Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Issue date: 3/8/2024 Version: 1.0

SECTION 1: Identification		
1.1. Identification		
Product form : Mix Product name : Ca	kture valry Top DowN	
1.2. Recommended use and restrictions on use		
No additional information available		
1.3. Supplier		
Sabre Initiatives LLC 2508 Trott Ave SW Wilmar, MN 56201 Phone: 1-320-235-8518 Website: www.sabrellc.com		
1.4. Emergency telephone number		
5,	300-424-9300 emTrec	
SECTION 2: Hazard(s) identification		
2.1. Classification of the substance or mixture		
GHS-US classification		
Flammable liquids, Category 4 Acute toxicity (oral), Category 4 Skin corrosion/irritation, Category 2 Serious eye damage/eye irritation, Category 1 Reproductive toxicity, Category 2 Specific target organ toxicity – Repeated exposure, Catego	H227 H302 H315 H318 H361 ry 2 H373	Combustible liquid Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
Full text of H-statements: see section 16		
2.2. GHS Label elements, including precautionar	y statements	
GHS US labelling		

Hazard pictograms (GHS US)

Signal word (GHS US) Hazard statements (GHS US)

Precautionary statements (GHS US)



H227 - Combustible liquid

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H361 Suspected of damaging fertility or the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.
- : P201 Obtain special instructions before use.
 - P202 Do not handle until all safety precautions have been read and understood.
 - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

smoking.

P260 - Do not breathe dust/fume/gas/mist/vapours/spray.

P264 - Wash hands, forearms and face thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P280 - Wear Eye protection, Face protection, Skin protection. Clothing protection.

P301+P312 - If swallowed: Call a doctor or poison control center if ingested or eye contact has occurred if you feel unwell.

P302+P352 - If on skin: Wash with plenty of water.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P310 - Immediately call a poison center or doctor.

P314 - Get medical advice/attention if you feel unwell.

P321 - Specific treatment (see additional precautions on this label).

P330 - Rinse mouth.

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P370+P378 - In case of fire: Use media other than water to extinguish.

P403+P235 - Store in a well-ventilated place. Keep cool.

P405 - Store locked up.

P501 - Dispose of contents/container to a licensed hazardous waste facility in accordance with state and local agencies.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
N-(n-butyl) thiophosphoric triamide (NBPT)	CAS-No.: 94317-64-3	15 – 25	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Dam. 1, H318 Repr. 2, H361
2-methylaminoethanol	CAS-No.: 109-83-1	1 – 5	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1, H314 STOT SE 3, H335 STOT RE 2, H373 Aquatic Acute 3, H402
benzaldehyde	CAS-No.: 100-52-7	1 – 3	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Aquatic Acute 3, H402

Full text of hazard classes and H-statements : see section 16

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 4: First-aid measures

4.1. Description of first aid measures	
First-aid measures general	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	 Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Do NOT induce vomiting. Obtain emergency medical attention. Rinse mouth. Call a poison center or a doctor if you feel unwell.
4.2. Most important symptoms and effect	ts (acute and delayed)
Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures	
5.1. Suitable (and unsuitable) extinguishin	g media
Suitable extinguishing media Unsuitable extinguishing media	Sand. Water spray. Dry powder. Foam. Carbon dioxide.Do not use a heavy water stream.
5.2. Specific hazards arising from the chem	nical
Fire hazard Explosion hazard Hazardous decomposition products in case of fire	 Combustible liquid. May form flammable/explosive vapour-air mixture. Toxic fumes may be released.
5.3. Special protective equipment and prec	cautions for fire-fighters
Firefighting instructions Protection during firefighting	 Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment Emergency procedures

: Safety glasses. Gloves. Protective clothing.

: Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

6.1.2. For emergency responders	
Protective equipment	: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Ventilate area.
6.2. Environmental precautions	

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up		
For containment	: Contain released product, collect/pump into suitable containers.	
Methods for cleaning up	: Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Notify authorities if product enters sewers or public waters.	
Other information	: Dispose of materials or solid residues at an authorized site.	
6.4. Reference to other sections		

See Section 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Additional hazards when processed	: Handle empty containers with care because residual vapours are flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Precautions for safe handling	: Ensure good ventilation of the work station. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
7.2. Conditions for safe storage, includi	ng any incompatibilities
Storage conditions	: Keep only in original container in a cool well ventilated area. Keep container closed when not in use. Store locked up. Store in a well-ventilated place. Keep cool.
Incompatible products	Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight. Heat sources.
Storage temperature	: 25 (5 – 42) °C

: 25 (5 – 42) °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Cavalry Top DowN
No additional information available
N-(n-butyl) thiophosphoric triamide (NBPT) (94317-64-3)
No additional information available
benzaldehyde (100-52-7)
No additional information available

