

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Commercial product name: **INTENSIL 40**

This substance/ mixture contains nanoforms

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of substance / preparation:

Industrial.

Raw material for: elastomer products .

1.3 Details of the supplier of the safety data sheet

Manufacturer/distributor: Easy Composites Ltd
Unit 39, Park Hall Business Village, Stoke on
Trent, Staffordshire,
ST3 5XA.
United Kingdom.

Telephone: +44 (0)1782 454499 -

Email: sales@easycomposites.com

1.4 Emergency telephone number

Emergency Information: +44 (0)1782 454499 (working hours only)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567):

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567):

No labeling according to GHS required.

Code	Additional Labelling
EUH210	Safety data sheet available on request.

2.3 Other hazards

The product contains substances which are relevant for the assessment in chapter 12.5.

Endocrine disrupting properties - human health: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Endocrine disrupting properties - environment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

not applicable

Version 4.1 (GB)

Print Date 13.01.2025

Date of last alteration: 02.05.2024

3.2 Mixtures

3.2.1 Chemical characteristics

Polydimethylsiloxane with vinyl groups and auxiliary

3.2.2 Hazardous ingredients

silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica		>=10 – <25 %
CAS-No.: 68909-20-6	EC-No.: 272-697-1	Index-No.: 014-052-00-7
INHA	[1]	
Classification (REGULATION (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567) *	STOT RE 2, by inhalation / H373 (Lungs) EUH066	
Synthetic amorphous silicon dioxide, nanostructured material, silanized		
<u>Particle Size Distribution:</u>		
Type of distribution: number distribution, State during measurement: agglomerates, d50 = 100 - 750 µm, Measurement technique: laser diffraction		
<u>Particle Size Distribution:</u>		
Type of distribution: number distribution, State during measurement: aggregates, d50 = 60 - 300 nm, Measurement technique: Transmission Electron Microscopy / Electron Microscopy (TEM/EM) calculation		
Type of distribution: number distribution, State during measurement: Primary structure, d50 = 6 - 50 nm, Measurement technique: Transmission Electron Microscopy / Electron Microscopy (TEM/EM) calculation		
<u>Form / Aspect Ratio (:1):</u>		
Form: fractal aggregates, Aspect Ratio (:1): 1 - 3, Measurement technique: TEM		
<u>Crystallinity:</u>		
Crystallinity: amorphous, Measurement technique: X-ray Diffraction (XRD)		
<u>Chemical Surface Functionalisation:</u>		
Chemical Surface Functionalisation: none, Properties of Coated Particle: hydrophobic		
<u>Specific surface:</u>		
40 - 350 m ² /g		

Type: INHA: ingredient, VERU: impurity

[1] = Hazardous or environmentally harmful substance; [2] = substance with a Community workplace exposure limit; [3] = PBT substance; [4] = vPvB substance; [5] = Endocrine disrupting properties

*Classification codes are explained in section 16.

The hazards associated with respirable particulate exposure do not apply to this material. All fillers, pigments and similar ingredients are incorporated in a non-respirable form, and under normal conditions of use are expected to remain inextricably bound within the product.

The product contains the following substances of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 57) in amounts ≥ 0.1%:

CAS No.	Substance	Content [%]	Reason for inclusion
540-97-6	Dodecamethylcyclohexasiloxane	>=0,1 – <0,3	Persistent, bioaccumulative and toxic (article 57d) Very persistent and very bioaccumulative (article 57e)

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

In case of accident or if you feel unwell seek medical advice (show label or SDS where possible).

After contact with the eyes:

Rinse immediately with plenty of water. Seek medical advice in case of continuous irritation.

After contact with the skin:

Wipe off excess material with cloth or paper. Wash with plenty of water or water and soap. In the event of a visible skin change or other complaints, seek medical advice (show label or SDS where possible).

After inhalation:

Material cannot be inhaled under normal conditions.

After swallowing:

Give several small portions of water to drink. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Any relevant information can be found in other parts of this section.

4.3 Indication of any immediate medical attention and special treatment needed

Further toxicology information in section 11 must be observed.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

alcohol-resistant foam , carbon dioxide , water mist , sprinkler system , sand , extinguishing powder .

Extinguishing media which must not be used for safety reasons:

water jet .

5.2 Special hazards arising from the substance or mixture

Risk of hazardous gasses or fumes in the event of fire. Exposure to combustion products may be a health hazard! Hazardous combustion products: toxic and very toxic fumes .

5.3 Advice for firefighters

Special protective equipment for fire fighting:

Use respiratory protection independent of recirculated air. Keep unprotected persons away.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Secure the area. Wear personal protection equipment (see section 8). Keep unprotected persons away. If material is released indicate risk of slipping. Do not walk through spilled material.

