



Revision Number 2

Causes skin irritation.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.



Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection and face protection. Wash face, hands and any exposed skin thoroughly after handling. Avoid breathing dust, fume, gas, mist, vapors and spray. Use only outdoors or in a well-ventilated area.

Precautionary Statements - Response

Specific treatment (see supplemental first aid instructions on this label). IF exposed or concerned: Get medical advice/attention.

Eyes

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 and attention.

Skin

IF ON SKIN: Wash with plenty of water and soap. If skin irritation occurs: Get medical advice and attention. Take off contaminated clothing and wash it before reuse.

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements - Disposal

Dispose of contents and container to an approved waste disposal plant.

Other information

Toxic to aquatic life with long lasting effects. Harmful to aquatic life.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Synthetic Ester	-	10-30	RN - 10941	-
Hydrocarbyl Amine	PROPRIETARY	5-10	RN - 10941	-
Benzene, 1,2,4-trimethyl-	95-63-6	0.1-1	-	-
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	0.1-1	-	-

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Chemical Additions

The classification as a carcinogen does not apply as it can be shown that the substance(s) contain(s) less than 3% DMSO extract as measured by IP 346.



4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms	Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization in susceptible persons. May cause gastrointestinal discomfort if consumed in large amounts. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness and difficulty breathing. May cause redness and tearing of the eyes. Burning sensation. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	Containers can burst or explode when heated, due to excessive pressure build-up. Thermal decomposition can lead to release of irritating gases and vapors.
Hazardous combustion products	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.
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Other information	Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.
<u>Methods and material for containment and cleaning up</u>	
Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	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). Clean contaminated surface thoroughly. After cleaning, flush away traces with water.
Reference to other sections	For additional information see: Section 8: Exposure controls/personal protection; Section 12: Ecological information; Section 13: Disposal considerations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling	Avoid contact with used product. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse. Ensure adequate ventilation. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Do not reuse empty containers. Store away from incompatible materials. See section 10 for more information. Store locked up. Store in accordance with local regulations.
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8. Exposure controls/personal protection

Control parameters

Exposure Limits	Under conditions which may generate mists, the following exposure limits are recommended: Long-term exposure limit (8-hour TWA): 5 mg/m³. Short-term exposure limit (15-minute): 10 mg/m³.
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Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Benzene, 1,2,4-trimethyl- 95-63-6	TWA: 10 ppm	-	TWA: 25 ppm TWA: 125 mg/m³

Biological occupational exposure limits	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.
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Appropriate engineering controls

Engineering controls	Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas.
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Individual protection measures, such as personal protective equipment

Eye/face protection	If there is a risk of contact: Wear safety glasses with side shields (or goggles).
Hand protection	If there is a risk of contact: Wear suitable gloves. Impervious gloves. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.



Skin and body protection	If there is a risk of contact: Wear suitable protective clothing. Long sleeved clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Environmental exposure controls	Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance		
Physical state	Liquid	
Color	Blue	
Odor	Hydrocarbons	
Odor threshold	No information available	
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH		No data available
Melting point / freezing point		No data available
Initial boiling point and boiling range		No data available
Flash point	104 °C / 219.2 °F	Cleveland Open Cup ASTM D 92
Evaporation rate		No data available
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Vapor pressure		No data available
Vapor density		No data available
Relative density	0.8670	No data available
Water solubility		No data available
Solubility(ies)		No data available
Partition coefficient		No data available
Autoignition temperature		No data available
Decomposition temperature		No data available
Kinematic viscosity	37.3 cSt at 40 °C 7.3 cSt at 100 °C	ASTM D445
Dynamic viscosity		No data available
<u>Other information</u>		
Explosive properties	No information available.	
Oxidizing properties	No information available.	
Softening point	No information available	
Pour Point	-55°C [ASTM D 97]	
Fire Point	104°C (COC) [ASTM D 92]	
Molecular weight	No information available	
VOC content	No information available	
Liquid Density	No information available	
Bulk density	No information available	

10. Stability and reactivity

Reactivity	None under normal use conditions.
Chemical stability	Stable under normal conditions.



Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.
Hazardous decomposition products	Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. May cause drowsiness or dizziness.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization in susceptible persons. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness and difficulty breathing. Redness. May cause redness and tearing of the eyes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
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Acute toxicity

Numerical measures of toxicity

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

ATEmix (dermal)	49,524.20 mg/kg
ATEmix (inhalation-dust/mist)	54.30 mg/l
ATEmix (inhalation-vapor)	695.60 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Benzene, 1,2,4-trimethyl-	= 3280 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	= 18 g/m³ (Rat) 4 h
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes skin irritation.

Component Information	
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	
Method	OECD Test No. 404: Acute Dermal Irritation/Corrosion

Species	Rabbit
Exposure route	Dermal
Effective dose	0.5 mL
Exposure time	4 hours
Results	Mild skin irritant

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Component Information	
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	
Method	OECD Test No. 405: Acute Eye Irritation/Corrosion
Species	Rabbit
Exposure route	Eye
Effective dose	0.1 mL
Results	non-irritant

Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	The supplier declares that it can be shown that the substance(s) contain less than 3% DMSO extract as measured by IP 346.
Reproductive toxicity	Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. Suspected of damaging fertility or the unborn child.
STOT - single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.
STOT - repeated exposure	No information available.
Aspiration hazard	Due to the viscosity, this product does not present an aspiration hazard.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects. Harmful to aquatic life.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Benzene, 1,2,4-trimethyl-95-63-6	-	LC50: 7.19 - 8.28mg/L (96h, Pimephales promelas)	-	EC50: =6.14mg/L (48h, Daphnia magna)
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene 68411-46-1	EC50: 51mg/L (48h, Daphnia magna)	LC50: >100mg/L (96h, Danio rerio)	-	-

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Benzene, 1,2,4-trimethyl-95-63-6	3.63
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene 68411-46-1	6.66

Mobility in soil No information available.



Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations, Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT

UN/ID no UN3082

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es) 9

Packing group III

Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29

DOT Marine Pollutant I

Marine pollutant Hydrogenated base oil, Hydrogenated base oil

Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hydrogenated base oil, Hydrogenated base oil), 9, III, Marine pollutant

Emergency Response Guide Number 171

TDG

UN/ID no UN3082

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es) 9

Packing group III

Special Provisions 16, 99

Marine pollutant Diphenylamine, Naphthalene.

Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Benzene, 1,2,4-trimethyl-), 9, III

IATA

UN number or ID number UN3082

UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.

Transport hazard class(es) 9

Packing group III

ERG Code 9L

Special Provisions A97, A158, A197

Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Diphenylamine, Naphthalene), 9, III

IMDG

UN number or ID number UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es) 9

Packing group III

EmS-No F-A, S-F

Special Provisions 274, 335, 969

Marine pollutant P

Marine pollutant Diphenylamine, Naphthalene

Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Diphenylamine, Naphthalene), 9, III, Marine pollutant

15. Regulatory information



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

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

Contact supplier for inventory compliance status

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Benzene, 1,2,4-trimethyl- - 95-63-6	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

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).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Cumene - 98-82-8	Carcinogen
Naphthalene - 91-20-3	Carcinogen
Benzene - 71-43-2	Carcinogen Developmental Male Reproductive
Ethylbenzene - 100-41-4	Carcinogen
Toluene - 108-88-3	Developmental

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Benzene, 1,2,4-trimethyl- 95-63-6	X	X	X

Benzene, 1,3,5-trimethyl- 108-67-8	-	X	-
Cumene 98-82-8	X	X	X
Dipropylene Glycol Monomethyl Ether 34590-94-8	X	X	X
Diphenylamine 122-39-4	X	X	X
Naphthalene 91-20-3	X	X	X
Benzene 71-43-2	X	X	X
n-Propylbenzene 103-65-1	X	X	X
Xylene 1330-20-7	X	X	X
Toluene 108-88-3	X	X	X
Ethylbenzene 100-41-4	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Key literature references and sources for data used to compile the SDS

U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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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

