SAFETY DATA SHEET
THE DOW CHEMICAL COMPANY

Product name: DOW™ LIQUIDARMOR™ - CM Flashing and Sealant

Issue Date: 06/02/2015
Print Date: 06/19/2015

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: DOW™ LIQUIDARMOR™ - CM Flashing and Sealant

Recommended use of the chemical and restrictions on use
Identified uses: professional use

COMPANY IDENTIFICATION
THE DOW CHEMICAL COMPANY
2030 WILLARD H DOW CENTER
MIDLAND MI  48674-0000
UNITED STATES

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 800-424-9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Other hazards
no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Mixture
This product is a mixture.

<table>
<thead>
<tr>
<th>Component</th>
<th>CASRN</th>
<th>Concentration</th>
</tr>
</thead>
</table>

®™ Trademark of The Dow Chemical Company (“Dow”) or an affiliated company of Dow
4. FIRST AID MEASURES

Description of first aid measures
General advice: If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Wash off with plenty of water.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire.

Unsuitable extinguishing media: no data available

Special hazards arising from the substance or mixture
Hazardous combustion products: Fire conditions may cause this product to decompose. Refer to section 10 - Thermal Decomposition.

Unusual Fire and Explosion Hazards: None known.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Move container from fire area if this is possible without hazard. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Avoid breathing vapor. Keep unnecessary and unprotected personnel from entering the area. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Sweep up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Wash thoroughly after handling. Do not enter confined spaces unless adequately ventilated. Use ventilation adequate to keep exposures below recommended exposure limits. See the safety datasheet. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Avoid freezing. Keep containers tightly closed in a cool, well-ventilated place.

Storage stability

Shelf life: Use within 18 Month

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure limits are listed below, if they exist.

<table>
<thead>
<tr>
<th>Component</th>
<th>Regulation</th>
<th>Type of listing</th>
<th>Value/Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol</td>
<td>US WEEL</td>
<td>TWA</td>
<td>10 mg/m3</td>
</tr>
</tbody>
</table>

Although some of the components of this product may have exposure guidelines, no exposure would be expected under normal handling conditions due to the physical state of the material.

Exposure controls
Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures
Eye/face protection: Use safety glasses (with side shields).

Skin protection
Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Styrene/butadiene rubber. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Avoid gloves made of: Polyvinyl alcohol ("PVA").

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Wear clean, body-covering clothing.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>dark blue</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Ammoniacal</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No test data available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>8 - 9.5</td>
<td></td>
</tr>
<tr>
<td>Melting point/range</td>
<td>Not applicable to liquids</td>
<td></td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Boiling point (760 mmHg)</td>
<td>No test data available</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>closed cup No test data available</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate (Butyl Acetate = 1)</td>
<td>No test data available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No test data available</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No test data available</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No test data available</td>
<td></td>
</tr>
<tr>
<td>Relative Vapor Density (air = 1)</td>
<td>Not available</td>
<td></td>
</tr>
</tbody>
</table>
Relative Density (water = 1)  1.20 - 1.40 ASTM D1475
Water solubility  No test data available
Partition coefficient: n-octanol/water  no data available
Auto-ignition temperature  No test data available
Decomposition temperature  No test data available
Kinematic Viscosity  Not determined
Explosive properties  No
Oxidizing properties  No
Molecular weight  No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Stable.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Avoid temperatures above 170°C (338°F). Exposure to elevated temperatures can cause product to decompose. Elevated temperatures can cause container to vent and/or rupture.

Incompatible materials: no data available

Hazardous decomposition products: no data available

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity
Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. Single dose oral LD50 has not been determined.

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts. The dermal LD50 has not been determined.

Acute inhalation toxicity
At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat). The LC50 has not been determined.
Skin corrosion/irritation
Essentially nonirritating to skin.
May cause drying and flaking of the skin.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.
Corneal injury is unlikely.

Sensitization
Based on information for component(s):
Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Based on information for component(s):
In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

Carcinogenicity
No relevant data found.

Teratogenicity
Based on information for component(s): Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity
Based on information for component(s): In animal studies, did not interfere with fertility. In animal studies, did not interfere with reproduction.

Mutagenicity
Based on information for component(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard
Based on available information, aspiration hazard could not be determined.

COMPONENTS INFLUENCING TOXICOLOGY:

Limestone
Acute oral toxicity
Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

LD50, Rat, > 6,000 mg/kg

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.
LD50, Rat, > 2,000 mg/kg No deaths occurred at this concentration.

**Acute inhalation toxicity**
Dust may cause irritation to upper respiratory tract (nose and throat).

LC50, Rat, 4 Hour, dust/mist, > 3 mg/l The LC50 value is greater than the Maximum Attainable Concentration. No deaths occurred at this concentration.

**Propylene glycol**

**Acute oral toxicity**
LD50, Rat, > 20,000 mg/kg

**Acute dermal toxicity**
LD50, Rabbit, > 2,000 mg/kg No deaths occurred at this concentration.

**Acute inhalation toxicity**
Mist may cause irritation of upper respiratory tract (nose and throat). LC50, Rabbit, 2 Hour, Aerosol, 317.042 mg/l No deaths occurred at this concentration.

