

# SAFETY DATA SHEET

According to Regulation (EC) No 453/2010

SDS-IHEX-0001

Version 1.3

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[www.eamaterials.com](http://www.eamaterials.com)

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## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

Product name : **Hexanes (mixtures of isomers)**  
 Included product code : IHEX012-2.5, IHEX012-4.0, IHEX012-25M, IHEX012- 200M, IHEX011-2.5, IHEX011-4.0, IHEX011-25M, IHEX011- 200M, IHEX008-2.5, IHEX008-4.0, IHEX008-25M, IHEX008-200M, IHEX004-2.5R, IHEX004-4.0R, IHEX004-5.0M

### 1.2 Relevant identified uses of the substance or mixture

Identified uses : Laboratory chemicals, Manufacture of substances  
 Uses advised against : Not applicable

### 1.3 Details of the supplier of the safety data sheet

Company : Elite Advanced Materials Sdn Bhd  
 No 1, Jalan KPK 1/2, Kawasan Perindustrian Kundang, 48020 Rawang, Selangor, Malaysia

E-mail address : enquiry@eamaterials.com

### 1.4 Emergency telephone number

Emergency phone : +60 3-6034 3766 (Local business hours only)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flammable liquids	Category 2
Skin corrosion/irritation	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity - single exposure, Central nervous system	Category 3
Specific target organ toxicity - repeated exposure	Category 2
Aspiration hazard	Category 1
Hazardous to the aquatic environment - chronic hazard	Category 2
Serious eye damage/eye irritation	Category 2

## 2.2 Label elements

Labeling in compliance to Regulation (EC) No. 1272/2008 [CLP/GHS]

### Hazard pictograms



GHS02



GHS07



GHS08



GHS09

### Signal word

Danger

### Hazard statements

H225	Highly flammable liquid and vapour
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs (Nervous System) through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

### Precautionary statements

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240	Ground/bond container and receiving equipment.
P273	Avoid release to the environment.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P281	Use personal protective equipment as required.

### Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P331	Do NOT induce vomiting.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

## 2.3 Other hazards

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Hazardous Constituent(s) Contained in Complex Substance(s) required for disclosure

This material is defined as a complex substance

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of First Aid measures

#### If inhaled

Move person into fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Consult a physician.

#### In case of skin contact

Rinse well with plenty of water and soap for at least 15 minutes. If skin irritation persists, consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution for at least 15 minutes. If eye irritation persists, consult a physician.

#### If swallowed

Do NOT induce vomiting. If vomiting occurs, lean victim forward to reduce the risk of aspiration. Consult a physician immediately.

### 4.2 Most important symptoms and effects, both acute and delayed

Prolonged or repeated contact with skin may cause:., defatting, Dermatitis, Contact with eyes can cause:., Redness, Blurred vision, Provokes tears., Effects due to ingestion may include:., Gastrointestinal discomfort, Central nervous system depression, Lung irritation, chest pain, pulmonary edema, giddiness, slowed reaction time, slurred speech, Headache, Dizziness, Drowsiness, Unconsciousness.

### 4.3 Indication of any immediate medical attention and special treatment

No data available.

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use dry sand, alcohol-resistant foam, dry chemical, or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

#### Unsuitable extinguishing media

Water may be ineffective, this material is lighter than water and insoluble in water. The fire could easily be spread by the use of water in an area where the water cannot be contained.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

### 5.3 Advice for fire-fighters

Wear full protective clothing and self-contained breathing apparatus if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal protective equipment is required during handling. 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. Take precautionary measures against static discharges.

### 6.2 Environmental precautions

Do not discharge into drains or waterways. Prevent further leakage or spillage if safe to do so. Collect the spillage.

### 6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges.

### 6.4 Reference to other sections

For disposal see Section 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precaution for safe handling

Personal protective equipment is required during handling. Do not get in eyes, on skin, or on clothing. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Use only non-sparking tools. Use explosion-proof equipment. Take measures to prevent the build-up of electrostatic charge.

