

Section 1 – PRODUCT AND COMPANY INFORMATION

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| Manufacturer | IMS Company 10373 Stafford Road Chagrin Falls, OH 44023-5296 WEB http://www.imscompany.com/ | Emergency Phone 800-424-9300 Prepared by Product Safety Advisor Prepared/Revised January 16, 2003 E-mail sales@imscompany.com |
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|--------------------|-------------|---------------------------|
| Item Number | Size | Former Item Number |
| 112086 | 1 quart | AEM3-BCMC-1Q |
| 112075 | 1 gallon | AEM3-BCMC-1G |
| 112082 | 5 gallons | AEM3-BCMC-5G |
| 112083 | 55 gallons | AEM3-BCMC-55G |

Product use A biodegradable solvent made from citrus peel, FDA-GRAS rated, for cleaning metals, molds, machinery, for part cleaner, degreaser, hand cleaner, etc. It can be used alone or mixed, sprayed or brushed or wiped on. It is a replacement for toxic, chlorinated cleaners, glycol ether, MEK, xylene, freons, CFC,

Hazardous Material Information System

| Health | 1 | Flammability | 2 | Reactivity | 0 | Protection | X |
|---------------|---------------------------|---------------------|-------------------|-------------------|--------------------------|-------------------|----------|
| 0 | Normal use Material | 0 | Will Not Burn | 0 | Stable | X = Consult the | |
| 1 | Slight Hazard (temporary) | 1 | Possible to Burn | 1 | Unstable if Heated | MSDS and | |
| 2 | Health Affected (lengthy) | 2 | Burns if Heated | 2 | Violent Chemical Change | your supervisor | |
| 3 | Extreme Danger | 3 | Easily Burns | 3 | Shock and Heat Sensitive | for your special | |
| 4 | Severe or Fatal | 4 | Very Easily Burns | 4 | May Explode | workplace need | |

* Chronic (Accumulates)

NOTE The HMIS may not be enough hazard information for this chemical in all workplaces. The HMIS system requires employee training about the system and about information in this MSDS.

Section 2 – INGREDIENTS INFORMATION

| Chemical/Common Name | CAS-Number | % | PEL-OSHA | TLV-ACGIH |
|-----------------------------|-------------------|----------|-----------------|------------------|
| d-Limonene | 5989-27-5 | 100 | (1) | (1) |

(1) Not Established

Section 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW Combustible liquid and vapors; shut off ventilation if not explosion proof and will exhaust to the outside. Remove sources of ignition. Use non-sparking tools/equipment. Wear appropriate personal protective equipment according to the conditions, such as respirator and protective clothing. Small spills can be collected or absorbed with inert absorbing materials such as clay or sand. Flush area with water to remove trace residues, but do not let product or contaminated water get to drains, sewers, or rainfall. If spill occurs indoors, turn off air conditioning and/or heating system to prevent vapors from contaminating entire building.

HEALTH EFFECTS (Acute and Chronic) – allergic reaction or sensitizer potential.

Nose Dizziness, headache; nausea, nasal and respiratory irritation, with overexposure.

Mouth Harmful if swallowed. May cause severe gastrointestinal distress, nausea, vomiting, or diarrhea. Aspiration of the material into the lungs during vomiting may cause chemical pneumonitis, which can be fatal.

Eyes May cause irritation, can cause eye damage.

Skin May cause irritation, localized dryness, and defatting. Prolonged contact may result in dermatitis, and allergic reaction.

Chronic Prolonged skin contact may cause dermatitis.

ROUTE OF ENTRY Inhalation, Skin

TARGET ORGANS, MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE Persons with chronic respiratory disease may show increased symptoms due to irritation.

Section 4 – FIRST AID MEASURES

NOTE If irritation persists after any kind of body exposure, get medical help.

| | |
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| Breathing | Small amounts of vapors are not likely to injure, unless the product is heated. Get to fresh air if symptoms appear. |
| Eating | If ingested, do not cause vomiting. Drink milk or water to dilute substance. **Get Medical Help At Once** |
| Eye Contact | Flush eyes immediately with water for at least 15 minutes. If irritation persists, call a physician. Remove contact lenses. Hold eyelids open to irrigate fully. |
| Skin Contact | Remove contaminated clothing and shoes. Wash exposed area with soap and water. Wash contaminated clothing before re-use. If irritation persists, or if contact has been prolonged, get medical help. |
| Medical Notes | Treat symptomatically |

Section 5 – FIRE FIGHTING MEASURES

Flash Point.....115° F (<46° C) Flammable LimitsLEL = 0.7 %.....UEL = 6.1 %
Autoignition temperature.....458° F (<236° C)

Extinguishing Media Foam, carbon dioxide, water fog, or dry chemical.

