

Safety Data Sheet

According to U.S.A. Federal Hazcom 2012

1. Identification

1.1. Product identifier

Code: **US.CAT.NN.033**
Product name: **B-33**

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

Intended use: **CATALYST - HARDENER FOR POLYURETHANE PAINTS**

1.3. Details of the supplier of the safety data sheet

Name: **ASTRA VERNICI S.R.L.**
Full address: **Via Della Industria, 4**
District and Country: **24052 Azzano San Paolo (BG) Italia**
Tel.: **+39 035 530019**
Fax: **+39 035 531714**
e-mail address of the competent person responsible for the Safety Data Sheet: **msds@astravernici.it**

1.4. Emergency telephone number

For urgent inquiries refer to: **+39035530019**

2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200). The product thus requires a safety datasheet.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Classification and Hazard Statement

Flammable liquid, category 2

Carcinogenicity, category 2

Eye irritation, category 2

Respiratory sensitization, category 1

Skin sensitization, category 1

Specific target organ toxicity - single exposure, category 3

Hazard pictograms:



Signal words:

Danger

Hazard statements:

H225

Highly flammable liquid and vapour.

H351

Suspected of causing cancer.

H319

Causes serious eye irritation.

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317

May cause an allergic skin reaction.

H336

May cause drowsiness or dizziness.

Precautionary statements:

Prevention:

P210

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261

Avoid breathing dust / fume / gas / mist / vapours / spray.

2. Hazards identification ... / >>

P202	Do not handle until all safety precautions have been read and understood.
P242	Use only non-sparking tools.
P201	Obtain special instructions before use.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P271	Use only outdoors or in a well-ventilated area.
P264	Accurately wash thoroughly after handling.
P240	Ground / bond container and receiving equipment.
P243	Take precautionary measures against static discharge.
P241	Use explosion-proof electrical / ventilating / lighting / equipment.
P272	Contaminated work clothing should not be allowed out of the workplace.
P284	[In case of inadequate ventilation] wear respiratory protection.

Response:

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.
P308+P313	IF exposed or concerned: Get medical advice / attention.
P312	Call a POISON CENTER / doctor / if you feel unwell.
P342+P311	If experiencing respiratory symptoms: call a POISON CENTER / doctor.
P333+P313	If skin irritation or rash occurs: Get medical advice / attention.
P337+P313	If eye irritation persists: Get medical advice / attention.
P304+P340	IF INHALED: remove person to fresh air and keep comfortable for breathing.
P302+P352	IF ON SKIN: wash with plenty of water.
P370+P378	In case of fire: Use dry chemical or CO2 to extinguish.
P363	Wash contaminated clothing before reuse.

Storage:

P403+P235	Store in a well-ventilated place. Keep cool.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal:

P501	Dispose of contents / container through a procedure in accordance with the regulations.
-------------	---

2.2. Other hazards

Additional hazards

Repeated exposure may cause skin dryness or cracking.

3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	Conc. %	Classification:
N-BUTYL ACETATE		
INDEX 607-025-00-1	40.5	Flammable liquid, category 3 H226, Specific target organ toxicity - single exposure, category 3 H336
EC 204-658-1		
CAS 123-86-4		
REACH Reg. 01-2119485493-29-xxxx		
ETHYL ACETATE		
INDEX 607-022-00-5	22.75	Flammable liquid, category 2 H225, Eye irritation, category 2 H319, Specific target organ toxicity - single exposure, category 3 H336
EC 205-500-4		
CAS 141-78-6		
REACH Reg. 01-2119475103-46-xxxx		
TOLUENE DIISOCYANATE, OLIGOMERIC REACTION PRODUCTS WITH 2,2'-OXYDIETHANOL AND PROPYLIDENETRIMETHANOL		
	14.155	Eye irritation, category 2 H319, Skin sensitization, category 1 H317
EC 500-120-8		
CAS 53317-61-6		
REACH Reg. Non disponibile / Not available		
BENZENE, 1,3-DIISOCYANATOMETHYL-, HOMOPOLYMER		
	12.475	Eye irritation, category 2 H319, Respiratory sensitization, category 1 H334, Skin sensitization, category 1 H317
EC 618-500-8		
CAS 9017-01-0		
REACH Reg. Non disponibile / Not available		

