

# RM 109 Race Fuel

## Safety Data Sheet

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : RM 109

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

Use of the substance/mixture : Fuel

#### 1.3. Details of the supplier of the safety data sheet

Valor, LLC/DBA Renegade  
1200 Alsop Lane  
Owensboro, KY 42303  
T 270-683-2461

#### 1.4. Emergency telephone number

No additional information available

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Flam. Liq. 2 H225  
Skin Irrit. 2 H315  
STOT SE 3 H336  
Asp. Tox 1 H304

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

: Danger

Hazard statements (GHS-US) :

: H225 – Highly flammable Liquid and vapor  
H315 - Causes skin irritation  
H336 - May cause drowsiness or dizziness  
H304 – May be fatal if swallowed and enters airways

Precautionary statements (GHS-US) :

: P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/bond container and receiving equipment  
P241 - Use explosion-proof electrical/ventilating/lighting/equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray  
P264 - Wash thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301+P310 - IF SWALLOWED: immediately call a POISON CENTER or doctor/physician  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing  
P308+P313 - IF exposed or concerned: Get medical advice/attention

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P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
P314 - Get medical advice and attention if you feel unwell  
P331 - If swallowed, do NOT induce vomiting  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse  
P370+P378 - In case of fire: Use CO2, dry chemical, foam (AFFF/ATC) or water spray for extinction  
P391 - Collect spillage  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
2-Methoxy-2-Methylpropane	(CAS No) 1634-04-4	5 - 35	Flam. Liq. 2, H225 Skin Irrit. 2, H315
2,2,4 - Trimethylpentane	(CAS No) 540-84-1	5 - 60	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air. If not breathing, administer CPR or artificial respiration. Get immediate medical attention.
First-aid measures after skin contact	: After contact with skin, wash immediately with plenty of water and soap. If skin reddening or irritation develops, seek medical attention.
First-aid measures after eye contact	: Immediately flush the eyes with plenty of water for at least 15 minutes while holding eyelids apart to ensure flushing of the entire surface of the eye. Continue flushing for an additional 15 minutes if a physician is not immediately available. Seek medical attention, preferably an ophthalmologist, immediately.
First-aid measures after ingestion	: If the material is swallowed, get immediate medical attention or advice. DO NOT induce vomiting unless directed to do so by medical personnel.

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

Symptoms/injuries after inhalation	: Breathing high concentrations may be harmful. May cause central nervous system depression or effects. Symptoms may include headache, excitation, euphoria, dizziness, incoordination, drowsiness, light-headedness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death, depending on the concentration and duration of exposure. Breathing high concentrations of this material, for example, in a confined space or by intentional abuse, can cause irregular heartbeats which can cause death.
Symptoms/injuries after skin contact	: Contact may cause reddening, itching and inflammation.
Symptoms/injuries after eye contact	: Contact may cause pain and severe reddening and inflammation of the conjunctiva. Effects may become more serious with repeated or prolonged contact.

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Symptoms/injuries after ingestion : May cause irritation of the mouth, throat and gastrointestinal tract. May cause central nervous system depression or effects. Symptoms may include salivation, pain, nausea, vomiting and diarrhea. Exposure may also cause central nervous system symptoms similar to those listed under "Inhalation"

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : CO<sub>2</sub>, dry chemical, foam (AFFF/ATC) or water spray  
Unsuitable extinguishing media : None.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable liquid and vapor.  
Explosion hazard : In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. Vapors may travel long distances along ground before igniting/flashing back to vapor source.

### 5.3. Advice for firefighters

Protection during firefighting : Firefighters should wear full protective gear.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : If possible, stop flow of product.  
Methods for cleaning up : Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large 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 spillage 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). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues. Avoid skin contact. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

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### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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.

### 7.3. Specific end use(s)

Fuel

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 2-Methoxy-2-Methylpropane (1634-04-4)

USA ACGIH	ACGIH TWA (ppm)	50 ppm
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### 8.2. Exposure controls

Appropriate engineering controls : Local exhaust and general ventilation must be adequate to meet exposure standards.  
Hand protection : Wear impervious gloves to minimize skin contact.  
Eye protection : Safety glasses. Wear splash goggles if splashing is likely.  
Skin and body protection : Wear suitable working clothes.  
Respiratory protection : If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Odor : Strong hydrocarbon  
Odor threshold : No data available  
pH : Neutral  
Relative evaporation rate (butylacetate=1) : No data available  
Melting point : No data available  
Freezing point : No data available  
Initial boiling point : <150°F  
Flash point : No data available  
Self ignition temperature : No data available  
Decomposition temperature : No data available  
Flammability (solid, gas) : No data available  
Vapor pressure : No data available

Relative vapor density at 20 °C : No data available  
Specific gravity : .723  
Solubility : Negligible.  
Log Pow : No data available  
Log Kow : No data available  
Viscosity, kinematic : No data available  
Viscosity, dynamic : No data available  
Explosive properties : No data available  
Oxidizing properties : No data available  
Explosive limits : No data available

### 9.2. Other information

VOC content : 100 %

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

The product is stable at normal handling and storage conditions.

#### 10.3. Possibility of hazardous reactions

Will not occur.

#### 10.4. Conditions to avoid

Heat, flames, and other ignition sources.

#### 10.5. Incompatible materials

Strong oxidizing agents.