Special Fire Fighting Procedures Do not direct a solid stream of water or foam into hot, burning pools; this may cause frothing and increase fire intensity. Handle as an oil fire.

Sensitivity to mechanical impact None

Sensitivity to static discharge (ESD) As with all spray systems, high sensitivity to being a source of ESD. As with most spray systems, highly sensitive to ignition from ESD while being sprayed.

Unusual Fire and Explosion Hazards Firefighters should wear self-contained, positive-pressure breathing apparatus with full facepiece, due to thermal decomposition products, and should avoid skin contact. Streams of water are likely to spread fire. Use water spray only to cool containers. Stable at ambient temperatures and pressures.

Section 6 – ACCIDENTAL RELEASE MEASURES

Steps to be Taken in Case Material is Released or Spilled Remove sources of ignition. Use non-sparking tools/equipment. Ventilate area to reduce concentration. Wear appropriate personal protective equipment according to the conditions, such as respirator and protective clothing. Small spills can be collected or absorbed with inert absorbing materials. Soak up residue with an absorbent such as sand, or other inert material. Place residue into closed metal containers for proper disposal. Remove residue to prevent slippery condition. Flush area with water to remove trace residues, but do not let product or contaminated water get to drains, sewers, or rainfall. Do not puncture or burn cans.

Section 7 – HANDLING AND STORAGE

Precautions to be Taken in Storage Store in tightly sealed containers in a cool, dry area, out of direct sunlight, away from sources of ignition. Handling, pouring, transferring, equipment should be grounded. Avoid acids and oxidizing agents. Store in cool, dry area out of direct sunlight (below 120° F, 49° C). Do not puncture or burn containers. Product will burn. Eliminate open flames, strong oxidizers, and other sources of ignition from the storage area. Keep containers closed to avoid contamination from airborne dust and moisture. Observe applicable fire codes.

Handling Keep lid on tight, product subject to oxidation. Thoroughly wash after handling, and before eating, drinking, or using tobacco products.

Maintenance Precautions Note: SafeKlean™ may cause swelling of gaskets and valves of some conventional materials. Viton and Neoprene are better choices for gaskets than Butyl or Buna. Valves and containers should have an epoxy coating. Do not remove or deface label. Keep container closed.

Other Precautions Vapors are heavier than air and will collect in low areas. Read and follow directions and cautions on the container label and any accompanying literature. As per any petroleum-based products, saturated rags and cloths must be hung out separately, to dry or be placed in air tight, metal container.

Section 8 – EXPOSURE CONTROLS – PERSONAL PROTECTION

Ventilation General ventilation, local exhaust, or mechanical or special ventilation to maintain product below the exposure limits needs to be evaluated. Often, additional, local exhaust is not specifically required. General (mechanical) room ventilation may be adequate to maintain product below TLV/PEL, if handled at ambient temperatures or in covered equipment. Local exhaust ventilation or other engineering controls may be required, if ambient temperatures are exceeded.

Respiratory Protection Generally not required if adequate ventilation is provided. If the exposure limits of the product or any of its components are exceeded by a factor of 10 or less, an approved organic vapor mask

should be used in accordance with 29 CFR 1910.134. If exceeded by a factor of 11 or more, a NIOSH approved atmosphere-supplying respirator, an approved self-contained breathing apparatus, or airline respirator, with full face-piece is required.

Protective Gloves Wear solvent-resistant gloves such as Viton, Polyvinyl Alcohol, or equivalent where prolonged or repeated contact with the spray mist or deposited product is likely.

Other Protective Equipment If contact with the spray is likely, eye protection is recommended. Goggles, or safety glasses, with side shields and a face shield will provide protection in most situations.

Other Engineering Controls To determine exposure levels, monitoring should be performed. Eye bath and safety shower station should be available.

Work Practices Do not use in confined or closed space. Ventilation must maintain the concentration of the product the TLV/PEL exposure limits. Avoid long-term or repeated contact. Stained clothing should be removed and laundered before re-use. Sudden release of hot vapor or mist from process equipment operating at elevated temperature and pressure, or sudden ingress of air into hot equipment under vacuum, may result in ignition without the presence of obvious ignition sources. Autoignition temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated-temperature processes must be thoroughly evaluated to establish and maintain safe operating conditions.

Hygienic Practices As with using any chemical product, avoid contact with skin and avoid breathing vapors, do not eat, drink, or smoke in work area; wash hands prior to eating, drinking or using restroom after handling or using. Launder contaminated clothing before reuse. All materials can contaminate tobacco, causing flu-like sickness (from inhaling components heated in tobacco smoke or ingested from handling tobacco and/or food products).

