

Material Safety data sheet
according to 1907/2006/EC, Article 31

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

1.1 Product identifier

- Trade name: GE LOW TEMPERATURE VARNISH
- Article number: C5-101

1.2 Relevant identified uses of the substance or mixture and uses advised against
 No information available

- Application of the substance / the preparation: No information available

• 1.3 Details of the supplier of the safety data sheet Supplier:

Oxford Instruments NanoAnalysis
 Halifax Rd, High Wycombe HP12 3SE
 United Kingdom
 Tel: +44 (0) 1494 442255

- Further information obtainable from: Technical Support

SECTION 2: Hazards Identification

Classification: OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation Category 2
 Serious eye damage/eye irritation Category 2
 Skin sensitization Category 1
 Germ cell mutagenicity Category 1B
 Carcinogenicity Category 1A
 Specific target organ toxicity (repeated exposure) Category 2
 Aspiration toxicity Category 1

Label elements: Danger, Flammable liquids

Hazard statements: Causes skin irritation, Causes serious eye irritation, May cause an allergic skin reaction, May cause genetic defects, May cause cancer, May cause damage to organs through prolonged or repeated exposure, May be fatal if swallowed and enters airways

 Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Contaminated work clothing should not be allowed out of the workplace
 Do not breathe dust/fume/gas/mist/vapors/spray
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting/./? /equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
 Specific treatment (see ./? on this label)
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 Take off contaminated clothing and wash before reuse
 If skin irritation or rash occurs: Get medical advice/attention
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Do NOT induce vomiting

In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store locked up - Store in a well-ventilated place. Keep cool - Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Trade name: C5-101

SECTION 3: Composition/information on ingredients

HAZARDOUS PRODUCT COMPOSITION/CAS NUMBER:

ODOR No information available

Appearance No information available

PHYSICAL STATE Liquid

Ethyl Alcohol: CAS: 64-17-5 APPROX PERCENT: 30 - 60%

Acetone: CAS: 67-64-1 APPROX PERCENT: 10 - 30%

Xylene (Mixed Isomers): CAS: 1330-20-7 APPROX PERCENT: 10 - 30%

Vinyl Butyral-Vinyl Acetate-Vinyl Alcohol Polymer: CAS: 27360-07-2
PERCENT: 10 - 30%

Ethyl Benzene: CAS: 100-41-4 APPROX PERCENT: 1-5%

n-Heptane: CAS: 142-82-5 APPROX PERCENT: 0.1 - 1%

Formaldehyde: CAS 50-00-0 PERCENT: 0.1 - 1

SECTION 4: First Aid Measures

EYE CONTACT Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

SKIN CONTACT Wash skin with soap and water. Inhalation Remove to fresh air.

INGESTION Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically

SECTION 5: Firefighting Measures

Suitable extinguishing media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Special Hazards:

None Known.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Trade name: C5-101

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
 Personal precautions Ensure adequate ventilation, especially in confined areas.
 Environmental precautions
 Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up
 Methods for containment Prevent further leakage or spillage if safe to do so.
 Methods for cleaning up Pick up and transfer to properly labeled containers

SECTION 7: Handling and storage

Precautions for safe handling:
 Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities:
 Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials None known based on information supplied

SECTION 8: Exposure controls/personal protection

Exposure Guidelines

HAZARDOUS PRODUCT COMPOSITION/CAS NUMBER	ACGIH TLV	OSHA PEL-TWA	NIOSH IDLH
Ethyl Alcohol 64-17-5	STEL: 1000 ppm	1000	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³
Acetone 67-64-1	STEL: 750 ppm TWA: 500 ppm	1000	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m ³
Xylene (Mixed Isomers) 1330-20-7	STEL: 150 ppm TWA: 100 ppm	100	-
Vinyl Butyral-Vinyl Acetate-Vinyl Alcohol Polymer 27360-07-2	-	PARTICULATES: 15	-
Ethyl Benzene 100-41-4	TWA: 20 ppm	100	IDLH: 800 ppm TWA: 100 ppm TWA: 435 mg/m ³ STEL: 125 ppm STEL: 545 mg/m ³
n-Heptane 142-82-5	STEL: 500 ppm TWA: 400 ppm	500	IDLH: 750 ppm Ceiling: 440 ppm 15 min Ceiling: 1800 mg/m ³ 15 min TWA: 85 ppm TWA: 350 mg/m ³
Formaldehyde 50-00-0	Ceiling: 0.3 ppm	0.75	IDLH: 20 ppm Ceiling: 0.1 ppm 15 min TWA: 0.016 ppm

Trade name: C5-101

SECTION 8: CONTINUED...

ENGINEERING CONTROLS: Exhaust ventilation.
Showers. Eyewash stations. Use in a well ventilated area.
Individual protection measures, such as personal protective equipment
Von Roll recommends evaluation and selection of appropriate engineering controls (such as ventilation and eyewash/safety shower) as well as appropriate personal protective equipment (such as respiratory protection, protective gloves, eye protection) for safely handling this material. The following guidelines should be considered in this process.
EYE PROTECTION: Splash Goggles.

