

Manufactured By:

Package For/Supply By:



Delta Bond
156-K

TIM-818EX (Adhesive)

Issue Date
September 01, 2017

Revision Date January 01,2021

Version 1

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code 818EX
Product Name TIM-818EX (Adhesive)

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

Recommended Use Adhesives and/or sealants
Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Manufacturer

Timtronics
35 Old Dock Road
Yaphank, NY 11980
631-345-6509

For further information, please contact

E-mail address: info@timtronics.com

1.4. Emergency telephone number

Emergency Telephone: 631-345-6509

Transportation Emergency: CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Inhalation (Dusts/Mists)	Category 3 - (H331)
Serious eye damage/eye irritation	Category 2 - (H319)
Specific target organ toxicity (single exposure)	Category 3
Chronic aquatic toxicity	Category 3 - (H412)

Classification according to Directive 67/548/EEC or 1999/45/EC

Full text of R-phrases: see section 16

2.2. Label elements

Product identifier



Signal word

Warning

Hazard statements

H319 - Causes serious eye irritation

H331 - Toxic if inhaled

H412 - Harmful to aquatic life with long lasting effects

May cause respiratory irritation. May cause drowsiness or dizziness

Precautionary Statements - EU (§28, 1272/2008)

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P321 - Specific treatment (see information on package label)

2.3. Other hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	EC No.	CAS No.	Weight-%	Classification according to Directive 67/548/EEC or 1999/45/EC	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
OFF-WHITE HYDRATED ALUMINA	244-492-7	21645-51-2	60-80	-	No data available	No data available
TETRAHYDROFURFURYLMETHACRYLATE	219-529-5	2455-24-5	15-25	-	No data available	No data available
ETHYLENE-VINYL ACETATE COPOLYMER	-	249347-78-8	5-10	-	No data available	No data available
Hydroxypropyl Methacrylate	248-666-3	27813-02-1	5-10	-	No data available	No data available
Cumene Hydroperoxide	201-254-7	80-15-9	1-3	Xn; R21/22-48/20/22 T; R23 C; R34 N; R51-53 O; R7	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 3 (H331) Skin Corr. 1B (H314) STOT RE 2 (H373) Aquatic Chronic 2 (H411) Org. Perox. E (H242)	No data available
Insoluble Saccharin	201-321-0	81-07-2	1-3	-	No data available	No data available

Full text of R-phrases: see section 16

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Skin contact	Wash with soap and water. Flush skin with water for several minutes. Remove contaminated clothing and shoes. If irritation develops, seek medical attention. Wash clothing before reuse.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms Avoid prolonged contact with eyes, skin, and clothing.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Use CO₂, dry chemical, or foam.

Unsuitable extinguishing media

None

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapors

Hazardous combustion products: Carbon oxides. Nitrogen oxides (NO_x).

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation, especially in confined areas.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. Contain and collect spillage 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).

6.3. Methods and material for containment and cleaning up

Methods for containment

Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes or clothing. Wash thoroughly after handling.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep at temperatures between 7 and 29°C.

Incompatible materials

Strong oxidizing agents.

7.3. Specific end use(s)

Risk Management Methods (RMM)

The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Chemical Name	European Union	United Kingdom	France	Spain	Germany
OFF-WHITE HYDRATED ALUMINA 21645-51-2	-	TWA: 10 mg/m ³ TWA: 4 mg/m ³	-	-	-
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
OFF-WHITE HYDRATED ALUMINA 21645-51-2	TWA: 5 mg/m ³ STEL 10 mg/m ³	TWA: 3 mg/m ³	TWA: 2.5 mg/m ³ TWA: 1.2 mg/m ³	-	TWA: 10 mg/m ³ TWA: 4 mg/m ³ STEL: 30 mg/m ³ STEL: 12 mg/m ³

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

Tight sealing safety goggles.

Hand Protection

Wear protective gloves.

Skin and body protection

Suitable protective clothing.

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	Paste / Gel	Odor	Mild
Appearance	paste	Odor threshold	No information available
Color	white		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	does not apply	
Melting point / freezing point		No information available
Boiling point / boiling range	>149C / >300F	
Flash point	>93C / >200F	
Evaporation rate		No information available
Flammability (solid, gas)		No information available
Flammability Limit in Air		
Upper flammability limit:		Not available
Lower flammability limit:		Not available
Vapor pressure	< 5mm @ 20C	
Vapor density		No information available
Relative density	1.60	
Water solubility	slightly soluble	
Solubility(ies)		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	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Stable

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization - Hazardous polymerization does not occur.

Possibility of Hazardous Reactions - None under normal processing.