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2-methylaminoethanol (109-83-1)		
No additional information available		
8.2. Appropriate engineering controls		
Appropriate engineering controls Environmental exposure controls	Ensure good ventilation of the work station.Avoid release to the environment.	
8.3. Individual protection measures/Pe	rsonal protective equipment	
Personal protective equipment: Avoid all unnecessary exposure.		
Hand protection:		
Wear protective gloves.		
Eye protection:		
Chemical goggles or safety glasses. Safety glasses		
Skin and body protection:		
Wear suitable protective clothing		
Respiratory protection:		
Wear appropriate mask. [In case of inadequat	e ventilation] wear respiratory protection.	
Bersonal protective equipment symbol(s):		

Personal protective equipment symbol(s):



Other information: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Colour Odour Odour threshold pH Melting point Freezing point Boiling point Flash point Relative evaporation rate (butylacetate=1) Flammability (solid, gas) Vapour pressure Relative vapour density at 20°C Relative density	 Liquid Blue Characteristic odour No data available No data available Not applicable ≤ 0 °C No data available 82.5 °C No data available Combustible liquid. No data available
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects		
Acute toxicity (dermal)	Harmful if swallowed. Not classified Not classified	
Cavalry Top DowN		
ATE US (oral)	500 mg/kg bodyweight	
N-(n-butyl) thiophosphoric triamide (NBPT) (94317-64-3)		
LD50 oral rat	2000 mg/kg	
LD50 dermal rat	2000 mg/kg	
benzaldehyde (100-52-7)		
LD50 oral rat	1430 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral, 14 day(s))	
LD50 dermal rabbit	> 2000 mg/kg bodyweight (24 h, Rabbit, Read-across, Dermal, 14 day(s))	
LC50 Inhalation - Rat	1 – 5 mg/l (OECD 436: Acute inhalation toxicity-acute toxic class method, 4 h, Rat, Male / female, Experimental value, Inhalation (mixture of vapour and aerosol), 14 day(s))	

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2-methylaminoethanol (109-83-1)		
LD50 oral rat	1880 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)	
LD50 dermal rabbit	1006 mg/kg (OECD 402: Acute Dermal Toxicity, Rabbit, Male / female, Experimental value, Dermal)	
Skin corrosion/irritation	: Causes skin irritation.	
Serious eye damage/irritation	: Causes serious eye damage.	
Respiratory or skin sensitisation	: Not classified	
Germ cell mutagenicity	: Not classified	
Carcinogenicity	: Not classified	
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.	
STOT-single exposure	: Not classified	
2-methylaminoethanol (109-83-1)		
STOT-single exposure	May cause respiratory irritation.	
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.	
2-methylaminoethanol (109-83-1)		
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.	
Aspiration hazard	: Not classified	
Viscosity, kinematic	: No data available	
Potential adverse human health effects and	: Based on available data, the classification criteria are not met.	
symptoms		
Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.	
Symptoms/effects after skin contact	: Irritation.	
Symptoms/effects after eye contact	: Serious damage to eyes.	

SECTION 12: Ecological information		
12.1. Toxicity		
Ecology - general :	Not classified as dangerous for the environment according to the criteria of Directive 67/548/EEC. The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.	
N-(n-butyl) thiophosphoric triamide (NBPT) (9)4317-64-3)	
LC50 - Fish [1]	≥ 1140 mg/l Bluegill	
EC50 - Crustacea [1]	≥ 290 mg/l	
benzaldehyde (100-52-7)		
LC50 - Fish [1]	12.4 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)	
EC50 - Crustacea [1]	50 mg/l (24 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)	
2-methylaminoethanol (109-83-1)		
LC50 - Fish [1]	> 100 mg/l (96 h, Danio rerio, Static system, Fresh water, Experimental value)	
EC50 - Crustacea [1]	33 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)	

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Cavalry Top DowN		
Persistence and degradability	Biodegradable in the soil.	
N-(n-butyl) thiophosphoric triamide (NBPT) (94317-64-3)		
Persistence and degradability	Not established.	
benzaldehyde (100-52-7)		
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.	
Biochemical oxygen demand (BOD)	1.62 g O ₂ /g substance	
Chemical oxygen demand (COD)	1.98 g O ₂ /g substance	
ThOD	2.42 g O ₂ /g substance	
BOD (% of ThOD)	0.67	
2-methylaminoethanol (109-83-1)		
Persistence and degradability	Readily biodegradable in water.	
Biochemical oxygen demand (BOD)	< 0.005 g O ₂ /g substance	
Chemical oxygen demand (COD)	0.71 g O ₂ /g substance	
12.3. Bioaccumulative potential		

Cavairy Top Down		
Bioaccumulative potential	Not established.	
N-(n-butyl) thiophosphoric triamide (NBPT) (94317-64-3)		
Bioaccumulative potential	Not established.	
benzaldehyde (100-52-7)		
BCF - Other aquatic organisms [1]	4.2 – 7.8 (Literature study, Estimated value)	
Partition coefficient n-octanol/water (Log Pow)	1.4 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).	
2-methylaminoethanol (109-83-1)		
Partition coefficient n-octanol/water (Log Pow)	-0.91 (Experimental value, 25 °C)	
Bioaccumulative potential	Not bioaccumulative.	