**Titanium dioxide**

**Acute oral toxicity**
LD50, Rat, > 10,000 mg/kg

**Acute dermal toxicity**
LD50, Rabbit, 10,000 mg/kg

**Acute inhalation toxicity**
LC50, Rat, male, 4 Hour, Dust, > 6.82 mg/l No deaths occurred at this concentration.

**Acrylic polymer 1**

**Acute oral toxicity**
Single dose oral LD50 has not been determined.

**Acute dermal toxicity**
The dermal LD50 has not been determined.

**Acute inhalation toxicity**
The LC50 has not been determined. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

**Acrylic polymer 2**

**Acute oral toxicity**
LD50, Rat, > 5,000 mg/kg

**Acute dermal toxicity**
LD50, Rabbit, > 5,000 mg/kg

**Acute inhalation toxicity**
Dust may cause irritation of the upper respiratory tract (nose and throat) and lungs.

LC50, Rat, dust/mist, > 3.4 mg/l
12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

**Limestone**

**Acute toxicity to fish**
Material is practically non-toxic to fish on an acute basis (LC50 > 100 mg/L).
LC50, Gambusia affinis (Mosquito fish), static test, 96 Hour, > 56,000 mg/l

**Propylene glycol**

**Acute toxicity to fish**
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, 40,613 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**
LC50, Ceriodaphnia dubia (water flea), static test, 48 Hour, 18,340 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**
ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate inhibition, 19,000 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**
NOEC, Pseudomonas putida, 18 Hour, > 20,000 mg/l

**Chronic toxicity to aquatic invertebrates**
NOEC, Ceriodaphnia dubia (water flea), semi-static test, 7 d, number of offspring, 13,020 mg/l

**Titanium dioxide**

**Acute toxicity to fish**
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
NOEC mortality, Leuciscus idus (Golden orfe), static test, 48 Hour, > 1,000 mg/l

**Acute toxicity to aquatic invertebrates**
EC50, Daphnia magna (Water flea), static test, 48 Hour, > 1,000 mg/l

**Acrylic polymer 1**

**Acute toxicity to fish**
No relevant data found.

**Acrylic polymer 2**

**Acute toxicity to fish**
No relevant information found.

Persistence and degradability
Limestone
Biodegradability: Biodegradation is not applicable.

Propylene glycol
Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).
10-day Window: Pass
Biodegradation: 81 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent

10-day Window: Not applicable
Biodegradation: 96 %
Exposure time: 64 d
Method: OECD Test Guideline 306 or Equivalent

Theoretical Oxygen Demand: 1.68 mg/mg

Chemical Oxygen Demand: 1.53 mg/mg

Biological oxygen demand (BOD)

<table>
<thead>
<tr>
<th>Incubation Time</th>
<th>BOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 d</td>
<td>69.000 %</td>
</tr>
<tr>
<td>10 d</td>
<td>70.000 %</td>
</tr>
<tr>
<td>20 d</td>
<td>86.000 %</td>
</tr>
</tbody>
</table>

Photodegradation
Atmospheric half-life: 10 Hour
Method: Estimated.

Titanium dioxide
Biodegradability: Biodegradation is not applicable.

Acrylic polymer 1
Biodegradability: No relevant data found.

Acrylic polymer 2
Biodegradability: No relevant information found.

Bioaccumulative potential

Limestone
Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Propylene glycol
Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water (log Pow): -1.07 Measured
Bioconcentration factor (BCF): 0.09 Estimated.

Titanium dioxide
Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Acrylic polymer 1
Bioaccumulation: No relevant data found.

Acrylic polymer 2
Bioaccumulation: No relevant data found.

Mobility in soil

Limestone
No relevant data found.

Propylene glycol
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient (Koc): < 1 Estimated.

Titanium dioxide
No data available.

Acrylic polymer 1
No relevant data found.

Acrylic polymer 2
No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Landfill. Incinerator or other thermal destruction device.

14. TRANSPORT INFORMATION

DOT
Not regulated for transport

Classification for SEA transport (IMO-IMDG):
Not regulated for transport
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code

Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):
Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard
This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania Worker and Community Right-To-Know Act:
The following chemicals are listed because of the additional requirements of Pennsylvania law:

<table>
<thead>
<tr>
<th>Components</th>
<th>CASRN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
</tr>
</tbody>
</table>

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
16. OTHER INFORMATION

Revision
Identification Number: 101272864 / A001 / Issue Date: 06/02/2015 / Version: 4.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this
document.

Legend

<table>
<thead>
<tr>
<th>TWA</th>
<th>8-hr TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>US WEEL</td>
<td>USA. Workplace Environmental Exposure Levels (WEEL)</td>
</tr>
</tbody>
</table>

Information Source and References
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from
information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it
carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and
understand the data contained in this (M)SDS and any hazards associated with the product. The
information herein is provided in good faith and believed to be accurate as of the effective date shown
above. However, no warranty, express or implied, is given. Regulatory requirements are subject to
change and may differ between various locations. It is the buyer's/user's responsibility to ensure that
his activities comply with all federal, state, provincial or local laws. The information presented here
pertains only to the product as shipped. Since conditions for use of the product are not under the
control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the
safe use of this product. Due to the proliferation of sources for information such as manufacturer-
specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other
than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the
(M)SDS you have is current, please contact us for the most current version.