10.4. Conditions to avoid

Strong Oxidizers

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon oxides. Nitrogen oxides (NOx).

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Product Information

Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation	May cause irritation of respiratory tract.
Eye contact	May cause irritation.
Skin contact	Substance may cause slight skin irritation.
Ingestion	Ingestion may cause irritation to mucous membranes.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	4,194.00
ATEmix (dermal)	2,247.00
ATEmix (inhalation-dust/mist)	0.50

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
OFF-WHITE HYDRATED ALUMINA	> 5000 mg/kg (Rat)		
Hydroxypropyl Methacrylate	= 11200 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	
Cumene Hydroperoxide	= 382 mg/kg (Rat)	= 0.126 mL/kg (Rabbit)	= 220 ppm (Rat) 4 h

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Unknown Aquatic Toxicity 78 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

TIM-818EX (Adhesive)

Chemical Name	Algae/aquatic plants	Fish	Crustacea
TETRAHYDROFURFURYL METHACRYLATE	-	31.1 - 38.8: 96 h Pimephales promelas mg/L LC50 flow-through	-
Hydroxypropyl Methacrylate	-	493: 48 h Leuciscus idus melanotus mg/L LC50 static	-
Cumene Hydroperoxide	-	3.9: 96 h Oncorhynchus mykiss mg/L LC50 static	7: 24 h Daphnia magna mg/L EC50
Insoluble Saccharin	-	18300: 96 h Pimephales promelas mg/L LC50	-

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Chemical Name	Partition coefficient
Hydroxypropyl Methacrylate	0.97

12.4. Mobility in soil

Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with federal, state and local regulations.

Contaminated packaging Improper disposal or reuse of this container may be dangerous and illegal.

Section 14: TRANSPORT INFORMATION

IMDG

14.1 UN/ID no.	None
14.2 Proper shipping name	Unrestricted
14.3 Hazard Class	None
14.4 Packing Group	None
14.5 Marine pollutant	None
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

RID

14.1 UN/ID no.	None
14.2 Proper shipping name	Unrestricted
14.3 Hazard Class	None
14.4 Packing Group	None
14.5 Environmental hazard	None
14.6 Special Provisions	None

ADR

14.1 UN/ID no.	None
14.2 Proper shipping name	Unrestricted
14.3 Hazard Class	None
14.4 Packing Group	None
14.5 Environmental hazard	None
14.6 Special Provisions	None

IATA

14.1 UN/ID no.	None
14.2 Proper shipping name	Unrestricted
14.3 Hazard Class	None
14.4 Packing Group	None
14.5 Environmental hazard	None
14.6 Special Provisions	None

Section 15: REGULATORY INFORMATION

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

Chemical Name	French RG number	Title
Hydroxypropyl Methacrylate 27813-02-1	RG 65	-

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants - Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

All ingredients are on the inventory or are exempt from listing.

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

15.2. Chemical safety assessment

No information available

Section 16: OTHER INFORMATION

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

Full text of R-phrases referred to under sections 2 and 3

No information available

Full text of H-Statements referred to under section 3

- H302 - Harmful if swallowed
- H312 - Harmful in contact with skin
- H331 - Toxic if inhaled
- H314 - Causes severe skin burns and eye damage
- H373 - May cause damage to organs through prolonged or repeated exposure if inhaled
- H411 - Toxic to aquatic life with long lasting effects
- H242 - Heating may cause a fire

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Prepared By

Issue Date September 01, 2017

Revision Date January 01, 2021

Revision Note

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Manufactured By:



Package For/Supply By:



Delta Bond
156-K
Activator

Issue Date
September 01, 2017

Revision Date: January 01,2021

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code TIM-818EX (Activator)
Product Name ACTIVATOR

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

Recommended Use Activator
Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Manufacturer
Timtronics
35 Old Dock Road
Yaphank, NY 11980
631-345-6509

For further information, please contact

E-mail address info@timtronics.com

1.4. Emergency telephone number

Emergency Telephone 631-345-6509

Transportation Emergency: CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Aspiration toxicity	Category 1 - (H304)
Acute toxicity - Oral	Category 4 - (H302)
Skin corrosion/irritation	Category 2 - (H315)
Specific target organ toxicity (single exposure)	Category 3 - (H335,H336)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

Classification according to Directive 67/548/EEC or 1999/45/EC
Full text of R-phrases: see section 16

2.2. Label elements

Product identifier

Contains Heptane, Isopropyl alcohol



Signal word

Danger

Hazard statements

- H302 - Harmful if swallowed
- H304 - May be fatal if swallowed and enters airways
- H315 - Causes skin irritation
- H410 - Very toxic to aquatic life with long lasting effects
- May cause respiratory irritation. May cause drowsiness or dizziness
- H226 - Flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)

