Harmful if Swallowed	Wash hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. If swallowed: Call a poison center or your doctor if you feel unwell. Rinse mouth. Dispose of contents/container to in accordance with local or regional regulations.

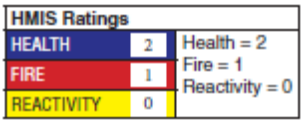
Signal word

Danger

NFPA Hazard Ratings



HMIS Ratings



3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization: **Mixture**
Description: Mixture of the substance(s) listed below with nonhazardous additions.

	Component	CAS No.	% by Weight
Active Ingredient:	Hexazinone	51235-04-2	75
Other Ingredients:	Modified aromatic sulfonate salt		1-5
	Sodium alkylnaphthalene sulfonate		1.76
	Sodium benzoate	532-32-1	10-15

4 FIRST AID MEASURES

Description of first aid measures
General information:
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies involving this product, call toll free 1-866-374-1975. See Label for Additional Precautions and Directions for Use.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
Notes to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

5 FIRE FIGHTING MEASURES

Extinguishing media
Suitable extinguishing agents:
Water spray, Dry chemical, Foam, Carbon dioxide (CO_2)
Special hazards arising from the substance or mixture
Vapors may form explosive mixtures with air.
Advice for firefighters
Protective equipment:
Full protective clothing and self-contained breathing apparatus should be worn. Use personal protective equipment. Evacuate personnel and keep upwind of fire. If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Do not allow run-off from firefighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6 ACCIDENTAL RELEASE MEASURES

Review sections 5 and 7 of this Safety Data Sheet before proceeding with cleanup. Use appropriate PPE during cleanup.
Personal precautions, protective equipment and emergency procedures
Evacuate personnel, thoroughly ventilate area, and use self-contained breathing apparatus. Use personal protective equipment.
Environmental precautions:
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.

7 HANDLING and STORAGE

Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Avoid prolonged or repeated exposure.
Personnel must refer to the Product Label and Directions For Use attached to the product for agricultural use requirements in accordance with the EPA Worker Protection Standard.

Information about protection against explosions and fires:
Keep protective respiratory device available.

Conditions for safe storage, including any incompatibilities
Store in a cool, dry place.
Store in a well ventilated place.
Keep away from any sources of heat or flame.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Components with occupational exposure limits: N/A
Additional information:
Personnel who handle this product in its end-use application should use this product only in accordance with its pesticide labeling and with the "Worker Protection Standard", 40 CFR 170.

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Breathing equipment:
Use NIOSH approved, dual cartridge respirators for dusts or mists if local ventilation is inadequate (N, R or P class filter media with NIOSH approved prefix TC-84A).
Protection of hands:

Protective gloves
The glove material has to be impermeable and resistant to the product.
Material of gloves
Butyl rubber, BR
Natural rubber, NR
Nitrile rubber, NBR
Neoprene gloves
Penetration time of glove material
The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.
Eye protection:
Tightly sealed goggles
Face protection
Body protection:
Wear long-sleeved shirt and long pants, waterproof shoes and socks. Wash contaminated clothing before reuse.

9 PHYSICAL and CHEMICAL PROPERTIES

Appearance	Light Tan Granular
Odor	Mild, pungent
Odor Threshold	N/A
pH	8.4 @ 10 g/L 20° C (68° F)
Melting/Freezing Point	Not determined
Boiling Point	Not determined
Flash Point	Not determined
Evaporation Rate	Not determined
Flammability (Solid/Gas)	Not determined
Upper/Lower Flammability or Explosive Limits	Not determined
Vapor Pressure	Not determined
Vapor Density	Not determined
Relative Density	Not determined
Bulk Density	0.58 g/cm^3
Solubility (in Water)	Dispersible
Partition Coefficient: n-octanol/water	Not determined
Auto-ignition temperature	Not determined
Decomposition temperature	Not determined
Viscosity	Not determined

10 STABILITY and REACTIVITY

Reactivity	Not determined
Chemical stability	This is a stable material under normal temperature and storage conditions.
Possibility of hazardous reactions	Will not occur
Conditions to avoid	None known
Incompatible materials	Strong acids and bases (slowly hydrolyzes)

11 TOXICOLOGICAL INFORMATION

Acute toxicity:

LD/LC$_{50}$ values relevant for classification:

Oral	Rat LD$_{50}$	1,310 mg/Kg
Dermal	Rabbit LD$_{50}$:	>5,000 mg/Kg
Inhalation	Rat LC$_{50}$:	>5.2 mg/L

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Primary irritant effect:

on the skin

No irritation (Rabbit)

on the eye

Corrosive (Rabbit)

Sensitization:

Did not cause sensitization on laboratory animals (guinea pig)

11 TOXICOLOGICAL INFORMATION *(cont.)*

Chronic toxicity:

Hexazinone Repeated Dose Toxicity
The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Oral Dog: Reduced body weight gain, liver effects, organ weight changes, altered blood chemistry

Oral Rat: Reduced body weight gain, organ weight changes, liver effects

Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Animal testing did not show any mutagenic effects.

