

ADM CORN SWEETENERS -- CARBON DIOXIDE, REFRIDGERATED LIQUID -- 4210-00-203-0341
===== Product Identification =====

Product ID:CARBON DIOXIDE, REFRIDGERATED LIQUID

MSDS Date:01/01/1991

FSC:4210

NIIN:00-203-0341

MSDS Number: BKCDD

=== Responsible Party ===

Company Name:ADM CORN SWEETENERS

Address:7627 W.LAKE STREET

City:RIVER FOREST

State:IL

ZIP:60305

Country:US

Info Phone Num:312-771-2990

Emergenc

y Phone Num:312-771-2990

CAGE:84168

=== Contractor Identification ===

Company Name:ARCHER DANIELS MIDLAND CO

Address:4666 E FARIES PKWY

Box:1470

City:DECATUR

State:IL

ZIP:62526-5666

Country:US

Phone:217-424-5200/7418

CAGE:84168

Company Name:DDRV STOCK MAINTENANCE DIV/DDRV-H

Address:8000 JEFFERSON-DAVIS HIGHWAY

Box:City:RICHMOND

State:VA

ZIP:23297

Country:US

Phone:804-279-3125

CAGE:02LX8

Company Name:GENERAL FIRE EXTINGUISHER CORP

Address:1685 SHERMER RD

Box:City:NORTHBROOK

State:IL

ZIP:60062-531

5
Country:US
Phone:(708) 847-272-7500; 847-272-7500
CAGE:99539

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Composition/Information on Ingredients
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Ingred Name:CARBON DIOXIDE
CAS:124-38-9
RTECS #:FF6400000
Fraction by Wt: > 99.9%
Other REC Limits:NONE SPECIFIED
OSHA PEL:5000 PPM
ACGIH TLV:5000PPM/30000STEL;93

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Hazards Identification
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LD50 LC50 Mixture:100,000 PPM/1 MIN HUMAN INHALATION LCLO
Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:PRODUCT CAN CAUSE ASPHYXIATION BY DISPLACING OXYGEN. AT HIGH CONCENTRATIONS PARALYSIS OF THE RESPIRATORY CONTROL CENTER OF THE NERVOUS SYSTEM MAY OCCUR. UNCONSCIOUSNESS MAY OCCUR.
Explanation of Carcinogenicity:PRODUCT IS NOT CURRENTLY CLASSIFIED AS CARCINOGENIC BY NTP, IARC OR OSHA.
Effects of Overexposure:LOW CONCENTRATIONS MAY INCLUDE HEADACHE, DIZZINESS, SHORTNESS OF BREATH, MUSCULAR WEAKNESS, DROWSINESS, RINGING IN EARS. HIGH CONCENTRATIONS MAY PRODUCE A FAINT ACIDIC TASTE AND PARALYSIS OF RESPIRATORY SYSTEM. CONTACT WITH LIQUID OR SOLID CARBON DIOXIDE MAY CAUSE FROSTBITE AND FREEZE BURNS.
Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

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First Aid Measures
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First Aid:IN CASE OF CONTACT WITH LIQUID OR SOLID, PROMPTLY FLUSH AREAS WITH TEPID WATER. DO NOT APPLY DIRECT HEAT. LOOSELY APPLY DRY STERILE BULKY DRE

SSINGS TO PROTECT AREA FROM INFECTION. GET MEDICAL
ATTENTIO N. IN CASE OF INHALATION, REMOVE TO FRESH AIR. QUICKLY
RESTORE AND/OR SUPPORT BREATHING. GET MEDICAL ATTENTION. CAUTION!
WOULD-BE RESCUERS NEED TO BE CONCERNED WITH THEIR OWN SAFETY DURNIG
RESCUE.

===== Fire Fighting Measures =====

Flash Point:NONE

Lower Limits:NONFLAMMABLE

Upper Limits:NONFLAMMABLE

Extinguishing Media:USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING
FIRE. USE W

ATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS.

Fire Fighting Procedures:WATER MAY BE USED TO INCREASE THE RATE OF
EVAPORATION. CARBON DIOXIDE IS A FIRE EXTINGUISHING AGENT BUT MAY
NOT BE EFFECTIVE ON CHEMICALS THAT SUPPLY OXYGEN.