- P321 - Specific treatment (see .? on this label)
- P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
- P331 - Do NOT induce vomiting

2.3. Other hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	EC No.	CAS No.	Weight-%	Classification according to Directive 67/548/EEC or 1999/45/EC	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Heptane	205-563-8	142-82-5	74	F; R11 Xi; R38 N; R50-53 Xn; R65 R67	Skin Irrit. 2 (H315) STOT SE 3 (H336) Asp. Tox. 1 (H304) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Flam. Liq. 2 (H225)	No data available
Isopropyl alcohol	200-661-7	67-63-0	2.4	F; R11 Xi; R36 R67	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)	No data available

Full text of R-phrases: see section 16

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation

Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.

Skin contact	Wash with soap and water. Flush skin with water for several minutes. Remove contaminated clothing and shoes. If irritation develops, seek medical attention. Wash clothing before reuse.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms Avoid prolonged contact with eyes, skin, and clothing.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media
Use CO2, dry chemical, or foam.

Unsuitable extinguishing media
None

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapors

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Ensure adequate ventilation, especially in confined areas.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. Contain and collect spillage 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).

6.3. Methods and material for containment and cleaning up

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep at temperatures between 7 and 29°C.

Incompatible materials

Acids. Strong oxidizing agents.

7.3. Specific end use(s)

Specific use(s)

Adhesives and/or sealants.

Risk Management Methods (RMM)

The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Heptane 142-82-5	TWA 500 ppm TWA 2085 mg/m ³	TWA: 500 ppm TWA: 2085 mg/m ³ STEL: 1500 ppm STEL: 6255 mg/m ³	TWA: 400 ppm TWA: 1668 mg/m ³ TWA: 1000 mg/m ³ STEL: 500 ppm STEL: 2085 mg/m ³ STEL: 1500 mg/m ³	TWA: 500 ppm TWA: 2085 mg/m ³	TWA: 500 ppm TWA: 2100 mg/m ³
Isopropyl alcohol 67-63-0	-	TWA: 400 ppm TWA: 999 mg/m ³ STEL: 500 ppm STEL: 1250 mg/m ³	STEL: 400 ppm STEL: 980 mg/m ³	TWA: 200 ppm TWA: 500 mg/m ³ STEL: 400 ppm STEL: 1000 mg/m ³	TWA: 200 ppm TWA: 500 mg/m ³
Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
Heptane 142-82-5	TWA: 500 ppm TWA: 2085 mg/m ³	TWA: 500 ppm TWA: 2085 mg/m ³ STEL: 500 ppm	TWA: 1200 mg/m ³ STEL: 1600 mg/m ³	TWA: 300 ppm TWA: 1200 mg/m ³ STEL: 500 ppm STEL: 2100 mg/m ³	TWA: 200 ppm TWA: 820 mg/m ³
Isopropyl alcohol 67-63-0	-	TWA: 200 ppm STEL: 400 ppm	-	TWA: 200 ppm TWA: 500 mg/m ³ STEL: 250 ppm STEL: 620 mg/m ³	TWA: 200 ppm TWA: 490 mg/m ³
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Heptane 142-82-5	TWA: 500 ppm TWA: 2000 mg/m ³ STEL 2000 ppm STEL 8000 mg/m ³	TWA: 400 ppm TWA: 1600 mg/m ³ STEL: 400 ppm STEL: 1600 mg/m ³	STEL: 2000 mg/m ³ TWA: 1200 mg/m ³	TWA: 200 ppm TWA: 800 mg/m ³ TWA: 40 ppm TWA: 275 mg/m ³ STEL: 250 ppm STEL: 1000 mg/m ³ STEL: 60 ppm STEL: 343.75 mg/m ³	TWA: 500 ppm TWA: 2085 mg/m ³ STEL: 1500 ppm STEL: 6255 mg/m ³
Isopropyl alcohol 67-63-0	TWA: 200 ppm TWA: 500 mg/m ³	TWA: 200 ppm TWA: 500 mg/m ³	STEL: 1200 mg/m ³ TWA: 900 mg/m ³	TWA: 100 ppm TWA: 245 mg/m ³	TWA: 200 ppm STEL: 400 ppm

	STEL 800 ppm STEL 2000 mg/m ³	STEL: 400 ppm STEL: 1000 mg/m ³		STEL: 150 ppm STEL: 306.25 mg/m ³	Sk*
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Chemical Name	European Union	United Kingdom	France	Spain	Germany
Isopropyl alcohol 67-63-0	-	-	-	40	25 mg/L
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Isopropyl alcohol 67-63-0	-	25	-	-	-

