

METHYL SALICYLATE

GHS Safety Data Sheet

Version No:6
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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

METHYL SALICYLATE

OTHER NAMES

C8-H8-O3, "betula oil", "Gaultheria oil, artificial", "oil of wintergreen", "methyl o-hydroxybenzoate", "natural wintergreen oil", "sweet birch oil", "synthetic wintergreen oil", "teaberry oil", "wintergreen oil, synthetic", "salicyclic acid, methyl ester", "wintergreen oil", "o-hydroxybenzoic acid, methyl ester", "2-hydroxybenzoic acid, methyl ester"

PROPER SHIPPING NAME

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(contains methyl salicylate)

PRODUCT USE

Flavour in foods, beverages, pharmaceuticals, odourant, perfumery. UV absorber in sunburn lotions.

SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V.Ind.Estate,

248, Worli Road

Mumbai- 400030,

India

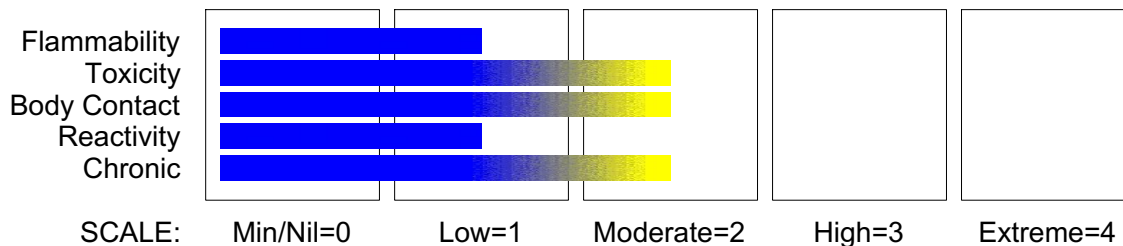
Telephone: 91- 22 24959898/99

Fax: 91- 22 2493 7232

Email: technical@sdfine.com

Section 2 - HAZARDS IDENTIFICATION

HAZARD RATINGS



GHS Classification

Acute Aquatic Hazard Category 2

Acute Toxicity Category 4

Chronic Aquatic Hazard Category 2

Eye Irritation Category 2A

Skin Corrosion/Irritation Category 2

Skin Sensitizer Category 1

STOT - SE Category 3

STOT - SE Category 3

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Section 2 - HAZARDS IDENTIFICATION



EMERGENCY OVERVIEW

HAZARD

WARNING

Determined by using GHS criteria

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash ... thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well- ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove to fresh air and keep at rest in a position 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.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse mouth.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.

Storage

P403+P233	Store in a well- ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal

P501	Dispose of contents/container to ...
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Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
methyl salicylate	119-36-8	>98
slow hydrolysis yields methanol	67-56-1	

Section 4 - FIRST AID MEASURES

SWALLOWED

- IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.
- For advice, contact a Poisons Information Centre or a doctor.

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Section 4 - FIRST AID MEASURES

- Urgent hospital treatment is likely to be needed.
- In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.

EYE

- If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN

- for salicylate intoxication:
- Pending gastric lavage, use emetics such as syrup of Ipecac or delay gastric emptying and absorption by swallowing a slurry of activated charcoal. Do not give ipecac after charcoal.
- Gastric lavage with water or perhaps sodium bicarbonate solution (3%-5%). Mild alkali delays salicylate absorption from the stomach and perhaps slightly from the duodenum.
- Saline catharsis with sodium or magnesium sulfate (15-30 gm in water).
- Take an immediate blood sample for an appraisal of the patient's acid-base status. A pH determination on an anaerobic sample of arterial blood is best. An analysis of the plasma salicylate concentration should be made at the same time. Laboratory controls are almost essential for the proper management of severe salicylism.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 100 metres in all directions.

FIRE/EXPLOSION HAZARD

- Combustible.
 - Slight fire hazard when exposed to heat or flame.
 - Heating may cause expansion or decomposition leading to violent rupture of containers.
 - On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include: carbon dioxide (CO₂), other pyrolysis products typical of burning organic material.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

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Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Environmental hazard - contain spillage.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.

