

MATERIAL SAFETY DATA SHEET

SAFETY DATA SHEET FOR **AddX**

July 2019

1 Manufacturer and Distributor:

AddX International Ltd

Product:

Trade Name: AddX
Application: Fuel Conditioner

2 Composition/ Information on Ingredients:

Ingredients: Processed and structured H302 /
Isopropanol C₃H₇OH
E133 Apple Green. CAS Registry
Number: 7732-18-5 / 67-63-0 [EC #
200-661-7] / 1934-21-0 / 3844-45-9

Binding Tariff Information
HS code / TARIC: 3811.90.00.90

3 Hazardous Identification:

Hazardous Rating (HMIS):

Hazard Rating Scale

0 = Minimal 1 = Slight 2 = Moderate 3/4 = Serious;

G = Gloves/Goggles

- Health: 2
- Reactivity: 3
- Flammability: 3
- Protection: 3
- Hazardous Compounds: Isopropanol (CH₃)₂CHOH / CAS 67-63-0
- Environmental Effects: the product may be toxic for aquatic organisms
- Other Effects: (most active component) Acute health, Chronic health / FIRE

Fire and Explosion Hazard:



| | |
|-------------------------------------|---|
| General Information: | Product is combustible (most active component) |
| Flash Point (TOC): | 32c (89.6 F) |
| Flammable Limits: | 1.1 (lowest component) |
| Extinguishing Media: | NFBA Class B extinguishers (carbon dioxide or foam) for Class II liquid fires |
| Special Fire Fighting Procedures: | Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used. Do not enter confined fire-space without full bunker gear. (Helmet with face shield, bunker coats, gloves & rubber boots). Use NIOSH approved positive-pressure self-contained breathing apparatus |
| Unusual Fire and Explosion Hazards: | Keep container tightly closed. Isolate from oxidizers, heat & open flame. Closed containers may explode if exposed to extreme heat. Applying to hot surfaces requires special precautions. Empty container very hazardous! Continue all label precautions! |
| 4 Health Hazard: | |
| Threshold Limit Value (TLV): | Not determined by American Conference of Governmental Industrial Hygienists (ACGIH) ACGIH |
| VENTILATION | |
| LOCAL EXHAUST: | Necessary |
| MECHANICAL (GENERAL): | Acceptable |
| SPECIAL: | None |
| OTHER: | None |
| | Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details regarding Propanol. |
| Permissible Exposure Limit (PEL) | Not determined by Occupational Safety and Health Administration (OSHA) |

Superfund Amendments and Reauthorization Act (SARA TITLE III): Isopropyl alcohol is listed as a reportable substance

(RQ) LIMIT:

No reportable quantity

Route of Exposure:

Eye, skin contact, aspiration, ingestion

Health Hazard from Acute/ Chronic Exposure

The components of AddX with Isopropanol are not listed as carcinogenic by NTP, OSHA, or IARC

Medical Conditions generally recognised as being aggravated by exposure:

None known

5 Emergency and First Aid Procedures:

Although AddX with Isopropanol is not expected to pose any specific health hazard the following precautions are recommended due to possible irritation from the Isopropanol component and <0.1% dye tracer contained in the product.

Individual dermal and respiratory sensitivities to AddX with Isopropanol will vary.

Ingestion:

Do NOT induce vomiting. Have patient lie down & keep warm. Vomiting may lead to severe damage to oesophagus which may be fatal.

Eye Contact:

Remove contact lenses at once, flush with water seek the advice of a physician immediately

Skin Contact:

In case of contact with skin immediately remove contaminated clothing. Wash thoroughly with soap & water. Wash contaminated clothing before reuse

Personal Precautions: Take protective measures to avoid eye and skin contact

Environmental Precautions: Flush with water

Methods for Cleaning Up: Wash the area with plenty of water. Mop with absorbent materials and dispose of

Ventilation: Handle product in a normal, well-ventilated area

Inhalation: After high vapour exposure remove to fresh air. If breathing is difficult give oxygen. If breathing has stopped give artificial respiration.

Notes to a Physician: Foresee pre-admission medical exam and also periodic medical exam to the workers exposed to the product.

6 Handling & Storage:

Handling: Staff should be aware a component is hazardous.

Storage: Keep product away from heat, to maintain quality. Store in a cool, dry place. Minimize product exposure to direct sunlight in hot climates. Store product in an area between 4°C (39F). – 32°C (89.6F). Store in a tightly sealed container.

7 Exposure Controls/ Personal Protection:

Precautionary Measures: Availability of an eye wash station is recommended

Personal Protective Equipment: When handling the product wear approved protective clothing rubber or PVC gloves and a face shield

Threshold Limit Value: Not established

Requirements for periodic health check: Foresee pre-admission medical exam and periodic medical exam to the workers exposed to the product.