3. Composition/information on ingredients ... / >>

ETHYL METHYL KETONE

INDEX 606-002-00-3 10

Flammable liquid, category 2 H225, Eye irritation, category 2 H319, Specific target organ toxicity - single exposure, category 3 H336

EC 201-159-0

CAS 78-93-3

REACH Reg. 01-2119457290-43-xxxx

M-TOLYLIDENE DIISOCYANATE

INDEX 615-006-00-4 0.12

Carcinogenicity, category 2 H351, Acute toxicity, category 1 H330, Eye irritation, category 2 H319, Skin irritation, category 2 H315, Specific target organ toxicity - single exposure, category 3 H335, Respiratory sensitization, category 1 H334, Skin sensitization, category 1 H317, Hazardous to the aquatic environment, chronic toxicity, category 3 H412

EC 247-722-4

CAS 26471-62-5

REACH Reg. 01-2119454791-34-xxxx

The full wording of hazard (H) phrases is given in section 16 of the sheet.

4. First-aid measures

4.1. Description of first aid measures

In case of doubt or in the presence of symptoms contact a doctor and show him this document.

In case of more severe symptoms, ask for immediate medical aid.

EYES: Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Take off immediately all contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice/attention. Avoid further contact with contaminated clothing.

INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.

INHALATION: Remove victim to fresh air, away from the accident scene. In the event of respiratory symptoms (coughing, wheezing, breathing difficulty, asthma) keep the victim in a comfortable position for breathing. If necessary administer oxygen. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.

Rescuer protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

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

Specific information on symptoms and effects caused by the product are unknown.

DELAYED EFFECTS: Based on the information currently available, there are no known cases of delayed effects following exposure to this product.

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

If symptoms occur, whether acute or delayed, consult a doctor.

Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

5. Fire-fighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

5. Fire-fighting measures ... / >>**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3. Advice for firefighters**GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7. Handling and storage**7.1. Precautions for safe handling**

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

USA	NIOSH-REL	NIOSH publication No. 2005-149, 3th printing, 2007.
USA	OSHA-PEL	Occupational Exposure Limits - Limits for Air Contaminants TABLE Z-1-1910.1000.
USA	CAL/OSHA-PEL	California Division of Occupational Safety and Health (Cal-OSHA) Permissible Exposure Limits (PELs).
EU	OEL EU	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2025

M-TOLYLIDENE DIISOCYANATE

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min	Remarks / Observations
		mg/m3	ppm	
OEL	EU	0.01	0.02	SKIN

ETHYL METHYL KETONE

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min	Remarks / Observations
		mg/m3	ppm	
OEL	EU	600	900	
ACGIH	-	590	885	
ACGIH	-		75	SKIN
OSHA	USA	590		
CAL/OSHA	USA	590	885	
NIOSH	USA	590	885	

ETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min	Remarks / Observations
		mg/m3	ppm	
OEL	EU	734	1468	
ACGIH	-	1441	400	
OSHA	USA	1400		
CAL/OSHA	USA	1400		
NIOSH	USA	1400		

N-BUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min	Remarks / Observations
		mg/m3	ppm	
OEL	EU	241	723	
ACGIH	-		50	
OSHA	USA	710		
CAL/OSHA	USA	710	950	
NIOSH	USA	710	950	

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

TOLUENE DIISOCYANATE, OLIGOMERIC REACTION PRODUCTS WITH 2,2'-OXYDIETHANOL AND PROPYLIDENETRIMETHANOL
TOLUENE DIISOCIANATO: Adopted Biological Exposure Indices (BEIs) - ACGIH (2012): Determinant: Toluene diamine in urine /
Sampling Time: End of shift / BEI@: 5 µg/g creatinine / Notation: Ns = Non specific

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must comply with current regulations.

HAND PROTECTION

8. Exposure controls/personal protection ... / >>

Protect hands with category III work gloves.