MAJOR SPILLS

- Environmental hazard - contain spillage.
- Moderate hazard.
- Clear area of personnel and move upwind.
 - Alert Fire Brigade and tell them location and nature of hazard.
 - Wear breathing apparatus plus protective gloves.
 - Prevent, by any means available, spillage from entering drains or water course.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- DO NOT allow clothing wet with material to stay in contact with skin.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

SUITABLE CONTAINER

- Glass container is suitable for laboratory quantities.
- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- methyl salicylate:
- methanol:

CAS:119- 36- 8

CAS:67- 56- 1

MATERIAL DATA

METHANOL:

METHYL SALICYLATE:

- For methanol:

Odour Threshold Value: 4.2-5960 ppm (detection), 53.0-8940 ppm (recognition)

NOTE: Detector tubes for methanol, measuring in excess of 50 ppm, are commercially available.

Exposure at or below the recommended TLV-TWA is thought to substantially reduce the significant risk of headache, blurred vision and other ocular and systemic effects.

Odour Safety Factor (OSF)

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

OSF=2 (METHANOL).

PERSONAL PROTECTION



RESPIRATOR

- Type AX-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET

- Wear chemical protective gloves, eg. PVC.
- Wear safety footwear or safety gumboots, eg. Rubber.

NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
 - Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:
- frequency and duration of contact,
 - chemical resistance of glove material,
 - glove thickness and
 - dexterity.

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

ENGINEERING CONTROLS

■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Colourless, yellowish or reddish oily liquid with an odour and taste of wintergreen; partly miscible with water (0.7 g/l, 30 C). Soluble in chloroform, ether, alcohol, glacial acetic acid.

PHYSICAL PROPERTIES

Liquid.
Does not mix with water.
Sinks in water.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

State	Liquid	Molecular Weight	152.14
Melting Range (°C)	- 8.6	Viscosity	Not Available
Boiling Range (°C)	220- 224	Solubility in water (g/L)	Partly miscible
Flash Point (°C)	99	pH (1% solution)	Not available.
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not applicable
Autoignition Temp (°C)	454	Vapour Pressure (kPa)	0.13 @ 54C
Upper Explosive Limit (%)	Not available.	Specific Gravity (water=1)	1.184 @ 25C
Lower Explosive Limit (%)	Not available.	Relative Vapour Density (air=1)	5.24
Volatile Component (%vol)	Not available.	Evaporation Rate	Not available
Material		Value	
log Kow		- 0.82- - 0.66	

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
 - Product is considered stable.
 - Hazardous polymerisation will not occur.
- For incompatible materials - refer to Section 7 - Handling and Storage.*

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

- Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
- Large oral doses of salicylates may cause mild burning pain in the throat, stomach and usually prompt vomiting. Several hours may elapse before the development of deep and rapid breathing, lassitude, anorexia, nausea, vomiting, thirst and occasional diarrhoea.
- A dose of 6 ml of methyl salicylate has proved fatal in an adult.

EYE

- Evidence exists, or practical experience predicts, that the material may cause severe eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.
- Eye contact may cause significant inflammation with pain.

SKIN

- The material produces severe skin irritation; evidence exists, or practical experience predicts, that the material either: □□• produces severe inflammation of the skin in a substantial number of individuals following direct contact, and/or □□• produces significant and severe inflammation when applied to the healthy intact skin of animals (for up to four hours), such inflammation being present twenty-four hours or more after the end of the exposure period.
 - Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic).
 - Open cuts, abraded or irritated skin should not be exposed to this material.
 - Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects.
- Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
- Methyl salicylate sometimes produces systemic poisoning by penetrating intact skin.
- There are numerous reports of fatal as well as non-fatal salicylate poisonings following topical use for the treatment of various skin disorders.

INHALED

- Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial number of individuals, following inhalation.
- In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and

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Section 11 - TOXICOLOGICAL INFORMATION

then repairing the damage.

■ Inhalation of vapours may cause drowsiness and dizziness.

This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.

■ Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.

CHRONIC HEALTH EFFECTS

■ Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

There exists limited evidence that shows that skin contact with the material is capable either of inducing a sensitisation reaction in a significant number of individuals, and/or of producing positive response in experimental animals.

Mild chronic salicylate intoxication, or "salicylism", may occur after repeated exposures to large doses. Symptoms include dizziness, tinnitus, deafness, sweating, nausea and vomiting, headache and mental confusion.