Unusual Fire/Explosion Hazard:WHEN EXPOSED TO FIRE, CONTAINERS MAY
RUPTURE VIOLENTLY. FIRE FIGHTERS SHOULD USE SELF-CONTAINED
BREATHING APPARATUS AND WEAR FULLY PROTECTIVE CLOTHING.

===== Accidental Release Measures =====

Spill

Release Procedures:NOTIFY SAFETY PERSONNEL OF MAJOR LEAKS OR
SPILLS. EVACUATE AREA UNTIL VENTILATION CAN RESTORE A SAFE OXYGEN
LEVEL. EMRGENCY PERSONNEL NEED SELF-CONTAINED BREATHING EQUIPMENT
AND PROTECTIVE CLOTHING AG AINST CONTACT WITH SOLID MATERIAL.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

===== Handling and Storage =====

Handling and Storage Precautions:HANDLING, STORAGE, AND UTILIZATION OF
COMPRESSED-GAS CYLINDERS MUST BE IN
ACCORDANCE WITH 29 CFR

1910.101(6). DO NOT STORE THEN IN ENCLOSED AREAS.

Other Precautions:DO NOT PUT DRY ICE IN A CLOSED CONTAINER WHERE
EVOLVED GAS CANNOT ESCAPE. USE AN UNSEALED, INSULATED STORAGE CHEST
OR CONTAINER FOR DRY ICE. STORE IN A COOL, DARK, WELL-VENTILATED
AREA AWAY FROM SOURC ES OF HEAT.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:PROVIDE AIR-SUPPLIED OR SELF-CONTAINED BREATHING
EQUIPMENT FOR EMERGENCY OR NONROUT

INE SITUATIONS WHERE THE LEVEL OF
CARBON DIOXIDE IS EXCESSIVE.

Ventilation:PROVIDE ADEQUATE GENERAL AND LOCAL EXHAUST VENTILATION TO
PREVENT WORKPLACE ATMOSPHERES FROM BECOMING OXYGEN DEFICIENT.

Protective Gloves:INSULATED GLOVES

Eye Protection:SAFETY GLASSES

Other Protective Equipment:USE A SAFETY LINE AND STANDBY WORKER WHEN
ENTERING CARBON-DIOXIDE ENRICHED AREA. SAFETY SHOES ARE
RECOMMENDED.

Work Hygienic Practices:CONTACT LENSES POSE A SPECIAL HAZARD; SOFT
LENSES MAY ABSORB

IRRITANTS AND ALL LENSES CONCENTRATE IRRITANTS.

Supplemental Safety and Health

OCCUPATIONAL EXPOSURES MAY OCCUR IN SUCH PLACES AS MINES, SILOS, VATS,
SHIPS HOLDS, WHERE FERMENTATION PROCESSES MAY DEplete OXYGEN WITH
CARBON DIOXIDE.

===== Physical/Chemical Properties =====

HCC:G3

Boiling Pt:B.P. Text:109F,43C

Melt/Freeze Pt:M.P/F.P Text:0F,-18C

Vapor Pres:291.1 PSIG

Vapor Density:1.5

Spec Gravity:1.53

Solubility in Water:APPRECIABLE

Appearance and Odor:COL

ORLESS GAS, CLEAR, COLORLESS, VOLATILE LIQUID,
ODORLESS, ACIDIC TASTE

Percent Volatiles by Volume:100 %

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

ACRYLALDEHYDE, ETHYLENIMINE, SODIUM PEROXIDE, ALUMINUM, MAGNESIUM,
TITANIUM, ZIRCONIUM, DIETHYL MAGNESIUM, CESIUM OXIDE

Stability Condition to Avoid:EXTREME HEAT, PHYSICAL DAMAGE

Hazardous Decomposition Products:CARBON MONOXIDE

===== Disposal Considerations

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Waste Disposal Methods: REMOVE SCRAP SOLID (DRY ICE), TAKE CYLINDER OUTDOORS OR PLACE IT IN A HOOD WITH GOOD FORCED VENTILATION. ALLOW GAS TO BE DISCHARGED AT A MODERATE RATE. CLOSE VALVE AND RETURN TO SUPPLIER.

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