The following should be considered when choosing work glove material (OSHA 29 CFR 1910.138): compatibility, degradation, permeability time.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear. Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (OSHA 29 CFR 1910.133).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a NIOSH certified filter, whose limit of use will be defined by the manufacturer (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84, OSHA 29 CFR 1910.134.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	typical of solvent	
Odour threshold	not available	
pH	not available	Reason for missing data:substance/mixture is non-polar/aprotic (eg: an organic solvent mixture)
Melting point / freezing point	not available	
Initial boiling point	> 35 °C (95 °F)	
Boiling range	not available	
Flash point	< 23 °C (73,4 °F)	
Evaporation rate	not available	
Flammability	flammable liquid	
Lower explosive limit	not available	
Upper explosive limit	not available	
Vapour pressure	not available	
Vapour density	not available	
Relative density	0.97 Kg/l	
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	not available	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
Viscosity	19,1 mm ² /s	Temperature: 20 °C
Explosive properties	not applicable	
Oxidising properties	not applicable	

9.2. Other information

Total solids (250°C / 482°F)	26,75 %
VOC :	73,23 % - 710,28 g/litre

10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

ETHYL METHYL KETONE

Reacts with: light metals, strong oxidants. Attacks various types of plastic materials. Decomposes under the effect of heat.

10. Stability and reactivity ... / >>**ETHYL ACETATE**

Decomposes slowly into acetic acid and ethanol under the effect of light, air and water.

N-BUTYL ACETATE

Decomposes on contact with: water.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

M-TOLYLIDENE DIISOCYANATE

SADT = 230°C/446°F.

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

ETHYL METHYL KETONE

May form peroxides with: air, light, strong oxidising agents. Risk of explosion on contact with: hydrogen peroxide, nitric acid, sulphuric acid. May react dangerously with: oxidising agents, trichloromethane, alkalis. Forms explosive mixtures with: air.

ETHYL ACETATE

Risk of explosion on contact with: alkaline metals, hydrides, oleum. May react violently with: fluorine, strong oxidising agents, chlorosulphuric acid, potassium tert-butoxide. Forms explosive mixtures with: air.

N-BUTYL ACETATE

Risk of explosion on contact with: strong oxidising agents. May react dangerously with: alkaline hydroxides, potassium tert-butoxide. Forms explosive mixtures with: air.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

ETHYL METHYL KETONE

Avoid exposure to: sources of heat.

ETHYL ACETATE

Avoid exposure to: light, sources of heat, naked flames.

N-BUTYL ACETATE

Avoid exposure to: moisture, sources of heat, naked flames.

10.5. Incompatible materials**ETHYL METHYL KETONE**

Incompatible with: strong oxidants, inorganic acids, ammonia, copper, chloroform.

ETHYL ACETATE

Incompatible with: acids, bases, strong oxidants, chlorosulphuric acid.

N-BUTYL ACETATE

Incompatible with: water, nitrates, strong oxidants, acids, alkalis, zinc.

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effectsMetabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure**N-BUTYL ACETATE**

WORKERS: inhalation; contact with the skin.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**N-BUTYL ACETATE**

In humans, the substance's vapours cause irritation of the eyes and nose. In the event of repeated exposure, skin irritation, dermatitis (dryness and cracking of the skin) and keratitis appear.

11. Toxicological information ... / >>Interactive effects**N-BUTYL ACETATE**

A case of acute intoxication been reported involving a 33 year old worker while cleaning a tank with a preparation containing xylenes, butyl acetate and ethylene glycol acetate. The person had irritation of the conjunctiva and upper respiratory tract, drowsiness and motor coordination disorders, which disappeared within 5 hours. The symptoms are attributed to poisoning by mixed xylenes and butyl acetate, with a possible synergistic effect responsible for the neurological effects. Cases of vacuolar keratitis are reported in workers exposed to a mixture of butyl acetate and isobutanol vapours, but with uncertainty concerning the responsibility of a particular solvent (INRC, 2011).

ACUTE TOXICITY**N-BUTYL ACETATE**

LD50 (Oral):	> 6400 mg/kg Rat
LD50 (Dermal):	> 5000 mg/kg Rabbit
LC50 (Inhalation vapours):	21.1 mg/l/4h Rat

ETHYL METHYL KETONE

LD50 (Oral):	2737 mg/kg Rat
LD50 (Dermal):	6480 mg/kg Rabbit
LC50 (Inhalation vapours):	23.5 mg/l/8h Rat

M-TOLYLIDENE DIISOCYANATE

LD50 (Oral):	4130 mg/kg Mouse
LD50 (Dermal):	> 9400 mg/kg Rabbit
LC50 (Inhalation vapours):	0.48 mg/l/1h Rat

SKIN CORROSION / IRRITATION

Repeated exposure may cause skin dryness or cracking.