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection Tight sealing safety goggles.
Hand Protection Wear protective gloves.
Skin and body protection Suitable protective clothing.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid	Odor	Aliphatic
Appearance	clear	Odor threshold	No information available
Color	Amber- light yellow		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	does not apply	
Melting point / freezing point		No information available
Boiling point / boiling range	> 90-95	
Flash point	-9 C / 15F	
Evaporation rate		No information available
Flammability (solid, gas)		No information available
Flammability Limit in Air		
Upper flammability limit:	6.7%	
Lower flammability limit:	1.0%	
Vapor pressure	45 mm Hg at 68°F / 20C	
Vapor density	Heavier than air	
Relative density	0.75	
Water solubility	negligible	
Solubility(ies)		No information available
Partition coefficient		No information available
Autoignition temperature	246 °C	
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	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	628 g/L
Density	No information available

Bulk density No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Stable

10.2. Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None.
 Sensitivity to Static Discharge None.

10.3. Possibility of hazardous reactions

Possibility of Hazardous Reactions

None under normal processing.

10.4. Conditions to avoid

Strong oxidizing agents.

10.5. Incompatible materials

Acids. Strong oxidizing agents.

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Product Information

Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation May cause irritation of respiratory tract.
Eye contact Vapor may cause irritation.
Skin contact Irritating to skin. Prolonged skin contact may defat the skin and produce dermatitis.
Ingestion Ingestion may cause irritation to mucous membranes.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 1,870.00
ATEmix (dermal) 3,025.00
ATEmix (inhalation-gas) 25,000.00
ATEmix (inhalation-dust/mist) 69.00

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Heptane		= 3000 mg/kg (Rabbit)	= 103 g/m ³ (Rat) 4 h
Isopropyl alcohol	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m ³ (Rat) 4 h

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation	No information available.
Sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Unknown Aquatic Toxicity 23.6 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Heptane	-	375.0: 96 h Cichlid fish mg/L LC50	10: 24 h Daphnia magna mg/L EC50
Isopropyl alcohol	1000: 96 h Desmodesmus subspicatus mg/L EC50 1000: 72 h Desmodesmus subspicatus mg/L EC50	9640: 96 h Pimephales promelas mg/L LC50 flow-through 11130: 96 h Pimephales promelas mg/L LC50 static 1400000: 96 h Lepomis macrochirus µg/L LC50	13299: 48 h Daphnia magna mg/L EC50

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Chemical Name	Partition coefficient
Heptane	4.66
Isopropyl alcohol	0.05

12.4. Mobility in soil

Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products

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

Contaminated packaging

Improper disposal or reuse of this container may be dangerous and illegal.

Section 14: TRANSPORT INFORMATION

IMDG

14.1 UN/ID no. UN 1993
 14.2 Proper shipping name Flammable Liquid, n.o.s. (heptanes, isopropanol)
 14.3 Hazard Class 3
 14.4 Packing Group II
 14.5 Marine pollutant None
 14.6 Special Provisions None
 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

RID

14.1 UN/ID no. UN 1993
 14.2 Proper shipping name Flammable Liquid, n.o.s. (heptanes, isopropanol)
 14.3 Hazard Class 3
 14.4 Packing Group II
 14.5 Environmental hazard Not applicable
 14.6 Special Provisions None

ADR

14.1 UN/ID no. UN 1993
 14.2 Proper shipping name Flammable Liquid, n.o.s. (heptanes, isopropanol)
 14.3 Hazard Class 3
 14.4 Packing Group II
 14.5 Environmental hazard Not applicable
 14.6 Special Provisions None

IATA

14.1 UN/ID no. UN1993
 14.2 Proper shipping name Flammable Liquid, n.o.s. (heptanes, isopropanol)
 14.3 Hazard Class 3
 14.4 Packing Group II
 Description May Qualify as Consumer Commodity ID8000 (Not more than 500 ml)
 14.5 Environmental hazard Not applicable
 14.6 Special Provisions None

Section 15: REGULATORY INFORMATION

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

Chemical Name	French RG number	Title
Heptane 142-82-5	RG 84	-
Isopropyl alcohol 67-63-0	RG 84	-

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants - Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable
International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

All ingredients are on the inventory or are exempt from listing.

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

15.2. Chemical safety assessment - No information available

Section 16: OTHER INFORMATION

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

Full text of R-phrases referred to under sections 2 and 3 - No information available

Full text of H-Statements referred to under section 3

H315 - Causes skin irritation
 H336 - May cause drowsiness or dizziness
 H304 - May be fatal if swallowed and enters airways
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects
 H225 - Highly flammable liquid and vapor
 H319 - Causes serious eye irritation

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Prepared By:

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This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet