



Safety Data Sheet

Date of Issue: 05.05.2021

Date of Expiry: 05.05.2026

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : **ECP Limited**
Address : PO Box 34125, Birkenhead, Auckland 0746
Telephone : +64 9 480 4386
Facsimile : +64 9 480 4385
Emergency phone number : 0800 243 622 (24 hours)

Manufacturing Company : Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200 Radnor, PA 19087

Product	Hexane			Code	5189
CAS#	HSNO#	UN #	DG Class/es	Packing group #	
110- 54 - 3	HSR001166	1208	3	II	

Recommended use : Laboratory Investigations or Manufacturing Use.

2: Hazard's identification

Environmental Protection Authority – New Zealand

Substance overview	Health Hazard
Classification 3.1B	Flammable Liquids: high hazard
Classification 6.1E (All)	Acutely toxic
Classification 6.3B	Mildly irritating to the skin
Classification 6.4A	Irritating to the eye
Classification 6.9A (All)	Toxic to human target organs or systems
Classification 9.1B (All)	Very ecotoxic in the aquatic environment

GHS Label elements, including precautionary statements

Pictogram



Signal word : **Danger**

Hazard statement(s)

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H320 Causes eye irritation.
H361 Suspected of damaging fertility or the unborn child.

H371 May cause damage to organs.
H401 Toxic to aquatic life

Precautionary statement(s)

Prevention

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
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.
P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.
P321 Specific treatment (see supplemental first aid instructions on this label).
P331 Do NOT induce vomiting. P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention. P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam for extinction.

Storage

P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards - None

3: Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)
Hexane	110-54-3	90 – 100 %
3-Methylpentane	96-14-0	0.1-1 %
2,4 Dimethylpentane	108-08-7	0.1 – 1 %

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4: First aid measures

Description of first-aid measures

General advice

- Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

If inhaled :

Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

In case of skin contact :

- Wash off with soap and plenty of water. Consult a physician.

In case of eye contact :

- Flush eyes with water as a precaution.

If swallowed :

- Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

Symptoms : Narcotic effect. Respiratory tract irritation.

Hazards : None known.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Symptoms may be delayed.

5: Firefighting measures

General Fire Hazards : Highly flammable liquid and vapor.

Extinguishing media

Suitable extinguishing media

- Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media

- Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the substance or mixture

Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent build-up of vapors or gases to explosive concentrations. Heat may cause the containers to explode.

Special protective equipment and precautions for firefighters

Special fire-fighting procedures :

Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

Special protective equipment for fire-fighters :

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Further information

Use water spray to cool unopened containers.

6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g., sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Reference to other sections

For disposal see section 13.

7: Handling and storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Flash back possible over considerable distance. Container explosion may occur under fire conditions. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge. For precautions see section 2.2

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8: Exposure controls/personal protection

Control parameters

Ingredients with workplace control parameters

Component	CAS No.	Value	Control parameters	Basis
n-Hexane	110-54-3	WES-TWA	20 ppm 72 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
	Remarks	Exposure can also be estimated by biological monitoring		

Biological occupational exposure limits

Component	CAS No.	Parameters	Value	Biological specimen	Basis
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n-Hexane	110-54-3	WES-TWA	5 mg/l	Urine	New Zealand. Biological Exposure Indices
Remarks		End of shift			

Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so.

Do not let product enter drains. Discharge into the environment must be avoided.

9: Physical and chemical properties

Appearance

Form: liquid

Physical state: liquid

Color: Colorless

Odor: Slight odor.

Odor threshold: No data available.

pH: No data available

Melting point/freezing point: -95 °C

Initial boiling point and boiling range: 68 °C

Flash Point: -23 °C

Evaporation rate: 9 (butyl acetate=1)

Flammability (solid, gas): No data available.

Upper/lower limit on flammability or

Flammability limit - upper (%):7.7 %(V) (Hexane)

Flammability limit - lower (%):	1.2 %(V) (Hexane)
Explosive limit - upper (%):	No data available
Explosive limit - lower (%):	No data available.
Vapor density:	3 (Air=1)
Density	0.66 g/ml (20 °C)
Relative density:	0.66 (20 °C)
Solubility(ies)	
Solubility in water:	Insoluble
Solubility (other):	No data available
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	224 °C (Hexane)
Decomposition temperature:	No data available.
Viscosity:	No data available
Other information	
Molecular weight:	86.18 g/mol

10: Stability and reactivity

Reactivity

- No dangerous reaction known under conditions of normal use.

Chemical stability

- Material is stable under normal conditions.

Possibility of hazardous reactions

- Hazardous polymerization does not occur.

Conditions to avoid

- Heat, sparks, flames. Contact with incompatible materials.

Incompatible materials

- Strong oxidizing agents.

Hazardous decomposition products

- Thermal decomposition may release oxides of carbon.

11: Toxicological information

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 16,000 mg/kg
(OECD Test Guideline 401)

LC50 Inhalation - Rat - 4 h - 172 mg/l

Remarks: (RTECS)

LD50 Dermal - Rabbit - male - > 2,000 mg/kg
(OECD Test Guideline 402)

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: Skin irritation - 24 h

(OECD Test Guideline 404) Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 72 h
(OECD Test Guideline 405)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative (
OECD Test Guideline 429)

Germ cell mutagenicity

Ames test

Salmonella typhimurium

Result: negative

Mouse - male

Result: negative

(ECHA)

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.

Reproductive toxicity

Suspected of damaging fertility.

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness. - Central nervous system Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity – repeated exposure

Inhalation - May cause damage to organs through prolonged or repeated exposure. - Nervous system Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

May be fatal if swallowed and enters airways. Aspiration hazard, Aspiration may cause pulmonary oedema and pneumonitis.

Additional Information

Repeated dose toxicity - Rat - male - Oral - No observed adverse effect level - 6.6 mg/kg (ECHA) , RTECS: MN9275000

Drowsiness, irritant effects, somnolence narcosis, Nausea, Tiredness, CNS disorders, paralysis symptoms Risk of corneal clouding. It generally applies for aliphatic hydrocarbons with 6 - 18 carbon atoms that they may cause pneumonia, in some cases also pulmonary oedema, upon direct inhalation, i.e., in conditions that can occur only in very special circumstances (nebulizations, spraying, inhalation of aerosols and similar). After absorption of very large quantities: narcosis. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12: Ecological information**Toxicity**

Toxicity to fish

LC50 - Pimephales pomelos (fathead minnow) - 2.5 mg/l - 96 h Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates
 EC50 - Daphnia magna (Water flea) - 2.1 mg/l - 48 h Remarks: (Lit.)

Persistence and degradability

Biodegradability

aerobic - Exposure time 28 d Result: 98 % - Readily biodegradable. (OECD Test Guideline 301F)

Bioaccumulative potential

- Bioaccumulation is unlikely to be significant because of the low water solubility of this product.

Mobility in soil

- The product is insoluble in water and will spread on the water surface.

Results of PBT and vPvB assessment

- PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

- Toxic to aquatic life with long lasting effects.

13: Disposal considerations

Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

Contaminated packaging

Dispose of as unused product.

14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	1208	1208	1208
14.2	UN Proper Shipping name	HEXANES	HEXANES	Hexanes
14.3	Transport Hazard Class	3	3	3
14.4	Packaging group	II	II	II
14.5	Environmental Hazards	yes	yes	No
14.6	Special precautions for user	None		
14.7	Incompatible	Strong oxidizing agents, Rubber, various plastics		

materials	
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15: Regulatory information

Safety, health, and environmental regulations/legislation specific for the substance or mixture

National regulatory information

HSNO Approval Code: HSR001166

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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