Long-term exposure to methanol vapour, at concentrations exceeding 3000 ppm, may produce cumulative effects characterised by gastrointestinal disturbances (nausea, vomiting), headache, ringing in the ears, insomnia, trembling, unsteady gait, vertigo, conjunctivitis and clouded or double vision. Liver and/or kidney injury may also result.

TOXICITY AND IRRITATION

■ Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound.

For certain benzyl derivatives:

All members of this group (benzyl, benzoate and 2-hydroxybenzoate (salicylate) esters) contain a benzene ring bonded directly to an oxygenated functional group (aldehyde or ester) that is hydrolysed and/or oxidised to a benzoic acid derivative. As a stable animal metabolite, benzoic acid derivatives are efficiently excreted primarily in the urine.

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis.

Section 12 - ECOLOGICAL INFORMATION

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This material and its container must be disposed of as hazardous waste.

Avoid release to the environment.

Refer to special instructions/ safety data sheets.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
methanol	LOW	No Data Available	LOW	HIGH

GESAMP/EHS COMPOSITE LIST - GESAMP Hazard Profiles

Name / Cas No / RTECS No	EHS	TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Methyl salicylate / CAS:119- 36-8 /	86	453	2	—	2	R	2	NI	1	1	(2)	2	1	R	—	SD	3

Legend:

EHS=EHS Number (EHS=GESAMP Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships) NRT=Net Register Tonnage, A1a=Bioaccumulation log Pow, A1b=Bioaccumulation BCF, A1=Bioaccumulation, A2=Biodegradation, B1=Acute aquatic toxicity LC/EC10 (mg/l), B2=Chronic aquatic toxicity NOEC (mg/l), C1=Acute mammalian oral toxicity LD50 (mg/kg),

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Section 12 - ECOLOGICAL INFORMATION

C2=Acute mammalian dermal toxicity LD50 (mg/kg), C3=Acute mammalian inhalation toxicity LC50 (mg/kg), D1=Skin irritation & corrosion, D2=Eye irritation & corrosion, D3=Long-term health effects, E1=Tainting, E2=Physical effects on wildlife & benthic habitats, E3=Interference with coastal amenities,

For column A2: R=Readily biodegradable, NR=Not readily biodegradable.

For column D3: C=Carcinogen, M=Mutagenic, R=Reprotoxic, S=Sensitising, A=Aspiration hazard, T=Target organ systemic toxicity, L=Lung injury, N=Neurotoxic, I=Immunotoxic.

For column E1: NT=Not tainting (tested), T=Tainting test positive.

For column E2: Fp=Persistent floater, F=Floater, S=Sinking substances.

The numerical scales start from 0 (no hazard), while higher numbers reflect increasing hazard.

(GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships)

Section 13 - DISPOSAL CONSIDERATIONS

- Containers may still present a chemical hazard/ danger when empty.
- Return to supplier for reuse/ recycling if possible.

Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.

- Where possible retain label warnings and MSDS and observe all notices pertaining to the product.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction.
- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: MISCELLANEOUS

HAZCHEM:

•3Z

Land Transport UNDG:

Class or division:	9	Subsidiary risk:	None
UN No.:	3082	UN packing group:	III
Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains methyl salicylate)			

Air Transport IATA:

ICAO/IATA Class:	9	ICAO/IATA Subrisk:	None
UN/ID Number:	3082	Packing Group:	III
Special provisions:	A97		

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains methyl salicylate)

Maritime Transport IMDG:

IMDG Class:	9	IMDG Subrisk:	None
UN Number:	3082	Packing Group:	III
EMS Number:	F- A, S- F	Special provisions:	274 335

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Section 14 - TRANSPORTATION INFORMATION

Limited Quantities: 5 L Marine Pollutant: Yes
Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains methyl salicylate)

GESAMP hazard profiles for this material can be found in section 12 of the MSDS.

Section 15 - REGULATORY INFORMATION

REGULATIONS

methyl salicylate (CAS: 119-36-8) is found on the following regulatory lists;

"GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR National List of Candidates for Substitution – Norway"

Regulations for ingredients

methanol (CAS: 67-56-1) is found on the following regulatory lists;

"GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR National List of Candidates for Substitution – Norway"

Section 16 - OTHER INFORMATION

Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
methyl salicylate	119- 36- 8	Carc3; R40 Xn; R22
methanol	67- 56- 1	Carc3; R40 Xn; R22

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by using available literature references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

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