### 7.2 Conditions for safe storage, including any incompatibilities

No smoking while handling the chemical. Store in cool place. Container must be closed tightly and stored in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

### 7.3 Specific end use

No further relevant information available.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Substance Name	Limit/Standard			Note	Source	Year
Cyclohexane	TWA	100 ppm			ACGIH	2011
Hexane (Mixture of isomers)	STEL	3500 mg/m <sup>3</sup>	1000 ppm		ACGIH	2011
Hexane (Mixture of isomers)	TWA	1760 mg/m <sup>3</sup>	500 ppm		ACGIH	2011
n-hexane	TWA	50 ppm		Skin	ACGIH	2011

## 8.2 Exposure control

### Personal protection measures, such as personal protective equipment

Never eat, drink or smoke during handling the chemical. Ensure that there is adequate ventilation, especially in confined areas. Wash hands before breaks and at the end of workday.

### **Eye/ face protection**

Protective eyeglasses or chemical safety goggles is required during handling. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### **Skin protection**

Wear gloves during handling the chemical. 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Full contact\*

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 480 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

#### Splash contact\*

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 59 min

Material tested: Dermatril® P (KCL 743 / Aldrich Z677388, Size M)

\*Source – Sigma Aldrich, 2015

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### **Body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### **Respiratory protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Physical state	:	Liquid
Color	:	Colorless
Ordor	:	Not determined
Ordor threshold	:	Not determined
pH - value	:	Not determined
Melting point / Range	:	Not determined
Boiling point / Range	:	64 to 70 °C @ 760 mmHg
Flash point	:	< -18 °C[closed cup]
Evaporation rate	:	14
Flammability limit - LEL	:	1.2 %(V)
Flammability limit - UEL	:	8.3 %(V)
Vapour pressure	:	37.2 kPa at 38 °C 17.6 kPa at 20 °C
Vapor density (air = 1)	:	2.9
Density	:	0.677 g/mL at 15 °C
Bulk density	:	Not determined
Solubility(ies)	:	Not determined
Water solubility	:	Insoluble
Partition coefficient: n-octanol/water:	:	log Pow: 3,90 - 4,11
Auto-ignition temperature	:	280 °C
Decomposition temperature	:	Not determined
Viscosity	:	0.48 cSt at 25 °C
Explosive properties	:	Not determined
Oxidising properties	:	Not determined

### 9.2 Other information

Not applicable

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

None under normal processing

### 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight. Keep away from open flames, hot surfaces and sources of ignition.

### 10.5 Incompatible materials

Strong oxidisers

### 10.6 Hazardous decomposition products

Material does not decompose at ambient temperatures

## SECTION 11: TOXICOLOGY INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

Component	LD50 Ingestion	LD50 Skin
Hexane (mixture of isomers)	15000 mg/kg	2000 mg/kg

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### 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.

NTP: No data available

ACGIH: No data available

OSHA: No data available

#### Reproductive toxicity

No data available

#### Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

#### Specific target organ toxicity - repeated exposure

Ingestion - May cause damage to organs through prolonged or repeated exposure. - Nervous system

#### Aspiration hazard

May be fatal if swallowed and enters airways.

#### Additional Information

RTECS: MN9275000

Prolonged or repeated contact with skin may cause:., defatting, Dermatitis, Contact with eyes can cause:., Redness, Blurred vision, Provokes tears., Effects due to ingestion may include:., Gastrointestinal discomfort, Central nervous system depression, Lung irritation, chest pain, pulmonary edema, giddiness, slowed reaction time, slurred speech, Headache, Dizziness, Drowsiness, Unconsciousness  
Testes. - Irregularities - Based on Human Evidence

## SECTION 12: ECOLOGY INFORMATION

### 12.1 Ecotoxicity

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 2,5 mg/l - 96,0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 3.878,00 mg/l - 48 h
Toxicity to algae	EC50 - Chlorella vulgaris (Fresh water algae) - 12.840,00 mg/l - 3 h EC50 - SKELETOMA - 0,30 mg/l - 8 h

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

Will likely be mobile in the environment due to its volatility.

### 12.5 Results of PBT and vPvB assessment

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

### 12.6 Other adverse effects

Toxic to aquatic life.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment method

#### Product

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

## SECTION 14: TRANSPORT INFORMATION

### 14.1 UN number

ADR/RID: 1208

IMDG: 1208

IATA-DGR: 1208

### 14.2 UN proper shipping name

ADR/RID:

HEXANES

IMDG:

HEXANES

IATA-DGR:

Hexanes



