



Safety Data Sheet

Acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: March 11, 2019

Revision: March 11, 2019

1 Identification

- **Product identifier**
- **Trade name:** Armor Plate
- **Article number:** DAC112
- **Recommended use and restriction on use**
- **Recommended use:** Mold Release Agent.
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
DAC Industries, Inc.
1636 Gervais Avenue Suite 9
Maplewood, MN 55109
Phone: (651) 748-1750
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
- | | | |
|-----------------|------|---|
| Flam. Aerosol 1 | H222 | Extremely flammable aerosol. |
| Press. Gas | H280 | Contains gas under pressure; may explode if heated. |
| Skin Irrit. 2 | H315 | Causes skin irritation. |
| Skin Sens. 1 | H317 | May cause an allergic skin reaction. |
| Repr. 2 | H361 | Suspected of damaging fertility or the unborn child. |
| STOT SE 3 | H336 | May cause drowsiness or dizziness. |
| STOT RE 2 | H373 | May cause damage to the nervous system through prolonged or repeated exposure. Route of exposure: Inhalation. |
| Asp. Tox. 1 | H304 | May be fatal if swallowed and enters airways. |

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms:**



GHS02 GHS04 GHS07 GHS08

- **Signal word:** Danger
- **Hazard statements:**
H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.

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H336 May cause drowsiness or dizziness.

H373 May cause damage to the nervous system through prolonged or repeated exposure. Route of exposure: Inhalation.

H304 May be fatal if swallowed and enters airways.

Precautionary statements:

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.

P211 Do not spray on an open flame or other ignition source.

P251 Pressurized container: Do not pierce or burn, even after use.

P260 Do not breathe mist/vapors/spray.

P264 Wash face, hands, and any exposed skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing must not be allowed out of the workplace.

P280 Wear protective gloves/protective clothing/eye protection.

P301+P310 If swallowed: Immediately call a poison center/doctor.

P331 Do NOT induce vomiting.

P302+P352 If on skin: Wash with plenty of soap and water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P312 Call a poison center/doctor if you feel unwell.

P314 Get medical advice/attention if you feel unwell.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.**3 Composition/information on ingredients**· **Chemical characterization: Mixtures**· **Components:**

68476-86-8	Petroleum gases, liquified, sweetened ⚠ Flam. Gas 1, H220 ⚠ Press. Gas, H280	60-80%
110-54-3	n-hexane ⚠ Flam. Liq. 2, H225 ⚠ Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 ⚠ Skin Irrit. 2, H315; STOT SE 3, H336 ⚠ Eye Irrit. 2B, H320	10-20%
64742-89-8	Solvent naphtha (petroleum), light aliph. ⚠ Asp. Tox. 1, H304	0.1-1%

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

For the wording of the listed Hazard Statements, refer to section 16.

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4 First-aid measures

· Description of first aid measures

· After inhalation:

Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.
In case of unconsciousness place patient stably in side position for transportation.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.
In cases of frostbite, rinse with plenty of water. Do not remove clothing.
If skin irritation continues, consult a doctor.

· After eye contact:

Protect unharmed eye.
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing:

Unlikely route of exposure.
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.

· Most important symptoms and effects, both acute and delayed:

Headache
Breathing difficulty
Coughing
Dizziness
Frostbite
Disorientation

· Danger:

May be fatal if swallowed and enters airways.
Danger of impaired breathing.
Danger of convulsion.
Danger of disturbed cardiac rhythm.
Suspected of damaging fertility or the unborn child.
May cause damage to the nervous system through prolonged or repeated exposure. Route of exposure:
Inhalation.
Vapors have narcotic effect.

· Indication of any immediate medical attention and special treatment needed:

Medical supervision for at least 48 hours.
Later observation for pneumonia and pulmonary edema.
If necessary oxygen respiration treatment.
Treat frost-bitten areas appropriately.

5 Fire-fighting measures

· Extinguishing media

· Suitable extinguishing agents:

Foam
Fire-extinguishing powder
Gaseous extinguishing agents
Carbon dioxide

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Water fog / haze

- **For safety reasons unsuitable extinguishing agents:** Water stream.
- **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
Danger of receptacles bursting because of high vapor pressure if heated.
Can form explosive gas-air mixtures.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information:**
Eliminate all ignition sources if safe to do so.
Cool endangered containers with water fog.
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation.
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources.
Protect from heat.
- **Environmental precautions**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up**
Allow to evaporate.
Absorb liquid components with non-combustible liquid-binding material.
Send for recovery or disposal in suitable receptacles.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Avoid splashes or spray in enclosed areas.
Keep away from heat and direct sunlight.
Avoid contact with the eyes and skin.
Avoid breathing mist, vapors, or spray.
Handle with care.
Keep out of reach of children.
- **Information about protection against explosions and fires:**
Do not spray on a naked flame or any incandescent material.

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Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 120 °F / 49 °C, i.e. electric lights. Do not pierce or burn, even after use.

Emergency cooling must be available in case of nearby fire.

Keep respiratory protective device available.

- **Conditions for safe storage, including any incompatibilities**

- **Requirements to be met by storerooms and receptacles:**

Storage area should be dry and well-ventilated.

Observe official regulations on storing packagings with pressurized containers.

Avoid storage near extreme heat, ignition sources or open flame.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from oxidizing agents.

- **Further information about storage conditions:**

Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

Storage Temperatures: < 122 °F / < 50 °C.

- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

110-54-3 n-hexane

PEL (USA)	Long-term value: 1800 mg/m ³ , 500 ppm
REL (USA)	Long-term value: 180 mg/m ³ , 50 ppm
TLV (USA)	Long-term value: 176 mg/m ³ , 50 ppm Skin; BEI
EL (Canada)	Long-term value: 20 ppm Skin
EV (Canada)	Long-term value: 176 mg/m ³ , 50 ppm
LMPE (Mexico)	Long-term value: 50 ppm PIEL, IBE

- **Ingredients with biological limit values:**

110-54-3 n-hexane

BEI (USA)	0.4 mg/L
	Medium: urine
	Time: end of shift at end of workweek
	Parameter: 2.5-Hexanedione without hydrolysis

- **Exposure controls**

- **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

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Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· **Engineering controls:** No relevant information available.· **Breathing equipment:**

Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Eye protection:**

Safety glasses

· **Body protection:** Protective work clothing· **Limitation and supervision of exposure into the environment**

Avoid release to the environment.

· **Risk management measures** No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **Appearance:**

Form: Aerosol

Color: Clear

· **Odor:** Mild· **Odor threshold:** Not determined.· **pH-value:** Not determined.· **Melting point/Melting range:** Not determined.· **Boiling point/Boiling range:** Not applicable, as aerosol.· **Flash point:** -91 °C (-131.8 °F)· **Flammability (solid, gaseous):** Extremely flammable aerosol.· **Auto-ignition temperature:** Not determined.· **Decomposition temperature:** Not determined.· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.· **Explosion limits**

Lower: 1.1 Vol %

Upper: 10.9 Vol %

· **Oxidizing properties:** Non-oxidizing.· **Vapor pressure:** Not determined.

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- **Density:**
 - Relative density:** 0.95
 - Vapor density:** Not determined.
 - Evaporation rate:** Not applicable.
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Other information** No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:**
- **Thermal decomposition / conditions to be avoided:**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- **Possibility of hazardous reactions**
Extremely flammable aerosol.
Can react violently with oxygen rich (oxidizing) material. Danger of Explosion.
Develops readily flammable gases / fumes.
Danger of receptacles bursting because of high vapor pressure if heated.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
Used empty containers may contain product gases which form explosive mixtures with air.
- **Conditions to avoid** Excessive heat.
- **Incompatible materials** Oxidizing agents
- **Hazardous decomposition products**
Under fire conditions only:
Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values that are relevant for classification:** None.
- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:** Based on available data, the classification criteria are not met.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer):**
Present in trace quantities.

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100-41-4 Ethylbenzene

2B

· NTP (National Toxicology Program):

None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

· Probable route(s) of exposure:

Inhalation.

Eye contact.

Skin contact.

· Germ cell mutagenicity: Based on available data, the classification criteria are not met.**· Carcinogenicity:** Based on available data, the classification criteria are not met.**· Reproductive toxicity:** Suspected of damaging fertility or the unborn child.**· STOT-single exposure:** May cause drowsiness or dizziness.**· STOT-repeated exposure:**

May cause damage to the nervous system through prolonged or repeated exposure. Route of exposure: Inhalation.

· Aspiration hazard: May be fatal if swallowed and enters airways.**12 Ecological information****· Toxicity****· Aquatic toxicity** Harmful to aquatic life with long lasting effects.**· Persistence and degradability** No relevant information available.**· Bioaccumulative potential:** No relevant information available.**· Mobility in soil:** No relevant information available.**· Additional ecological information****· General notes:**

Avoid release to the environment.

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

· Other adverse effects No relevant information available.**13 Disposal considerations****· Waste treatment methods****· Recommendation:**

Contact waste processors for recycling information.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· Uncleaned packagings**· Recommendation:** Disposal must be made according to official regulations.

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14 Transport information

· UN-Number	UN1950
· DOT, ADR/RID/ADN, IMDG, IATA	
· UN proper shipping name	
· DOT	Aerosols
· ADR/RID/ADN, IMDG	AEROSOLS
· IATA	Aerosols, flammable
· Transport hazard class(es)	
· DOT	
	
· Class	2.1
· Label	2.1
· ADR/RID/ADN	
	
· Class	2 5F
· Label	2.1
· IMDG, IATA	
	
· Class	2.1
· Label	2.1
· Packing group	Aerosols are not assigned a packing group.
· Environmental hazards	
· Marine pollutant:	No
· Special precautions for user	Warning: Gases
· Danger code (Kemler):	-
· EMS Number:	F-D,S-U
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	

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Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L.

· **ADR/RID/ADN**



Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L.

· **IMDG**



Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L.

· **IATA**



Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **United States (USA)**
- **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

110-54-3 | n-hexane

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

Present in trace quantities.

100-41-4 | Ethylbenzene

· **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

110-54-3 | n-hexane

· **Chemicals known to cause developmental toxicity:**

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None of the ingredients are listed.

EPA (Environmental Protection Agency):

110-54-3 n-hexane

II

IARC (International Agency for Research on Cancer):

Present in trace quantities.

100-41-4 Ethylbenzene

2B

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Date of preparation / last revision March 11, 2019 / -**Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Gas 1: Flammable gases – Category 1

Flam. Aerosol 1: Aerosols – Category 1

Press. Gas: Gases under pressure – Compressed gas

Flam. Liq. 2: Flammable liquids – Category 2

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B

Skin Sens. 1: Skin sensitisation – Category 1

Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

Sources

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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