12.4. Mobility in soil

Cavalry Top DowN	
Ecology - soil	Not toxic to plants.
benzaldehyde (100-52-7)	
Surface tension	70.5 mN/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)
Partition coefficient n-octanol/water (Log Koc)	1.75 (log Koc)
Ecology - soil	Highly mobile in soil.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2-methylaminoethanol (109-83-1)	
Surface tension	340 mN/m (22 °C)
Partition coefficient n-octanol/water (Log Koc)	1.33 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.
12.5. Other adverse effects	

Other information

: No other effects known.

SECTION 13: Disposal considerations	
13.1. Disposal methods	
Waste treatment methods Product/Packaging disposal recommendations	 Dispose of contents/container in accordance with licensed collector's sorting instructions. Dispose of contents/containers in hazardous or special waste collection point, an approved disposal plant, a licensed hazardous waste disposal contractor or authorized waste collection site in accordance with local, regional and/or international regulation, except for empty clean containers which can be disposed of as non hazardous waste.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information	
14.1. UN number	
DOT NA No UN-No. (TDG) UN-No. (IMDG) UN-No. (IATA)	 NA1993 Not applicable Not applicable Not applicable
14.2. UN proper shipping name	
Proper Shipping Name (DOT) Proper Shipping Name (TDG) Proper Shipping Name (IMDG) Proper Shipping Name (IATA)	 Combustible liquid, n.o.s. Not applicable Not applicable Not applicable
14.3. Transport hazard class(es)	
DOT Transport hazard class(es) (DOT)	: Combustible liquid When shipping in approved packaging in quantities less than 119 gallons, this product conforms to the criteria for inclusion in Packing Group III thereby meeting criteria set in 49 CFR 173.121(b)(1)(i-iv). While this product is combustible it is not subject to the subchapter, as per CFR 49, Part 173.150(f)(1-2) and is not considered a hazardous product when shipping by road.
TDG Transport hazard class(es) (TDG)	: Not applicable
IMDG Transport hazard class(es) (IMDG)	: Not applicable
IATA Transport hazard class(es) (IATA)	: Not applicable

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

14.4. Packing group	
Packing group (DOT) Packing group (TDG) Packing group (IMDG) Packing group (IATA)	 III Not applicable Not applicable Not applicable
14.5. Environmental hazards	
Other information	: No supplementary information available.
14.6. Special precautions for user	
DOT UN-No.(DOT) DOT Special Provisions (49 CFR 172.102)	 NA1993 148 - Except for transportation by aircraft, when transported as a limited quantity or a consumer commodity, the maximum net capacity specified in §173.150(b)(2) of this subchapter for inner packagings may be increased to 5 L (1.3 gallons). IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T1 - 1.5 178.274(d)(2) Normal
DOT Packaging Exceptions (49 CFR 173.xxx) DOT Packaging Non Bulk (49 CFR 173.xxx) DOT Packaging Bulk (49 CFR 173.xxx) DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) DOT Quantity Limitations Cargo aircraft only (49	: 150 : 203 : 241 : 60 L : 220 L
CFR 175.75) DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
TDG No data available	
IMDG No data available	

No data available

IATA

No data available

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

Not applicable

SECTION 15: Regulatory information
15.1. US Federal regulations
N-(n-butyl) thiophosphoric triamide (NBPT) (94317-64-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

benzaldehyde (100-52-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations	
Component	State or local regulations
benzaldehyde(100-52-7)	U.S New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Other information

: Some testing has been conducted to assess the stability and compatibility of this product with certain herbicides and adjuvants. Test results show that the rate of the degradation should not preclude the use of this product with most commonly used agricultural herbicides under normal use. Most agricultural chemicals compatible with UAN solutions are also compatible with this product. However, compatibility tests prior to use are recommended. Glyphosate herbicides may cause an increase in the rate of degradation when tank-mixed with this product. Therefore such mix should be applied soon after mixing to avoid a possible reduction in the effectiveness of the active ingredient. Product should not be combined with Dicyandiamide (DCD) products.

Full text of H-statements		
H227	Combustible liquid	
H302	Harmful if swallowed.	
H312	Harmful in contact with skin.	
H314	Causes severe skin burns and eye damage.	
H315	Causes skin irritation.	
H318	Causes serious eye damage.	
H335	May cause respiratory irritation.	
H361	Suspected of damaging fertility or the unborn child.	
H373	May cause damage to organs through prolonged or repeated exposure.	
H402	Harmful to aquatic life	

NFPA health hazard

: 1 - Materials that, under emergency conditions, can cause significant irritation.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.	
NFPA specific hazard	: None	
Hazard Rating		
Health	: 1 Slight Hazard - Irritation or minor reversible injury possible	
Flammability	: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)	
Physical	: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.	
Personal protection	C - Safety glasses, Gloves, Synthetic apron	
Safety Data Sheet (SDS), USA		

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.