SAFETY DATA SHEET

Enduro-Var Flat



Section 1. Identification

GHS product identifier

: Enduro-Var Flat

Product code

: Not available.

Other means of identification

: Not available.

Product type

: Liquid.

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

Identified uses : Water-based coating.

Manufacturer : General Finishes

2462 Corporate Circle East Troy, WI 53120

U.S.A.

Phone no.: 262-642-4545 Toll free no.: 1-800-783-6050 Fax no.: 262-642-4707 Web: GeneralFinishes.com

Emergency telephone number (with hours of

: CHEMTREC, U.S. : 1-800-424-9300

International: +1-703-527-3887

(24/7)

Section 2. Hazards identification

OSHA/HCS status

operation)

: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

: SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Unborn child) - Category 1B

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

GHS label elements

Hazard pictograms :





Signal word : Danger

Hazard statements : H319 - Causes serious eye irritation.

H315 - Causes skin irritation.

H360 - May damage the unborn child. H335 - May cause respiratory irritation.

Precautionary statements





Section 2. Hazards identification

Prevention

: P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.

P271 - Use only outdoors or in a well-ventilated area.

P261 - Avoid breathing vapor.

P264 - Wash hands thoroughly after handling.

Response : P308 + P313 - IF exposed or concerned: Get medical attention.

P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable

for breathing. Call a POISON CENTER or physician if you feel unwell.

P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off

contaminated clothing and wash it before reuse.

P332 + P313 - If skin irritation occurs: Get medical attention.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical attention.

Storage

: P405 - Store locked up.

Disposal

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise

classified

: None known.

Section 3. Composition/information on ingredients

Substance/mixture

Other means of identification

: Mixture

: Not available.

Ingredient name	%	CAS number
N-methyl-2-pyrrolidone	≥10 - ≤25	872-50-4
Triethylamine	≥1 - <3	121-44-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.

Inhalation

: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.



Section 4. First aid measures

Skin contact

: Flush contaminated skin with plenty of water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.Inhalation : May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact

: Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation

: Adverse symptoms may include the following:

respiratory tract irritation

coughing

reduced fetal weight increase in fetal deaths skeletal malformations

Skin contact

: Adverse symptoms may include the following:

irritation redness

reduced fetal weight increase in fetal deaths skeletal malformations

Ingestion

: Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments

: No specific treatment.

Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.



Section 4. First aid measures

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

: In case of fire, use water spray (fog), foam, dry chemical or CO₂.

Unsuitable extinguishing media

: None known.

Specific hazards arising from the chemical

Hazardous thermal decomposition products

: In a fire or if heated, a pressure increase will occur and the container may burst.

 Decomposition products may include the following materials: carbon dioxide carbon monoxide

nitrogen oxides

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Spill

: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.



Section 7. Handling and storage

Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

United States

Occupational exposure limits

Exposure limits
AIHA WEEL (United States, 10/2011). Absorbed through skin.
TWA: 10 ppm 8 hours.
ACGIH TLV (United States, 3/2017). Absorbed through skin.
TWA: 0.5 ppm 8 hours.
STEL: 1 ppm 15 minutes.
OSHA PEL (United States, 6/2016).
TWA: 25 ppm 8 hours.
TWA: 100 mg/m³ 8 hours.

Canada

Occupational exposure limits

Ingredient name	Exposure limits
N-methyl-2-pyrrolidone	CA Ontario Provincial (Canada, 7/2015).
	TWA: 400 mg/m ³ 8 hours.
Triethylamine	CA Alberta Provincial (Canada, 4/2009). Absorbed through skin.
•	8 hrs OEL: 4.1 mg/m³ 8 hours.
	8 hrs OEL: 1 ppm 8 hours.
	15 min OEL: 3 ppm 15 minutes.
	15 min OEL: 12 mg/m³ 15 minutes.
	CA British Columbia Provincial (Canada, 7/2016). Absorbed through
	skin.
	TWA: 1 ppm 8 hours.
	STEL: 3 ppm 15 minutes.
	CA Ontario Provincial (Canada, 7/2015). Absorbed through skin.
	TWA: 1 ppm 8 hours.
	STEL: 3 ppm 15 minutes.
	CA Quebec Provincial (Canada, 1/2014). Absorbed through skin.
	TWAEV: 5 ppm 8 hours.
	TWAEV: 20.5 mg/m³ 8 hours.
	STEV: 15 ppm 15 minutes.



Section 8. Exposure controls/personal protection

STEV: 61.5 mg/m3 15 minutes.

CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through

skin.

STEL: 3 ppm 15 minutes. TWA: 1 ppm 8 hours.

Appropriate engineering controls

: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.
Color : Yellow.

Odor : Not available.
Odor threshold : Not available.

pH : 8.5

Melting point : Not available.