6.2 Environmental precautions

Prevent material from entering surface waters, drains or sewers and soil. Close leak if possible without risk. Retain contaminated water/extinguishing water. Dispose of in prescribed marked containers. Inform authorities if substance leaks into surface waters, sewerage or ground.

6.3 Methods and material for containment and cleaning up

Scoop up large quantities after dusting surfaces with sand or Fuller's earth to prevent sticking. Sweep or scrape up the spilled material and place in an appropriate chemical waste container. Clean any slippery coating that remains using a detergent / soap solution or another biodegradable cleaner. Apply sand or other inert granular material to improve traction.

6.4 Reference to other sections

Relevant information in other sections has to be considered. This applies in particular for information given on personal protective equipment (section 8) and on disposal (section 13).

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions for safe handling:

Observe information in section 8.

Precautions against fire and explosion:

Observe the general rules for fire prevention.

7.2 Conditions for safe storage, including any incompatibilities

Conditions for storage rooms and vessels:

Observe local/state/federal regulations.

Advice for storage of incompatible materials:

Observe local/state/federal regulations.

Further information for storage:

Store in a dry and cool place.

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Maximum airborne concentrations at the workplace:

exempt

8.2 Exposure controls

8.2.1 Exposure in the work place limited and controlled

General protection and hygiene measures:

Observe standard industrial hygiene practices for the handling of chemical substances. Do not eat, drink or smoke when handling.

Further information for system design and engineering measures

Observe information in section 7. Observe national regulatory requirements.

Personal protection equipment:

Respiratory protection

No personal respiratory protective equipment normally required.

Eye protection

Protective goggles, according to acknowledged standards such as EN 166, are recommended.

Hand protection

Use of protective gloves is recommended when handling the material, according to recognized standards such as EN374.

Recommended glove types: Protective gloves made of nitrile rubber
thickness of the material: > 0,1 mm

Breakthrough time: > 480 min

Recommended glove types: Protective gloves made of butyl rubber
thickness of the material: > 0,3 mm

Breakthrough time: > 480 min

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Note that, due to the numerous external influences (such as temperature), a chemically resistant protective glove in daily use may have a service life that is considerably shorter than the measured break through time.

Skin protection

None required.

Version 4.1 (GB)

Print Date 13.01.2025

Date of last alteration: 02.05.2024

8.2.2 Exposure to the environment limited and controlled

Prevent material from entering surface waters, drains or sewers and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Property:	Value:	Method:
Physical state	liquid	
Form	paste	
Colour	colourless	
Odour	faint	
Odour Threshold	no data available	
Melting point	exempt	
Boiling point/boiling range	exempt	
Lower explosion limit	exempt	
Upper explosion limit	exempt	
Flash point	> 200 °C	(DIN 51376)
Ignition temperature	> 400 °C	(DIN 51794)
Thermal decomposition	> 250 °C	
pH	Not applicable. Insoluble in water.	
Viscosity, kinematic	no data available	
Viscosity, dynamic	> 9000000 mPa.s	
Water solubility	practically insoluble	
Partition coefficient: n-octanol/water	not applicable	
Vapour pressure	exempt	
Density	1,12 g/cm ³ (20 °C)	(ISO 1183-1 A)
Relative vapour density	no data available	
Particle Size Distribution	Not applicable.	

9.2 Other information

No data available.

Property:	Value:	Method:
Evaporation rate	no data available	
Molecular weight	not applicable	

SECTION 10: Stability and reactivity

10.1 – 10.3 Reactivity; Chemical stability; Possibility of hazardous reactions

If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

Relevant information can possibly be found in other parts of this section.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

If stored and handled properly: none known. Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1 Acute toxicity

Version 4.1 (GB)

Print Date 13.01.2025

Date of last alteration: 02.05.2024

Product details:

Exposure routes	Result/Effect
Oral	LD50 > 2000 mg/kg Species: Rat, Source: Expert judgement
dermal	LD50 > 2000 mg/kg Species: Rat, Source: Expert judgement

11.1.2 Skin corrosion/irritation

Product details:

No skin irritation (Species: Rabbit, Source: Expert judgement)

11.1.3 Serious eye damage/eye irritation

Product details:

No eye irritation (Species: Rabbit, Source: Expert judgement)
--

11.1.4 Respiratory or skin sensitisation

Product details:

Exposure routes	Result
Skin contact	Does not cause skin sensitisation. (Species: Guinea pig, Test system: Buehler Test, Method: OECD 406, Source: Conclusion by analogy)
Inhalation	No data available.

11.1.5 Germ cell mutagenicity

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.1.6 Carcinogenicity

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.1.7 Reproductive toxicity

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.1.8 Specific target organ toxicity - single exposure

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.1.9 Specific target organ toxicity - repeated exposure

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.1.10 Aspiration hazard

Assessment:

Based on the physical-chemical properties of the product no aspiration hazard must be expected.

11.2 Information on other hazards

Version 4.1 (GB)

Print Date 13.01.2025

Date of last alteration: 02.05.2024

11.2.1 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2 Further toxicological information

None known.

SECTION 12: Ecological information

12.1 Toxicity

Assessment:

Evaluation on basis of physical-chemical properties: No expected damaging effects to aquatic organisms.

12.2 Persistence and degradability

Assessment:

Polymer component: biologically not degradable. Elimination by adsorption to activated sludge.

12.3 Bioaccumulative potential

Assessment:

Polymer component: No adverse effects expected.

Data on substances

Dodecamethylcyclohexasiloxane (D6):

Under controlled laboratory conditions D6 dissolved in water bioconcentrates in fish. However, available monitoring data indicate that the substance does not biomagnify in aquatic and terrestrial food webs in the environment.

12.4 Mobility in soil

Assessment:

Polymer component: insoluble in water.

Data on substances:

Dodecamethylcyclohexasiloxane (D6):

D6 has a very low water solubility, easily evaporates to air, and partitions to organic matter. It is degraded in air by reaction with hydroxyl radicals. In soil D6 is removed by several simultaneously occurring processes including volatilisation, hydrolysis, and clay-catalysed degradation.

12.5 Results of PBT and vPvB assessment

The product contains substances $\geq 0.1\%$ that have been subjected to the SVHC process according to REACH regulation (EC) No 1907/2006 Art. 57 as fulfilling the PBT and/or vPvB criteria according to REACH regulation (EC) No 1907/2006 Annex XIII.

Data on substances:

Dodecamethylcyclohexasiloxane (D6):

D6 formally meets the criteria for vPvB substances according to regulation (EC) No. 1907/2006 (REACH), Annex XIII. However, D6 does not behave similarly to known vPvB substances. The weight of scientific evidence from field studies shows that D6 is not biomagnifying in aquatic and terrestrial food webs. D6 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D6 in air that does not degrade by this reaction is not expected to deposit from the air to water, to land, or to living organisms.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Version 4.1 (GB)

Print Date 13.01.2025

Date of last alteration: 02.05.2024

12.7 Other adverse effects

none known

SECTION 13: Disposal considerations

13.1 Waste treatment methods

13.1.1 Material

Recommendation:

Material that cannot be used, reprocessed or recycled should be disposed of in accordance with Federal, State, and local regulations at an approved facility. Depending on the regulations, waste treatment methods may include, e.g., landfill or incineration.

13.1.2 Uncleaned packaging

Recommendation:

Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations. Uncleaned packaging should be treated with the same precautions as the material.

13.1.3 Waste Disposal Legislation Ref.No.(EC)

It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

SECTION 14: Transport information

14.1 UN number or ID number

ADR: Not applicable
 RID: Not applicable
 IMDG: Not applicable
 ICAO/IATA: Not applicable

14.2 Proper shipping name

ADR: Not applicable
 RID: Not applicable
 IMDG: Not applicable
 ICAO/IATA: Not applicable

14.3 Transport hazard class

ADR: Not applicable
 RID: Not applicable
 IMDG: Not applicable
 ICAO/IATA: Not applicable

14.4 Packing group

ADR: Not applicable
 RID: Not applicable
 IMDG: Not applicable
 ICAO/IATA: Not applicable

14.5 Environmental hazards

Environmentally hazardous: no

14.6 Special precautions for user

Relevant information in other sections has to be considered.

14.7 Maritime transport in bulk according to IMO instruments

Bulk transport in tankers is not intended.

SECTION 15: Regulatory information

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

National and local regulations must be observed.

For information on labelling please refer to section 2 of this document.

Control of Major Accident Hazards Regulations 2015 (COMAH)

Not applicable

Relevant regulations:

SI 2002/1689: CHIP Regulations 2002

SI 2002/2677: COSHH Regulations 2002

SI 1999/3242: Management of Health & Safety at Work Regulations 1999

Health & Safety at Work Act 1974

SI 1993/1643: Environmental Protection Act 1993 & Subsidiary Regulations.

Other national and local measures relating to the workplace, pollution control, environmental protection and waste control.

Other specifications, restrictions and prohibitions:

Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors - ANNEX I. RESTRICTED EXPLOSIVES PRECURSORS: Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors - ANNEX II. REPORTABLE EXPLOSIVES PRECURSORS: Not applicable

Details of international registration status

Relevant information about individual substance inventories, where available, is given below.

Japan.....	: ENCS (Handbook of Existing and New Chemical Substances): This product is listed in, or complies with, the substance inventory.
Australia	: AIIC (Australian Inventory of Industrial Chemicals): This product is listed in, or complies with, the substance inventory.
China	: IECSC (Inventory of Existing Chemical Substances in China): This product is listed in, or complies with, the substance inventory.
Canada.....	: DSL (Domestic Substance List): This product is listed in, or complies with, the substance inventory.
Philippines	: PICCS (Philippine Inventory of Chemicals and Chemical Substances): This product is listed in, or complies with, the substance inventory.
United States of America (USA)	: TSCA (Toxic Substance Control Act Chemical Substance Inventory): All components of this product are listed as active or are in compliance with the substance inventory.
Taiwan.....	: TCSI (Taiwan Chemical Substance Inventory): This product is listed in, or complies with, the substance inventory. General note: The Taiwanese chemicals regulation requires a phase 1 registration for TCSI-listed or TCSI-compliant substances if imports to Taiwan or manufacturing in Taiwan exceed the trigger quantity of 100 kg/a (for mixtures to be calculated per each ingredient). It is the duty of the importing/manufacturing legal entity to take care of this obligation.
European Economic Area (EEA)	: REACH (Regulation (EC) No 1907/2006): General note: the registration obligations for substances imported into the EEA or manufactured within the EEA by the supplier mentioned in section 1 are fulfilled by the said supplier. The registration obligations for substances imported into the EEA by customers or other downstream users must be fulfilled by the latter.
South Korea (Republic of Korea).....	: AREC (Act on Registration and Evaluation of Chemicals; "K-REACH"): Please approach your regular contact for more detailed information.

15.2 Chemical safety assessment

Due to the results of the chemical safety assessment, exposure scenarios and identified uses are not of relevance for this safety data sheet.

SECTION 16: Other information

16.1 Material

The details in this document are based on the state of our knowledge at the time of revision. They do not constitute an assurance of the described product properties in terms of statutory warranty requirements.

The providing of this document to a recipient does not relieve the recipient of his or her responsibility toward compliance with all laws and stipulations applicable to the product. This applies in particular to the further sale or distribution of the product or substances or items containing the product, in other jurisdictions and with regard to the protection of third-party intellectual property rights. If the described product is processed or mixed with other substances or materials, the details stated in this document cannot be conferred to the resultant new product unless this has been expressly mentioned. If the product is repackaged, the recipient is obligated to additionally provide the required safety-related information.

16.2 Further information:

Commas appearing in numerical data denote a decimal point. Vertical lines in the left-hand margin indicate changes compared with the previous version. This version supersedes all previous versions.

Key or legend to abbreviations and acronyms used in the safety data sheet

ABEK - Multi-Range Filter A, B, E, K; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; APF - Assigned Protection Factor; CAS No. - Chemical Abstracts Service Registry Number; DFG - German Research Foundation; DIN - German institute for standardization; DOC - Dissolved Organic Carbon; d/w - days per week; EC / CE / EG - European Community; EC50 / CE50 - Median effective concentration; ECHA - European Chemicals Agency; ED - endocrine disruptor; EG-RL - test method according to Regulation 440/2008; EN - European Standard; ERC - Environmental Release Category; g/cm³ - gram per cubic centimeter; h - hour(s); H-Code - hazard statement code(s); hPa - Hectopascal; IATA Regs - International Air Transport Association (IATA) Dangerous Goods Regulations; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 / CI50 - half maximal inhibitory concentration; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IMDG Code - International Maritime Dangerous Goods Code; ISO - International Organization for Standardization; LC50 / CL50 - medium lethal concentration; LD50 / DL50 - medium lethal dose; LOAEC - Lowest Observed Adverse Effect Concentration; LOAEL - Lowest Observed Adverse Effect Level; MARPOL - International Convention for the Prevention of Marine Pollution from Ships; mg/g - milligrams per gram; mg/kg - milligrams per kilogram; mg/l - milligrams per liter; mg/m³ - milligrams per cubic meter; min - minutes; mJ - millijoule; mm - millimeter; mm²/s - square millimeter per second; mPa.s - Millipascal second(s); MSDS / SDB / SDS - safety data sheet; NO - Observed Adverse Effect Concentration; NOAEL - No Observed adverse effect level; NOEC - No Observed Effect Concentration; NOEL - No Observed Effect Level; OECD - Organization for Economic Cooperation and Development; PBT - persistent, bioaccumulative, toxic; PC - product category; P-Code - precautionary statement code(s); ppm - parts per million; PROC - process category; RCP - reciprocal calculation-based procedure; RID - convention concerning international carriage by rail; SU - sector of use; SVHC - substance of very high concern; Vol% - volume percent; UN No. - United Nations Dangerous Goods Number; vPvB - very Persistent, very Bioaccumulative

Explanation of the GHS classification code:

STOT RE 2; H373 : Specific target organ toxicity - repeated exposure Category 2; May cause damage to organs through prolonged or repeated exposure if inhaled.
EUH066..... : Repeated exposure may cause skin dryness or cracking.

- End of Safety Data Sheet -