

SAFETY DATA SHEET

Classified in accordance with 29 CFR 1910.1200

1. Identification

Product identifier: NANOPOX® C 620

Chemical name:

Preparation of cyclo aliphatic epoxy resin and amorphous silicon dioxide

Other means of identification

None.

Recommended restrictions

Recommended use: Industrial use

Restrictions on use: None known.

Manufacturer/Importer/Distributor Information

Company Name : Evonik Corporation
Nutrition & Care
7801 Whitepine Road
Richmond, VA 23237
USA

Telephone : +1 804 727 0700

Fax : +1 804 727 0845

E-mail : product-regulatory-services@evonik.com

Emergency telephone number:

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)

Emergency 800 681 9531 (CHEMTREC MEXICO)
+1 703 527 3887 (CHEMTREC WORLD)

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids Category 4

Health Hazards

Skin sensitizer Category 1

Environmental Hazards

Acute hazards to the aquatic environment Category 3

Label Elements

Hazard Symbol:



Signal Word: Warning

Hazard Statement:
Combustible liquid.
May cause an allergic skin reaction.
Harmful to aquatic life.

Precautionary Statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response: IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instructions on this label). In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage: Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Chemical name:

Preparation of cyclo aliphatic epoxy resin and amorphous silicon dioxide

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) [*]
7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester		2386-87-0	50 - <100%

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

The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General information:	Remove soiled or soaked clothing immediately
Inhalation:	fresh air supply, consult a doctor if feeling unwell.
Skin Contact:	In case of contact with skin wash off with soap and water. In case of discomfort: Supply with medical care.
Eye contact:	In case of contact with eyes rinse thoroughly with water. In case of discomfort: Supply with medical care.
Ingestion:	Thoroughly clean the mouth with water In case of discomfort: Supply with medical care.
Personal Protection for First-aid Responders:	No data available.

Most important symptoms and effects, both acute and delayed

Symptoms:	Up to now no symptoms are known.
Hazards:	No data available.

Indication of immediate medical attention and special treatment needed

Treatment:	Treat symptomatically.
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5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	foam, carbon dioxide, dry powder, water spray.
Unsuitable extinguishing media:	High volume water jet.
Special hazards arising from the substance or mixture:	In the event of fire the following can be released: - Carbon monoxide, carbon dioxide, silicon dioxide Under certain conditions of combustion traces of other toxic substances cannot be excluded

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No specific precautions.
Special protective equipment for fire-fighters:	Do not inhale explosion and/or combustion gases. Self-contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment.
Accidental release measures:	No data available.

Methods and material for containment and cleaning up:

Take up with absorbent material (eg sand, kieselguhr, universal binder) Dispose of absorbed material in accordance with the regulations.

Environmental Precautions:

Do not allow to enter drains or waterways Prevent product from getting into subsoil/soil.

7. Handling and storage

Handling

Technical measures:

No data available.

Local/Total ventilation:

No data available.

Safe handling advice:

Provide good ventilation of working area (local exhaust ventilation if necessary). Do not inhale gases/vapours/aerosols. Avoid contact with skin and eyes.

Contact avoidance measures:

No data available.

Storage

Safe storage conditions:

Keep container tightly closed in a cool, well-ventilated place. Do not store together with amines. Do not store near acids. Do not store together with mercaptans. Do not store together with alkalies.

Safe packaging materials:

No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Biological Limit Values

No biological exposure limits noted for the ingredient(s).

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment

Eye/face protection:

Safety glasses

Skin Protection

Hand Protection:

Additional Information: gloves made of butyl (IIR)

Skin and Body Protection:

protective clothing

Respiratory Protection:

in case of formation of vapours/aerosols: Short term: filter apparatus, combination filter A-P2

Hygiene measures:

Remove soiled or soaked clothing immediately. When using do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Use skin protective preparation as preventive skin protection.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	Viscous Liquid
Color:	yellowish
Odor:	Slight
Odor Threshold:	not measured
Freezing point:	< -4 °F/ < -20 °C
Boiling Point:	> 392 °F/> 200 °C

Flammability: not measured

Upper/lower limit on flammability or explosive limits

Explosive limit - upper:	not measured
Explosive limit - lower:	not measured
Flash Point:	> 149 °F/> 65 °C
Auto-ignition temperature:	not measured
Decomposition Temperature:	not measured
pH:	Not applicable

Viscosity

Dynamic viscosity:	1,000 - 7,000 mPa.s at 77 °F/25 °C
Kinematic viscosity:	714 - 5000 mm ² /s at 77 °F/25 °C , Method: calculated
Flow Time:	No data available.