#### 10.6. Hazardous decomposition products

Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Harmful in contact with skin. Harmful if inhaled.

2-Methoxy-2-Methylpropane (1634-04-4)	
LD50 oral rat	4 g/kg
LD50 dermal rabbit	> 10000 mg/kg
LC50 inhalation rat (ppm)	23576 ppm/4h
ATE US (oral)	4000000.00000000 mg/kg

2,2,4 Trimethylpentane (540-84-1)	
LD50 oral rat	>5,000 mg/kg
LD50 dermal rabbit	>2000 mg/kg
LC50 inhalation rat (ppm)	>33.52 mg per liter (Exposure time: 4 h)

Skin corrosion/irritation : Causes skin irritation.  
Serious eye damage/irritation : Not classified  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : May cause genetic defects.  
Carcinogenicity : May cause cancer.

2-Methoxy-2-Methylpropane (1634-04-4)	
IARC group	3 - Not classifiable

2,2,4 Trimethylpentane (540-84-1)	
IARC group	No Ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No Ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH
National Toxicity Program (NTP) Status	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

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Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure): May cause damage to organs through prolonged or repeated exposure. Affected organs include: blood, kidneys, reproductive system, liver, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Aspiration hazard : May be fatal if swallowed and enters airways.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.

#### 2-Methoxy-2-Methylpropane (1634-04-4)

LC50 fish 1	672 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	542 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	> 800 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)
LC50 fish 2	929 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 other aquatic organisms 2	184 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)

#### 2,2,4 Trimethylpentane (540-84-1)

LC50 fish 1	.11 mg/l (Exposure time: 96 h – Species: Oncorhynchus Mykiss [Rainbow Trout])
EC50 Daphnia 1	.4 mg/l (Exposure time: 48 h - Species: Daphnia magna [Water Flea])

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

#### 2-Methoxy-2-Methylpropane (1634-04-4)

BCF fish 1	(no bioaccumulation expected)
Log Pow	1.06 (at 23 °C)

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

Product : The products should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated Packaging : Empty Remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on the empty drum.

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### SECTION 14: Transport information

In accordance with DOT

Transport document description	: UN1203 Gasoline includes gasoline mixed with ethyl alcohol, with not more than 10% alcohol, 3, II
UN-No.(DOT)	: 1203
DOT NA no.	: UN1203
DOT Proper Shipping Name	: Gasoline includes gasoline mixed with ethyl alcohol, with not more than 10% alcohol
Department of Transportation (DOT) Hazard Classes	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT)	: 3 - Flammable liquid



Packing group (DOT)	: II - Medium Danger
DOT Special Provisions (49 CFR 172.102)	: 144 - If transported as a residue in an underground storage tank (UST), as defined in 40 CFR 280.12, that has been cleaned and purged or rendered inert according to the American Petroleum Institute (API) Standard 1604 (IBR, see 171.7 of this subchapter), then the tank and this material are not subject to any other requirements of this subchapter. However, sediments remaining in the tank that meet the definition for a hazardous material are subject to the applicable regulations of this subchapter. 177 - Gasoline, or, ethanol and gasoline mixtures, for use in internal combustion engines (e.g., in automobiles, stationary engines and other engines) must be assigned to Packing Group II regardless of variations in volatility. B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable. B33 - MC 300, MC 301, MC 302, MC 303, MC 305, MC 306, and DOT 406 cargo tanks equipped with a 1 psig normal vent used to transport gasoline must conform to Table I of this Special Provision. Based on the volatility class determined by using ASTM D 439 and the Reid vapor pressure (RVP) of the particular gasoline, the maximum lading pressure and maximum ambient temperature permitted during the loading of gasoline may not exceed that listed in Table I. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: E - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.

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### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### 2-Methoxy-2-Methylpropane (1634-04-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Listed on SARA Section 313 (Specific toxic chemical listings)

EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
SARA Section 313 - Emission Reporting	1.0 %

##### 2,2,4 Trimethylpentane (540-84-1)

SARA 311/312 Hazards	Fire Hazard Acute Health Hazard
CERCLA Reportable Quantity	1000 Lbs 2,2,4-Trimethylpentane
Sara 302 Reportable Quantity	This material does not contain any components with a SARA 302 RQ
SARA 302 Threshold Planning Quantity	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 304 Reportable Quantity	This material does not contain any components with a section 304 EHS RQ
SARA 13 Ingredients	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) report levels established by SARA Title III, Section 313.

#### 15.2. US State regulations

##### 2-Methoxy-2-Methylpropane (1634-04-4)

U.S. - Massachusetts - Right To Know List  
U.S. - Minnesota - Hazardous Substance List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

##### 2,2,4 Trimethylpentane (540-84-1)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

Full text of H-phrases:

Asp. Tox. 1	Aspiration hazard Category 1
Flam. Liq. 2	Flammable liquids Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H336	May cause drowsiness or dizziness



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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*

**Trade Secret Provision:** *In accordance with OSHA regulations and policies, the specific percentages and specific names of certain chemicals are being designated a trade secret and are not disclosed herein. In compliance with current regulations, this SDS provides the necessary properties and effects of the chemicals listed for this product. In cases of medical emergency, medical personnel can contact the emergency number listed and obtain the specifics of these chemicals. Should this need arise, we will request the attending physician provide to us, at such time as appropriate, a letter stating the medical necessity and a signature of confidentiality for the obtained information.*