Boiling point : >100°C (>212°F)





Section 9. Physical and chemical properties

: Closed cup: >98.889°C (>210°F) Flash point

Evaporation rate : Not available. Flammability (solid, gas) : Not available. Lower and upper explosive : Not available.

(flammable) limits

Vapor pressure : Not available. Vapor density : Not available.

Relative density

: Miscible in water. Solubility Partition coefficient: n-: Not available.

octanol/water

Auto-ignition temperature

: Not available. **Decomposition temperature** : Not available.

: Dynamic (room temperature): 70 mPa·s (70 cP) **Viscosity**

VOC content : 244 g/L Flow time (ISO 2431) : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

: The product is stable. **Chemical stability**

Possibility of hazardous

reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition

products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
N-methyl-2-pyrrolidone	LD50 Dermal	Rabbit	8 g/kg	-
	LD50 Oral	Rat	3914 mg/kg	-
Triethylamine	LD50 Oral	Rat	460 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
N-methyl-2-pyrrolidone Triethylamine	Eyes - Moderate irritant Skin - Mild irritant	Rabbit Rabbit	-	100 mg 365 mg	-

Sensitization

There is no data available.

Mutagenicity





Section 11. Toxicological information

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

Name	Category	Target organs
N-methyl-2-pyrrolidone Triethylamine	Category 3 Category 3	Respiratory tract irritation Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure

: Dermal contact. Eye contact. Ingestion.

Potential acute health effects

Eye contact : Causes serious eye irritation. **Inhalation** : May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

reduced fetal weight increase in fetal deaths skeletal malformations

Skin contact: Adverse symptoms may include the following:

irritation redness

reduced fetal weight increase in fetal deaths skeletal malformations

Ingestion: Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

<u>Delayed and immediate effects and also chronic effects from short and long term exposure</u> <u>Short term exposure</u>





Section 11. Toxicological information

Potential immediate

effects

: No known significant effects or critical hazards.

Potential delayed effects

: No known significant effects or critical hazards.

Long term exposure

Potential immediate

effects

: No known significant effects or critical hazards.

Potential delayed effects

: No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards. Carcinogenicity : No known significant effects or critical hazards. Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards. **Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	17433.5 mg/kg
Dermal	86764.5 mg/kg
Inhalation (vapors)	867.6 mg/L

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
N-methyl-2-pyrrolidone	-0.46	-	low
Triethylamine	1.45	<0.5	low

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.



Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS#		Reference number
Triethylamine	121-44-8	Listed	U404

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

AERG: Not applicable.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations

: TSCA 8(a) PAIR: 1-(2-Butoxy-1-methylethoxy)propan-2-ol; Octamethylcyclotetrasiloxane

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 311: Triethylamine; Cyclohexane

Clean Air Act Section 112

(b) Hazardous Air **Pollutants (HAPs)** : Listed

Clean Air Act Section 602

: Not listed

Class I Substances





Section 15. Regulatory information

Clean Air Act Section 602

Class II Substances

: Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals)

: Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : SKIN CORROSION/IRRITATION - Category 2

> SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Unborn child) - Category 1B

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

Composition/information on ingredients

Name	Classification
N-methyl-2-pyrrolidone	FLAMMABLE LIQUIDS - Category 4
	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
	TOXIC TO REPRODUCTION (Unborn child) - Category 1B
	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract
	irritation) - Category 3
Triethylamine	FLAMMABLE LIQUIDS - Category 2
	ACUTE TOXICITY (oral) - Category 4
	ACUTE TOXICITY (dermal) - Category 4
	ACUTE TOXICITY (inhalation) - Category 4
	SKIN CORROSION/IRRITATION - Category 1A
	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract
	irritation) - Category 3

SARA 313

	Product name	CAS number
Form R - Reporting requirements	N-methyl-2-pyrrolidone Triethylamine	872-50-4 121-44-8
Supplier notification	N-methyl-2-pyrrolidone Triethylamine	872-50-4 121-44-8

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: N-methyl-2-pyrrolidone; Triethylamine

New York : The following components are listed: Triethylamine

New Jersey : The following components are listed: N-methyl-2-pyrrolidone; Triethylamine : The following components are listed: N-methyl-2-pyrrolidone; Triethylamine **Pennsylvania**

California Prop. 65

MARNING: This product can expose you to N-methyl-2-pyrrolidone, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Canada





Section 15. Regulatory information

Canadian lists

Canadian NPRI: The following components are listed: N-methyl-2-pyrrolidone; Triethylamine

CEPA Toxic substances : None of the components are listed.

Canada inventory (DSL : All components are listed or exempted.

NDSL)

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 1B	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method

History

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Prepared by : KMK Regulatory Services Inc.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should

be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.