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin
Sensitising for the respiratory system

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Suspected of causing cancer
Carcinogenicity Assessment:
26471-62-5 M-TOLYLIDENE DIISOCYANATE
IARC:2B
NTP: Reasonably Anticipated

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

M-TOLYLIDENE DIISOCYANATE	
LC50 - for Fish	133 mg/l/96h <i>Oncorhynchus mykiss</i>
EC50 - for Crustacea	18.3 mg/l/48h <i>Americamysis bahia</i>
EC50 - for Algae / Aquatic Plants	4000 mg/l/72h <i>Chlorella vulgaris</i>

12.2. Persistence and degradability

N-BUTYL ACETATE	
Solubility in water	1000 - 10000 mg/l
ETHYL ACETATE	
Solubility in water	> 10000 mg/l
Rapidly degradable	
ETHYL METHYL KETONE	
Solubility in water	> 10000 mg/l
Rapidly degradable	
M-TOLYLIDENE DIISOCYANATE	
Solubility in water	0.1 mg/l
Inherently degradable	

12.3. Bioaccumulative potential

N-BUTYL ACETATE	
Partition coefficient: n-octanol/water	2.3
BCF	15.3
ETHYL ACETATE	
Partition coefficient: n-octanol/water	0.68
BCF	30
ETHYL METHYL KETONE	
Partition coefficient: n-octanol/water	0.3
M-TOLYLIDENE DIISOCYANATE	
Partition coefficient: n-octanol/water	3.43

12.4. Mobility in soil

N-BUTYL ACETATE	
Partition coefficient: soil/water	< 3

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage $\geq$ than 0,1%.

12.6. Other adverse effects

Information not available

13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
The management of waste arising from the use or dispersal of this product must be organised in accordance with occupational safety regulations. See section 8 for possible need for PPE.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

14. Transport information

Classification according to the UN model on transport of dangerous goods.

14.1. UN number

ADR / RID, IMDG, IATA: UN 1263

14.2. UN proper shipping name

ADR / RID: PAINT RELATED MATERIAL
IMDG: PAINT RELATED MATERIAL
IATA: PAINT RELATED MATERIAL

14.3. Transport hazard class(es)

ADR / RID: Class: 3 Label: 3

IMDG: Class: 3 Label: 3

IATA: Class: 3 Label: 3



14.4. Packing group

ADR / RID, IMDG, IATA: II

14.5. Environmental hazards

ADR / RID: NO
IMDG: not marine pollutant
IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 33	Limited Quantities: 5 lt	Tunnel restriction code: (D/E)
	Special provision: 163, 367, 640C, 650		
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 lt	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 364
	Passengers:	Maximum quantity: 5 L	Packaging instructions: 353
	Special provision:	A3, A72, A192	

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

15. Regulatory information

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

U.S. Federal Regulations

15. Regulatory information ... / >>**TSCA:**

All components of this product are listed on US Toxic Substances Control Act (TSCA) Inventory or are exempt from the listing / notification requirements.

Clean Air Act Section 112(b):

No component(s) listed.

Clean Air Act Section 602 Class I Substances:

No component(s) listed.

Clean Air Act Section 602 Class II Substances:

No component(s) listed.

Clean Water Act – Priority Pollutants:

No component(s) listed.

Clean Water Act – Toxic Pollutants:

No component(s) listed.

DEA List I Chemicals (Precursor Chemicals):

No component(s) listed.

DEA List II Chemicals (Essential Chemicals):

78-93-3 ETHYL METHYL KETONE

EPA List of Lists:**313 Category Code:**

26471-62-5 M-TOLYLIDENE DIISOCYANATE (Diisocyanate)

EPCRA 302 EHS TPQ:

No component(s) listed.

EPCRA 304 EHS RQ:

No component(s) listed.