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---------------------------------|------------------|--------------------------------------|------|
| Boiling Point..... | >310° F (154° C) | Specific Gravity (Water=1) | 0.84 |
| Vapor Pressure at 68° F (20° C) | | | |
| PSI | 2 | Percent Volatile by Volume (%) | 100 |
| Vapor Density (Air=1)..... | 4.7 | Evaporation Rate (ether=1) | <1 |
| VOC | 100 % | Pour point..... | NA |
| Solubility in Water | NIL | pH..... | NA |
| Melting point..... | -102° F (-74° C) | Odor threshold | NA |

Appearance and Odor Information Clear liquid, varies from colorless to pale yellow with strong citrus odor.

Section 10 – STABILITY AND REACTIVITY

Incompatibility (reactivity, materials to avoid) Strong oxidizing and acidic agents, including acidic clays, peroxides, halogens, vinyl chloride, and iodine pentafluoride. Reacts explosively with iodine pentafluorethylene.

Product Chemically Stable? Yes

Conditions to keep Stability Avoid excessive heat, open flame, and static electricity.

Decomposition Products Carbon dioxide, carbon monoxide, and variously incompletely burned hydrocarbon products are expected. Smoke may be acrid and fumes irritating.

Will Hazardous Polymerization Occur? No

Conditions to Avoid Polymerization Avoid contact with open flame, electric arcs, or other hot surfaces that can cause thermal decomposition. Avoid temperatures high enough to rupture container. Do not spray into flame or onto red-hot surfaces, which could ignite spray.

Section 11 – TOXICOLOGICAL INFORMATION

Not considered to be carcinogenic by OSHA, NTP, IARC, or ACGIH.

LD₅₀, LC₅₀ > 5 g/kg

Reproductive Toxicity NA

Irritancy, sensitivity See other sections, 3 - Hazard Identification, 4 - First Aid

Section 12 – ECOLOGICAL INFORMATION

May be toxic to aquatic organisms.

Section 13 – DISPOSAL CONSIDERATIONS

Waste Disposal Methods Give containers to a disposal service equipped to handle and dispose of

containers. Reclamation from spent fluids is encouraged where possible. Where reclamation is not practical, this product may be incinerated where permitted under Federal, State, County/Provincial, and Local regulations. Never dispose by means of public sewers or drainage. Saturated rags and cloths must be hung out separately, to dry or be placed in air tight, metal container and treated as an oily waste.

Section 14 – TRANSPORT INFORMATION

Ground (US DOT) TERPENE HYDROCARBONS, N.O.S. Not regulated for non-bulk quantities.
Class 3
UN/ID No. UN2319
Packing III
Air (IATA)..... TERPENE HYDROCARBONS, N.O.S.
Class 3
UN/ID No. UN2319
Packing III
Vessel TERPENE HYDROCARBONS, N.O.S.
Class 3
UN/ID No. UN2319
Packing III

Section 15 – REGULATORY INFORMATION

| | |
|--------------------------|------|
| CFC, HCFC, HFC, ODS | N |
| EPA Class I or Class II | N |
| EPA - CAA, CWA | Y |
| EU risk phrase #'s | N |
| FDA-21 CFR 174.5 (2) (d) | Y |
| IDLH | N |
| OSHA listed | N |
| PROP 65 listed | N |
| RCRA listed | DOO1 |
| SARA 313 list | N |
| TSCA listed | Y |
| USDA H-1, -2 | Y |

This product has been classified in accordance with hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16 – OTHER INFORMATION

CAUTION Intentional misuse of this chemical product, as with any industrial chemical in contact with the body, can be harmful or fatal. This includes such things as deliberately breathing, placing in mouth, swallowing, placing on skin, or any other body contact, or repeated, or continuous contact.

IMS provides this information in good faith, but makes no representation as to its comprehensiveness or its accuracy. This document is offered as a guide to a trained person, for appropriate precautionary handling. Persons using the product and receiving the information must exercise independent judgment in determining the appropriateness of the use and the safety information for their particular purpose. **IMS MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THIS INFORMATION OR TO THE PRODUCT. ACCORDINGLY, IMS WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE ON THIS INFORMATION.**

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|-------------------|---|------|---|
| ACGIH | American Conference of Governmental Hygienists | NA | Not Applicable, Not Available |
| AKA | Also Known As, Synonym | ND | Not Determined |
| CAS | Chemical Abstract Service | NIL | Not measurable, significant, noticeable, or an affect |
| GRAS | Generally Recognized As Safe by FDA rule or listing | NTP | National Toxicology Program |
| H-1, -2 | USDA, plant process chemicals that do not touch food stuff | OSHA | Occupational Safety and Health Administration |
| IARC | International Agency for Research of Cancer | ppm | parts per million |
| IDLH | Immediately Dangerous to Life or Health, exposure rate/volume | USDA | U S Department of Agriculture |
| mg/m ³ | milligrams per Cubic Meter | Y | Yes, Does Exists, Is Listed, |
| N | No, None, Not listed, Not Known | | |