Reproductive toxicity: Animal testing showed no reproductive toxicity.

Teratogenicity: Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Sodium alkylnaphthalene sulfonate Repeated Dose Toxicity
Inhalation Rat: Respiratory tract damage, pathologic changes
Oral Rat: Kidney effects, reduced body weight gain

Reproductive toxicity: Animal testing showed effects on reproduction at levels equal to or above those causing parental toxicity.

Teratogenicity: Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Sodium benzoate Repeated Dose Toxicity
Oral Rat: No toxicologically significant effects were found.

Mutagenicity: Animal testing did not show any mutagenic effects. Tests on mammalian cell cultures showed mutagenic effects. Evidence suggests this substance does not cause genetic damage in cultured bacterial cells. Evidence suggests this substance does not cause genetic damage in animals.

Reproductive toxicity: No toxicity to reproduction.

Teratogenicity: Evidence suggests the substance is not a developmental toxin in animals.

Carcinogenic categories

IARC (International Agency for Research on Cancer)	None of the ingredients is listed.
NTP (National Toxicology Program)	None of the ingredients is listed.
OSHA-Ca (Occupational Safety & Health Administration)	None of the ingredients is listed.

12 ECOLOGICAL INFORMATION

AQUATIC TOXICITY

Hexazinone

96h LC_{50}	*Oncorhynchus mykiss* (rainbow trout)	> 320 mg/L
120h ErC_{50}	*Skeletonema costatum* (Diatom)	0.022 mg/l
120h NOEC	*Skeletonema costatum* (Diatom)	0.0041 mg/l
48h EC_{50}	*Daphnia magna* (Water flea)	152 mg/l

Modified Aromatic Sulfonate Salt

48h LC_{5O}	*Oryzias latipes* (Orange-red killifish)	360 mg/l
72h EC_{50}	*Algae*	102.5 mg/l
48h EC_{50}	*Daphnia* (water flea)	334.2 mg/l

12 ECOLOGICAL INFORMATION *(cont.)*

Sodium benzoate

96h LC_{50}	*Pimephales promelas* (fathead minnow) 484 mg/l US EPA Test Guideline OPP 72-1 Information given is based on data obtained from similar substances.	
48h EC_{50}	*Daphnia magna* (Water flea)	> 100 mg/l
6d	NOEC Danio rerio (zebra fish}	10 mg/l

Environmental Fate

Modified Aromatic Sulfonate Salt	
Biodegradability	Not readily biodegradable.
Bioaccumulation	Bioaccumulation is unlikely.

13 DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

14 TRANSPORT INFORMATION

UN Number:
IMDG, IATA: 3077

UN Proper shipping name:
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,SOLID, N.O.S. (Hexazinone)
IATA: Environmentally hazardous substance, solid, n.o.s. (Hexazinone)

Transport hazard class(es)/Label(s):
IMDG: Class 9, Marine Pollutant

IATA

Packing group:
IMDG, IATA: III

Marine pollutant: Yes

EMS Number: F-A, S-F

DOT Transport/Additional information:
In accordance with 49 CFR 171.4(c), non-bulk packaging (max capacity of 119 gal (450 L) or less for liquids or 882 lbs. (400 kg) or less for solids) transported by motor vehicle, rail car or aircraft are excepted from all Marine Pollutants regulations in 49 CFR and therefore treated as non-hazardous material. All bulk shipments or any shipment transported partially or entirely by vessel are treated as regulated Marine Pollutants and are shipped according to the requirements listed above.

15 REGULATORY INFORMATION

FIFRA: **Yes** **Product Name: Velpar DF CU Herbicide** **EPA Reg. No. 61842-48**

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. 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. Following is the hazard information as required on the pesticide label:

Corrosive, causes irreversible eye damage.
Harmful if swallowed.
Do not get in eyes or on clothing.
Wash thoroughly with soap and water after handling.

Safety, health and environmental regulations/legislation specific for the substance or mixture
Section 355 (extremely hazardous substances): None of the ingredients is listed.
Section 313 (Toxic Release Reporting-Form R):

Chemical name	CAS No.	Concentration
Hexazinone	51235-04-2	75%

TSCA (Toxic Substances Control Act): Exempt from TSCA
Proposition 65
Not Listed

CERCLA/SUPERFUND:
RQ (Reportable Quantity) Not Listed

RCRA Classification
Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

GHS label elements
The product is classified and labeled according to the Globally Harmonized System (GHS).
The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

16 OTHER INFORMATION

Issue Date: July 25, 2016

REVISIONS: New Product. SDS was formatted in compliance with HCS 29 CFR 1910.1200 Rev. 2012 and GHS Rev 05, and ANSI Z400.1.

The information and recommendations contained herein are provided in good faith and 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 herein.