Vickers Laboratories Ltd - Safety Data Sheet 2475

(in accordance with regulation (EU) 2015/830 and regulation (EC) 1272/2008)

Revision: 1.3 Revision date: 16 April 2021
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Section 1. Identification

1.1 Product Identifier 2475

Product Name OPTOMER 2475 (N-VINYL-2-PYRROLIDINONE)

CAS Number 88-12-0
REACH Registration No 01-2119498301-39-XXXX

Molecular Formula $CH_2:CHNCOCH_2CH_2CH_2$ =111.14

1.2 Relevent identified uses of the substance or mixure & uses advised against

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

1.3 Supplier Vickers Laboratories Ltd

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(Have this document to hand)

Section 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to regulation 1272/2008/EC

Acute toxicity, category 4 (oral)	H302: Harmful if swallowed.
Acute toxicity, category 4 (dermal)	H312: Harmful in contact with skin.
Acute toxicity, category 4 (inhalation)	H332: Harmful if inhaled.
Serious eye damage/irritation, category 1	H318: Causes serious eye damage.
Carcinogenicity, category 2	H351: Suspected of causing cancer.
Spec target organ tox - single, category 3	H335: May cause respiratory irritation.
Spec target organ tox - repeat, category 2	H373: May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

Labelling according to regulation 1272/2008/EC

Signal word Danger

Hazard Pictograms

Hazard Statements	Suspected of causing cancer. Harmful if swallowed, inhaled and in contact with skin. May cause damage to organs through prolonged or repeated exposure. May cause respiratory irritation. Causes serious eye damage.
Precautionary Statements	Obtain special instructions before use. Avoid release to the environment. Wear protective gloves / protective clothing / eye protection / face protection. IF exposed or concerned: Get medical advice/attention.

Section 3. Composition

3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
N-Vinyl-pyrrolidinone	88-12-0	201-800-4	01-2119498301-39-XXXX	>99.7%	Acute Tox. 4 (O),Acute Tox. 4 (D),Acute Tox. 4 (I),Eye Dam. 1,Carc. 2,STOT SE 3 (I),STOT RE 2

Section 4. First Aid

4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION.
Skin	Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use.
Inhalation	Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. OBTAIN MEDICAL ATTENTION URGENTLY.
Ingestion	If conscious give plenty of water to drink. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

4.2 Most important symptoms and effects, both acute & delayed.

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed.

No further relevant information available.

Section 5. Fire Fighting

5.1 Extinguishing media

Extinguishing Media	Alcohol resistant foam, dry powder, or carbon dioxide. Use water spray to keep fire exposed containers cool.
Unsuitable Media	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards	Vapour-air mixtures are explosive.

5.3 Advice for firefighters

Advice for firefighters	Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection	Ensure no sources of ignition. Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so.

6.2 Environmental precautions

Enviromental	Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.

6.3 Methods and material for containment and cleaning up

Major Spillage	Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.
Minor Spillage	Wash area down with copious amounts of water.

6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

Section 7. Storage & Handling

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage . Keep containers closed when not in use. Keep well separated from acids and peroxides. Ensure temperature does not reach more than 40C

7.3 Specific end use(s)

See section 1.2.

Section 8. Workplace Exposure & Personal Protection

8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits			
			Long Term (8hr TWA)		Short Term 15min period)	
N-Vinyl-pyrrolidinone	88-12-0	>99.7%	-	-	-	-

Exposure data source(s) DNEL: Derived No Effect Level.

DNEL: Worker: Long term exposure - Systemic effects, inhalation: 0.1mg/m3

8.2 Exposure controls

Respiratory Protection	Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge organic vapour respirator, or use self contained breathing apparatus.
Hand Protection	Use solvent resistant gloves.
Eye Protection	Use tightly fitting chemical splash proof glasses or goggles.
Skin Protection	Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.
Special Hazards	No special precautions required.

Section 9. Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Colourless liquid or frozen mass.
Odour	Characteristic.
pH	9 @ 20°C solution.
Boiling Point	218°C
Melting Point	13°C
Flash Point	95°C (Closed cup)
Upper Flammable Limit	10%
Lower Flammable Limit	1.4%

Auto Ignition	240°C
Explosive Properties	Slight.
Oxidising Properties	No.
Vapour Pressure	0.09mmHg @ 20°C
Relative Density	1.0430
Water Solubility	Completely soluble in water.