CERCLA RQ:

26471-62-5 M-TOLYLIDENE DIISOCYANATE (Diisocyanate)
78-93-3 ETHYL METHYL KETONE
141-78-6 ETHYL ACETATE
123-86-4 N-BUTYL ACETATE

EPCRA 313 TRI:

26471-62-5 M-TOLYLIDENE DIISOCYANATE (Diisocyanate)

RCRA Code:

26471-62-5 M-TOLYLIDENE DIISOCYANATE (Diisocyanate)
78-93-3 ETHYL METHYL KETONE
141-78-6 ETHYL ACETATE

CAA 112 (r) RMP TQ:

26471-62-5 M-TOLYLIDENE DIISOCYANATE (Diisocyanate)

State Regulations**Massachusetts:**

26471-62-5 M-TOLYLIDENE DIISOCYANATE (Diisocyanate)
78-93-3 ETHYL METHYL KETONE
141-78-6 ETHYL ACETATE
123-86-4 N-BUTYL ACETATE

Minnesota:

26471-62-5 M-TOLYLIDENE DIISOCYANATE (Diisocyanate)
78-93-3 ETHYL METHYL KETONE
141-78-6 ETHYL ACETATE
123-86-4 N-BUTYL ACETATE

New Jersey:

26471-62-5 M-TOLYLIDENE DIISOCYANATE (Diisocyanate)
78-93-3 ETHYL METHYL KETONE

15. Regulatory information ... / >>

141-78-6 ETHYL ACETATE
123-86-4 N-BUTYL ACETATE

New York:

26471-62-5 M-TOLYLIDENE DIISOCYANATE (Diisocyanate)
78-93-3 ETHYL METHYL KETONE
141-78-6 ETHYL ACETATE
123-86-4 N-BUTYL ACETATE

Pennsylvania:

26471-62-5 M-TOLYLIDENE DIISOCYANATE (Diisocyanate)
78-93-3 ETHYL METHYL KETONE
141-78-6 ETHYL ACETATE
123-86-4 N-BUTYL ACETATE

California:

26471-62-5 M-TOLYLIDENE DIISOCYANATE (Diisocyanate)
78-93-3 ETHYL METHYL KETONE
141-78-6 ETHYL ACETATE
123-86-4 N-BUTYL ACETATE

Proposition 65:

WARNING! This product contains chemicals known to the State of California to cause cancer and birth defects or reproductive harm.

26471-62-5 M-TOLYLIDENE DIISOCYANATE

2047102-5 M-10-1 POLYBIDENE DISODIUM							
		NSRL / MADL (µg/day)					
Hazard type		Oral	Dermal	Inhalation	Intravenous	Note	
Carcinogenicity		20				-	

International Regulations

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H351	Suspected of causing cancer.
H330	Fatal if inhaled.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

LEGEND:

- 313 CATEGORY CODE: Emergency Planning and Community Right-to Know Act Section 313 Category Code
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAA 112 © RMP TQ: Risk Management Plan Threshold Quantity (Clean Air Act Section 112©)
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CERCLA RQ: Reportable Quantity (Comprehensive Environment Response, Compensation, and Liability Act)
- CLP: Regulation (EC) 1272/2008
- DEA: Drug Enforcement Administration
- EmS: Emergency Schedule
- EPA: US Environmental Protection Agency
- EPCRA: Emergency Planning and Community Right-to Know Act
- EPCRA 302 EHS TPQ: Extremely Hazardous Substance Threshold Planning Quantity (Section 302 Category Code)

16. Other information ... / >>

- EPCRA 304 EHS RQ: Extremely Hazardous Substance Reportable Quantity (Section 304 Category Code)
- EPCRA 313 TRI: Toxics Release Inventory (Section 313 Category Code)
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PEL: Predicted exposure level
- RCRA Code: Resource Conservation and Recovery Act Code
- REACH: Regulation (EC) 1907/2006
- REL: Recommended exposure limit
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TSCA: Toxic Substances Control Act
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- WHMIS: Workplace Hazardous Materials Information System.

GENERAL BIBLIOGRAPHY:

- GHS rev. 3
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy
- 6 NYCRR part 597
- Cal/OSHA website
- California Safe Drinking Water and Toxic Enforcement Act
- EPA website
- Hazard Communication Standard (HCS 2012)
- IARC website
- List Of Lists EPA: Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112© of the Clean Air Act
- Massachusetts 105 CMR Department of public health 670.000: "Right to Know"
- Minnesota Chapter 5206 Department Of Labor and Industry Hazardous Substances, Employee "Right to Know".
- New Jersey Worker and Community Right to know Act N.J.S.A.
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Pennsylvania, Hazardous Substance List, Chapter 323

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION

Product classification derives from criteria established by the OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200), unless determined otherwise in Section 11 and 12. The data for evaluation of chemical-physical properties are reported in section 9.

Changes to previous review:

The following sections were modified:

03 / 08 / 09 / 14.