Solubility(ies)

Solubility in Water:	Insoluble
Solubility (other):	not measured
Partition coefficient (n-octanol/water):	not measured
Vapor pressure:	< 0.1 hPa at 68 °F/20 °C
Relative density:	not measured
Density:	1.3 - 1.4 g/cm ³ at 68 °F/20 °C
Bulk density:	No data available.
Relative vapor density:	not measured

Other information

Explosive properties:	not measured
Oxidizing properties:	not oxidizing
Self-ignition:	not measured
Metal Corrosion:	Not corrosive to metals

Evaporation Rate: not measured

10. Stability and reactivity

Reactivity: see section "Possibility of hazardous reactions".

Chemical Stability: The product is stable under normal conditions.

Possibility of hazardous reactions: Risk of polymerisation.

Conditions to avoid: Product polymerizes at room temperature with amines, mercaptans and Lewis acids, which process generates heat.

Incompatible Materials: Amines. Mercaptans. Acids. Alkalies.

Hazardous Decomposition Products: None with proper storage and handling.

11. Toxicological information

Information on likely routes of exposure

Inhalation: Information on effects are given below.

Skin Contact: Information on effects are given below.

Eye contact: Information on effects are given below.

Ingestion: Information on effects are given below.

Acute toxicity (list all possible routes of exposure)

Oral

Product: LD 50, ATEmix, 4,932 mg/kg

Dermal

Product: LD 50, ATEmix, 3,334 mg/kg

Inhalation

Product: Not classified for acute toxicity based on available data.

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: No data available.

Serious Eye Damage/Eye Irritation

Product: No data available.

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogens present or none present in regulated quantities

ACGIH: US.ACGIH Threshold Limit Values:

No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogens present or none present in regulated quantities

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended:

No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity

No data available.

In vitro

Product: No data available.

Components: Ames test, OECD 471: , positive
7-
Oxabicyclo[4.1.0]heptane-
3-carboxylic acid, 7-
oxabicyclo[4.1.0]hept-3-
ylmethyl ester

In vivo

Product: No data available.

Components: Transgenic rodent somatic cell gene mutation assay, OECD 488, Oral,
7- Mouse, Male, negative
Oxabicyclo[4.1.0]heptane-
3-carboxylic acid, 7-
oxabicyclo[4.1.0]hept-3-
ylmethyl ester

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: Not classified

Information on health hazards

Other hazards

Product: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product:

Toxicity to microorganisms

Product: No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to microorganisms

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log K_{ow})

Product: , not measured

Mobility in soil:

Product: No data available.

Results of PBT and vPvB assessment:

Product: No data available.

Other adverse effects:

Other hazards

Product: Do not allow to enter soil, waterways or waste water canal.

13. Disposal considerations

Disposal methods: In accordance with local authority regulations, take to special waste incineration plant

Contaminated Packaging: If empty contaminated containers are recycled or disposed of, the receiver must be informed about possible hazards.

14. Transport information

Domestic regulation

49 CFR

Not regulated as a dangerous good

Remarks : FOR USA ONLY: In packagings > 450 L this Product must be classified, placarded, marked and shipped as Combustible Liquid in the USA.

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Flammable (gases, aerosols, liquids, or solids), Respiratory or Skin Sensitization

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

US. EPCRA (SARA Title III Section 313 Toxic Chemical Release Inventory (TRI) Reporting

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities (on the basis of current knowledge of the product composition).

US State Regulations

US. California Proposition 65



WARNING: This product can expose you to chemicals including, methanol which is [are] known to the State of California to cause birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov.

Inventory Status:

US TSCA Inventory:	Included on Inventory.
Canada DSL Inventory List:	Included on Inventory. This product contains a component that is regulated pursuant to a Significant New Activity Notice No. 15007. To be compliant with the Significant New Activity Notice, this product may only be used as component of an industrial resin into which the substance becomes incorporated into a solid matrix.

16. Other information, including date of preparation or last revision

HMIS Hazard ID

Health	<input type="text" value="2"/>
Flammability	<input type="text" value="2"/>
Physical Hazards	<input type="text" value="0"/>
PERSONAL PROTECTION	B

B - Safety Glasses & Gloves

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

Version #: 1.4

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Abbreviations and acronyms:

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials;

bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further Information: none

Revision Information Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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