9.2 Other information

No data available.

Section 10. Stability & Reactivity

10.1	Reactivity	No data available.
10.2	Chemical Stability	Stable under normal conditions
10.3	Possibility of hazardous reactions	No data available.
10.4	Conditions to Avoid	Temperatures above 40C.
10.5	Incompatable Materials	Acids and free radical-formers eg peroxides.
10.6	Hazardous Decomposition Products	Burning will produce toxic fumes of NOx, carbon monoxide and/or carbon dioxide.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Eyes	Both the vapour and liquid may, cause conjunctival irritation and corneal damage.
Skin	Unlikely to be an irritant on brief or occasional exposure. May be absorbed through the skin. Unlikely to be absorbed across the skin in harmful amounts.
LD50 Skin	1043mg/kg Rat
Ingestion	Moderately toxic by ingestion.
LD50 Oral	1022mg/kg Rat
Inhalation	Exposure to vapour concentrations above the occupational exposure limits will produce irritation of the eyes, nose, throat and respiratory tract. Danger of serious damage to health by prolonged exposure.
LD50 Inhalation	3.07g/m3 Rat (4 hours)
TCLo	Not available
Carcinogenicity	Must be considered to have carcinogenic properties.
Mutagenicity	No mutagenic effects with or without metabolic activation.
Reproductive Effects	None identified.

Section 12. Ecological

12.1	Toxicity	Readily biodegradable,DOC reduction >70% elimination. Toxicity to fish [oncorhynchus mykiss] 913mg/l/96hr: Daphnae [acute] EC/LC50 [48hr], 45mg/l : Algae EC/LC50 [72hr] 780mg/l : Bacteria EC/LC50 [17hr] 4800 mg/l.
	LC50 Algal	Not available
	LC50 Crustacea	45mg/l Daphnia magna (48 hours)
	LC50 Fish	976mg/l Rainbow Trout (72 hours)
12.2	Persistence and degradability	Product is biodegradable.
12.3	Bioaccumulative potential	Not expected to bioaccumulate.
12.4	Mobility in soil	No data available.
12.5	Results of PBT & vPvB assessment	Assessment not required.
12.6	Other adverse effects	None known at present.

Section 13. Disposal Considerations

13.1 Waste treatment methods

Disposal Methods	Dispose of in a licensed incinerator for organic solvents. Do not dispose of as domestic waste.
Contaminated Packaging	Use a licensed waste disposer.

Section 14. Transport Information

14.1	**UN Number**	Non-restricted
14.2	**Proper Shipping Name**	Non-restricted
14.3	**Transport classes**	
	UN classification	None
	Subsidiary hazard(s)	None
	Transport category	None
	ADR Hazard ID	Non-restricted
	Tunnel Restriction Code	Non-restricted
14.4	**Packing Group**	None
14.5	**Environment hazards**	See section 12.
14.6	**Special precautions for user**	No special precautions required.
14.7	**Transport in bulk**	Not transported in bulk.

Section 15. Regulatory Information

15.1 Safety, health and environment regulations specific for subtance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification	Acute toxicity, category 4 (oral); Acute toxicity, category 4 (dermal); Acute toxicity, category 4 (inhalation); Serious eye damage/irritation, category 1; Carcinogenicity, category 2; Spec target organ tox - single, category 3; Spec target organ tox - repeat, category 2
Signal word	Danger
Hazard Pictograms	
Hazard Statements	H351, H302+H312+H332, H373, H335, H318 Suspected of causing cancer. Harmful if swallowed, inhaled and in contact with skin. May cause damage to organs through prolonged or repeated exposure. May cause respiratory irritation. Causes serious eye damage.
Precautionary Statements	P201, P273, P280, P308+P313 Obtain special instructions before use. Avoid release to the environment. Wear protective gloves / protective clothing / eye protection / face protection. IF exposed or concerned: Get medical advice/attention.

15.2 Chemical safety assessment

Assessment not required.

Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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