GLOVES: Polyvinyl alcohol gloves. Viton rubber gloves.
VENTILATION: Use only in well ventilated area. Localized mechanical ventilation.
RESPIRATORY PROTECTION: Use in a well ventilated area. Use approved NIOSH respiratory protection if TLV exceeded, or over exposure is likely.
OTHER PERSONAL PROTECTION DATA: Rubber apron or other chemical-resistant apron. Face shield. General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

PHYSICAL STATE: Liquid
Explosive properties No information available
Oxidizing properties No information available
Other Information: Softening point
No information available
DENSITY No information available
Bulk density No information available

Softening point No information available
DENSITY No information available
Bulk density No information available

<u>PROPERTIES</u>	<u>Values</u>
pH	No information available
Melting point/freezing point	No information available
Boiling point / boiling range	No information available
Flash point	-20 °C / -4 °F
EVAPORATION RATE	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	12.8
Lower flammability limit:	1.0
VAPOR PRESSURE	No information available
VAPOR DENSITY	No information available
SPECIFIC GRAVITY	0.89
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

SECTION 10: Stability and reactivity

REACTIVITY: NO DATA AVAILABLE
Stable under recommended storage conditions.
Possibility of Hazardous Reactions - None under normal processing.

CONDITIONS TO AVOID:
Keep away from heat, sparks and flame.
Incompatible materials
Avoid contact with acidic, basic or oxidizing agents.
Hazardous Decomposition Products
Carbon monoxide. Carbon dioxide. Toxic fumes. Oxides of nitrogen

Trade name: C5-101

SECTION 11: Toxicological information

Information on likely routes of exposure:

PRODUCT INFORMATION No data available

Inhalation No data available. EYE CONTACT No data available.

SKIN CONTACT No data available. INGESTION No data available

HAZARDOUS PRODUCT COMPOSITION/CAS NUMBER	Oral LD50	Dermal LD50	Inhalation LC50
Ethyl Alcohol 64-17-5	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
Acetone 67-64-1	= 5800 mg/kg (Rat)	-	= 50100 mg/m ³ (Rat) 8 h
Xylene (Mixed Isomers) 1330-20-7	= 3500 mg/kg (Rat) = 4820 mg/kg (Rat)	> 4350 mg/kg (Rabbit) > 1700 mg/kg (Rabbit) > 2000 mg/kg (Rabbit)	= 29.08 mg/L (Rat) 4 h = 5000 ppm (Rat) 4 h > 5.04 mg/L (Rat) 4 h
Vinyl Butyral-Vinyl Acetate-Vinyl Alcohol Polymer 27360-07-2	-	-	-
Ethyl Benzene 100-41-4	= 3500 mg/kg (Rat) = 4820 mg/kg (Rat)	= 15400 mg/kg (Rabbit) > 2000 mg/kg (Rabbit)	= 17.2 mg/L (Rat) 4 h > 5.04 mg/L (Rat) 4 h
n-Heptane 142-82-5	-	= 3000 mg/kg (Rabbit)	= 103 g/m ³ (Rat) 4 h
Formaldehyde 50-00-0	= 600 mg/kg (Rat)	= 270 mg/kg (Rabbit)	= 0.578 mg/L (Rat) 4 h

Information on toxicological effects: Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure: Sensitization No information available. Germ cell mutagenicity No information available. Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

SECTION 12: : Ecological information

Ecotoxicity: 29.5159% of the mixture consists of component(s) of unknown hazards to the aquatic environment:

HAZARDOUS PRODUCT COMPOSITION/CAS NUMBER	Acute Algae Toxicity:	Acute Fish Toxicity:	Crustacea
Ethyl Alcohol 64-17-5	-	12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static	9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static
Acetone 67-64-1	-	4.74 - 6.33: 96 h Oncorhynchus mykiss mL/L LC50 6210 - 8120: 96 h Pimephales promelas mg/L LC50 static 8300: 96 h Lepomis macrochirus mg/L LC50	10294 - 17704: 48 h Daphnia magna mg/L EC50 Static 12600 - 12700: 48 h Daphnia magna mg/L EC50
Xylene (Mixed Isomers) 1330-20-7	11: 72 h Pseudokirchneriella subcapitata mg/L EC50	13.1 - 16.5: 96 h Lepomis macrochirus mg/L LC50 flow-through 13.5 - 17.3: 96 h Oncorhynchus mykiss mg/L LC50 2.661 - 4.093: 96 h Oncorhynchus mykiss mg/L LC50 static 23.53 - 29.97: 96 h Pimephales promelas mg/L LC50 static 30.26 - 40.75: 96 h Poecilia reticulata mg/L LC50 static 7.711 - 9.591: 96 h Lepomis macrochirus mg/L LC50 static 13.4: 96 h Pimephales promelas mg/L LC50 flow-through 19: 96 h Lepomis macrochirus mg/L LC50 780: 96 h Cyprinus carpio mg/L LC50 semi-static 780: 96 h Cyprinus carpio mg/L LC50	0.6: 48 h Gammarus lacustris mg/L LC50 3.82: 48 h water flea mg/L EC50
Ethyl Benzene 100-41-4	1.7 - 7.6: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 2.6 - 11.3: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 11: 72 h Pseudokirchneriella subcapitata mg/L EC50 4.6: 72 h Pseudokirchneriella subcapitata mg/L EC50 438: 96 h Pseudokirchneriella subcapitata mg/L EC50	11.0 - 18.0: 96 h Oncorhynchus mykiss mg/L LC50 static 7.55 - 11: 96 h Pimephales promelas mg/L LC50 flow-through 9.1 - 15.6: 96 h Pimephales promelas mg/L LC50 static 32: 96 h Lepomis macrochirus mg/L LC50 static 4.2: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 9.6: 96 h Poecilia reticulata mg/L LC50 static	1.8 - 2.4: 48 h Daphnia magna mg/L EC50
n-Heptane 142-82-5	-	375.0: 96 h Cichlid fish mg/L LC50	10: 24 h Daphnia magna mg/L EC50
Formaldehyde 50-00-0	-	0.032 - 0.226: 96 h Oncorhynchus mykiss mL/L LC50 flow-through 100 - 136: 96 h Oncorhynchus mykiss mg/L LC50 static 22.6 - 25.7: 96 h Pimephales promelas mg/L LC50 flow-through 23.2 - 29.7: 96 h Pimephales promelas mg/L LC50 static 1510: 96 h Lepomis macrochirus µg/L LC50 static 41: 96 h Brachydanio rerio mg/L LC50 static	11.3 - 18: 48 h Daphnia magna mg/L EC50 Static 2: 48 h Daphnia magna mg/L LC50

Trade name: C5-101

SECTION 12: CONTINUED...

Persistence and degradability - No information available.

Bioaccumulation - No information available.

HAZARDOUS PRODUCT COMPOSITION/CAS NUMBER:

Partition coefficient

Ethyl Alcohol: CAS: 64-17-5 Partition coefficient -0.32

Acetone: CAS: 67-64-1 Partition coefficient: -0.24

Xylene (Mixed Isomers): CAS: 1330-20-7 Partition coefficient 2.77 - 3.15

Vinyl Butyral-Vinyl Acetate-Vinyl Alcohol Polymer CAS: 27360-07 Partition coefficient-2

Ethyl Benzene: CAS: 100-41-4 Partition coefficient : 3.118

n-Heptane: CAS: 142-82-5 Partition coefficient 4.66

Formaldehyde: 50-00-0 Partition coefficient :0.35

Other adverse effects No information available

SECTION 13: Disposal Considerations

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

EPA HAZARDOUS WASTE DISPOSAL

CODE: D001, RQ = 100 lb / 45.4 kg

Acetone 67-64-1	-	Included in waste stream: F039	-	U002
Xylene (Mixed Isomers) 1330-20-7	-	Included in waste stream: F039	-	U239
Vinyl Butyral-Vinyl Acetate-Vinyl Alcohol Polymer 27360-07-2	-	-	-	-
Ethyl Benzene 100-41-4	-	Included in waste stream: F039	-	-
n-Heptane 142-82-5	-	-	-	-
Formaldehyde 50-00-0	U122	Included in waste streams: K009, K010, K038, K040, K156, K157	-	U122

HAZARDOUS PRODUCT COMPOSITION/CAS NUMBER	California Hazardous Waste Status
Ethyl Alcohol 64-17-5	Toxic Ignitable
Acetone 67-64-1	Ignitable
Xylene (Mixed Isomers) 1330-20-7	Toxic Ignitable
Vinyl Butyral-Vinyl Acetate-Vinyl Alcohol Polymer 27360-07-2	-
Ethyl Benzene 100-41-4	Toxic Ignitable
n-Heptane 142-82-5	Toxic Ignitable
Formaldehyde 50-00-0	Toxic Ignitable

SECTION 14: Transport Information

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

EPA HAZARDOUS WASTE DISPOSAL

CODE: D001, RQ = 100 lb / 45.4 kg

Trade name: C5-101

SECTION 15: Regulatory information

International Inventories

TSCA Complies

DSL/NDSL Does not comply

EINECS/ELINCS Does not comply

ENCS Does not comply

IECSC Does not comply

KECL Does not comply

PICCS Does not comply

AICS Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any

chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

ACUTE HEALTH HAZARD No

FIRE HAZARD No

Sudden release of pressure hazard No

REACTIVE HAZARD No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

SECTION 16: OTHER

NFPA RATING: HEALTH 2 , FLAMMABILITY 3 , INSTABILITY 0

HMIS CLASSIFICATION: HEALTH *2 , FLAMMABILITY 3 , PHYSICAL HAZARD 0