8 Physical & Chemical Properties:

Appearance @ 20°C: Pale green solution, E133 Apple Green

Odour: Citrus with strong alcohol vapour / smell

Concentrate: 100%

For Isopropanol element:

0

0.786 g/cm³ (20 °C)

| | |
|----------------------|------------------------|
| <u>Melting point</u> | -89 °C, 184 K, -128 °F |
| <u>Boiling point</u> | 82.6 °C, 356 K, 181 °F |

For processed H₃O₂ element:

| | |
|-------------------------------|-----------------------------|
| Average Molecular Mass: | 18 |
| Solubility @ 20°C | |
| • Water: | Soluble |
| • Ethanol: | Soluble |
| • Acetone: | Soluble |
| • Aliphatic hydrocarbons: | Insoluble |
| Mass Density @ 25°C: | 1 |
| Viscosity @ 20°C: | |
| Melting Range: | 0 |
| Boiling Temperature | |
| @ 100kPa: | 100°C |
| Vapour Pressure @ 20°C: | 17.5mmHg |
| Vapour Density (air = 1): | N/A |
| Flash Point (PMcc): | N/A |
| Auto ignition Temperature: | N/A |
| Decomposition Temperature: | N/A |
| pH 1% Water Solution: | 5.5 - 7.5 |
| Explosion Properties: | N/A |
| Oxidizing Properties: | N/A |
| Specific Gravity @ 25°C: | 1.00 |
| Solubility in Water: | Miscible in all Proportions |
| Percent Volatile: | Not Volatile |
| Evaporation Rate (Ether = 1): | Not Established |

9 Stability & Reactivity:

| | |
|---|---|
| Stability: | Stable |
| Conditions to Avoid for Polymerisation: | None |
| Hazardous Decomposition Products: | Insignificant; mostly moisture, trace amounts of CO ₂ and CO. H ₃ O ₂ element is <u>not</u> an oxygen donor. The C ₃ H ₇ OH compound <u>may</u> serve as a chemical reagent in itself by acting as a |

| | |
|--------------------------------|---|
| Conditions to Avoid: | dihydrogen donor in transfer hydrogenation. Excessive heat or freezing |
| Materials to Avoid: | Strong oxidizing agents |
| Intended Use & Transformation: | It is not destined to undergo chemical transformation. |

10 Toxicological Information:

| Possible Routes of Penetration: | <i>H₃O₂ element</i> | <i>C₃H₇OH element</i> |
|---------------------------------|--|---|
| Ingestion: | Not toxic. | Toxic |
| Eye Contact: | Is not irritant | is an irritant |
| Skin Contact: | Is not irritant | is an irritant |
| Sensitization: | Not sensitizing | is sensitizing |
| Inhalation: | Possible only as aerosol either element may irritate the respiratory passages. | |
| Symptomology: | Not noted. | |

11 Ecological Information:

Environmental Distribution: Water is likely to be the main transport medium for the chemical, to estimate its possible environmental distribution

Primary Biodegradability: The product fulfils the requisite minimum requirements of primary biodegradability

Ready Biodegradability: >99%

A Biotic Degradability: Not available

Theoretical Oxygen Demand (ThOd): 2.40

Chemical Oxygen Demand (COD): Isopropanol (2.22 mg/mg)0

Ecotoxicity:

Bacteria toxicity (EC 50): Isopropanol (1050 mg/l)
Fish toxicity (LC 50) : Isopropanol (9280 mg/l)

12 Disposal Considerations:

Dispose of product in authorised places/ methods in observance with current laws

13 Transport Information:

A component of this product is dangerous for road, sea, air & rail transport
namely; Isopropanol

14 Regulatory Information:

Classification & Labelling: (Directive 67/ 548/ EC & following
amendments)

Symbols of Hazard: A component is harmful and dangerous in some
environments

Risk Phrases: harmful if inhaled

Safety Advice: Avoid exposure to skin respiratory tract.
Ventilate well

15 Shipping Classifications:

Shipping Name: AddX with Isopropanol

Hazard Class: 3

ID Number: P91-396

Highway/Rail: Keep from freezing store between 4°C (39°F). –
32°C (89.6°F). Store in a tightly sealed container

Air/Ship: Keep from freezing store between 4°C (39°F). –
32°C (89.6°F). Store in a tightly sealed container

16 Regulatory Status:

16.1 NTP, OSHA & IARC do NOT list product as carcinogenic to humans.

- 16.2 Unused product is NOT listed by EPA as hazardous waste (40CR Part 261)
- 16.3 AddX with Isopropanol is NOT listed on California's Prop. 65 toxic substance list.
- 16.4 AddX with Isopropanol does NOT contain lead, cadmium, mercury, hexavalent chromium or has come into contact with these chemicals.
- 16.5 AddX with Isopropanol does NOT contain and is NOT manufactured with any Class I or II ozone depleting substances.
- 16.6 AddX with Isopropanol is a combustible liquid. It is hazardous under OSHA 29 CFR 1910.1200
- 17 Manufacturer:
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Notice:

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