



SAFETY DATA SHEET

MATERION

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Name of the substance Naphthalene
Identification number 601-052-00-2 (Index number)
Registration number -
Document number 2MY
Synonyms None.
Materion Code 2MY
Issue date 30-April-2020

1.3. Details of the supplier of the safety data sheet

Supplier

Company name Materion Advanced Chemicals Inc.
Address 407 N. 13th Street
1316 W. St. Paul Avenue
Milwaukee, WI 53233
United States
Division Milwaukee
Telephone 414.212.0257
e-mail advancedmaterials@materion.com
Contact person Laura Hamilton

1.4. Emergency telephone number

Version number 01

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Not available.
Uses advised against None known.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Acute toxicity, oral	Category 4	H302 - Harmful if swallowed.
Carcinogenicity	Category 2	H351 - Suspected of causing cancer.

Environmental hazards

Hazardous to the aquatic environment, acute aquatic hazard	Category 1	
Hazardous to the aquatic environment, long-term aquatic hazard	Category 1	H410 - Very toxic to aquatic life with long lasting effects.

Hazard summary Flammable Solid Harmful if swallowed. Causes skin and eye irritation. Suspected of causing cancer. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Naphthalene

Hazard pictograms



Signal word Danger

Hazard statements

H228	Flammable solid.
H302	Harmful if swallowed.

H351 Suspected of causing cancer.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P202 When using, do not eat, drink or smoke.
P280 Do not handle until all safety precautions have been read and understood.
P210 Wear protective gloves/protective clothing/eye protection/face protection.
P240 Keep away from heat/sparks/hot surfaces. - No smoking.
P241 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/ equipment.
P264 Wash hands thoroughly after handling.

Response

P330 If exposed or if you feel unwell: Get medical advice/attention.
Rinse mouth.

Storage

P405 Store locked up.

Disposal

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

Supplemental label information

None.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Naphthalene	100	91-20-3 202-049-5	-	601-052-00-2	#
Classification:	Flam. Sol. 2;H228, Acute Tox. 4;H302, Carc. 2;H351, Aquatic Chronic 1;H410				

SECTION 4: First aid measures

General information

If you feel unwell, seek medical advice (show the label where possible).

4.1. Description of first aid measures

Inhalation

Move into fresh air and keep at rest. For breathing difficulties, oxygen may be necessary. If breathing has stopped, perform artificial respiration and obtain medical help. Get medical attention.

Skin contact

Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. Get medical attention if irritation persists after washing.

Eye contact

Flush thoroughly with water for at least 15 minutes. Get medical assistance.

Ingestion

DO NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Causes eye irritation. Mild skin irritation. Prolonged exposure may cause chronic effects.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards

Flammable solid.

5.1. Extinguishing media

Suitable extinguishing media

Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media

Not available.

5.2. Special hazards arising from the substance or mixture

Flammable or explosive mixtures with air maybe formed.

5.3. Advice for firefighters

Special protective equipment for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Wear necessary protective equipment. Avoid contact with eyes and prolonged skin contact. Avoid inhalation of dust and vapours. Keep combustibles away from spilled material. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Pay attention to flashback.

For emergency responders

Not available.

6.2. Environmental precautions

Prevent entry into drains. Prevent entry into waterways, sewer, basements or confined areas.

6.3. Methods and material for containment and cleaning up

Stop leak if you can do so without risk. Cover powdered spills with plastic sheet or tarpaulin to minimise spreading and protect from water. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination.

6.4. Reference to other sections

Not available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with eyes, skin, and clothing. Do not smoke, use open fire or other sources of ignition. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site.

7.2. Conditions for safe storage, including any incompatibilities

Flammable/combustible - Keep away from oxidisers, heat and flames. Keep container tightly closed in a cool, well-ventilated place.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Material	Type	Value
Naphthalene (CAS 91-20-3)	MAK	50 mg/m ³
		10 ppm

Belgium. Exposure Limit Values.

Material	Type	Value
Naphthalene (CAS 91-20-3)	STEL	80 mg/m ³
		15 ppm
	TWA	53 mg/m ³
		10 ppm

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Material	Type	Value
Naphthalene (CAS 91-20-3)	STEL	75 mg/m ³
	TWA	50 mg/m ³

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Material	Type	Value
Naphthalene (CAS 91-20-3)	MAC	50 mg/m ³
		10 ppm

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	0,2 mg/m ³

Czech Republic. OELs. Government Decree 361

Material	Type	Value
Naphthalene (CAS 91-20-3)	Ceiling	100 mg/m ³
	TWA	50 mg/m ³

Denmark. Exposure Limit Values

Material	Type	Value
Naphthalene (CAS 91-20-3)	TLV	50 mg/m ³
		10 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³
		10 ppm

Finland. Workplace Exposure Limits

Material	Type	Value
Naphthalene (CAS 91-20-3)	STEL	10 mg/m ³
		2 ppm
	TWA	5 mg/m ³
		1 ppm

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Material	Type	Value
Naphthalene (CAS 91-20-3)	VME	50 mg/m ³
		10 ppm
Regulatory status: Indicative limit (VL)		
Regulatory status: Indicative limit (VL)		

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Material	Type	Value	Form
Naphthalene (CAS 91-20-3)	AGW	2 mg/m ³	Vapour and aerosol.
		0,4 ppm	Vapour and aerosol.

Greece. OELs (Decree No. 90/1999, as amended)

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³
		10 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³
		10 ppm

Ireland. Occupational Exposure Limits

Material	Type	Value
Naphthalene (CAS 91-20-3)	STEL	75 mg/m ³
		15 ppm
	TWA	50 mg/m ³
		10 ppm

Italy. Occupational Exposure Limits

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³
		10 ppm

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³
		10 ppm

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³
		10 ppm

Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³
		10 ppm

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³
		10 ppm

Netherlands. OELs (binding)

Material	Type	Value
Naphthalene (CAS 91-20-3)	STEL	80 mg/m ³
	TWA	50 mg/m ³

Norway. Administrative Norms for Contaminants in the Workplace

Material	Type	Value
Naphthalene (CAS 91-20-3)	TLV	50 mg/m ³
		10 ppm

Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817

Material	Type	Value
Naphthalene (CAS 91-20-3)	STEL	50 mg/m ³
	TWA	20 mg/m ³

Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³
		10 ppm

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	10 ppm

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³
		10 ppm

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Material	Type	Value
Naphthalene (CAS 91-20-3)	STEL	80 mg/m ³
		15 ppm
	TWA	50 mg/m ³
		10 ppm

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³
		10 ppm

Spain. Occupational Exposure Limits

Material	Type	Value
Naphthalene (CAS 91-20-3)	STEL	80 mg/m ³
		15 ppm
	TWA	53 mg/m ³
		10 ppm

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

Material	Type	Value
Naphthalene (CAS 91-20-3)	STEL	80 mg/m ³
		15 ppm
	TWA	50 mg/m ³
		10 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Material	Type	Value	Form
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³	Vapour and aerosol.
		10 ppm	Vapour and aerosol.

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Material	Type	Value
Naphthalene (CAS 91-20-3)	TWA	50 mg/m ³
		10 ppm

Biological limit values

Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2

Material	Value	Determinant	Specimen	Sampling Time
Naphthalene (CAS 91-20-3)	3,77 µg/g	1-Hydroxypyrene	Creatinine in urine	*
	5,66 µg/l	1-Hydroxypyrene	Urine	*

* - For sampling details, please see the source document.

UK. EH40 Biological Monitoring Guidance Values (BMGVs)

Material	Value	Determinant	Specimen	Sampling Time
Naphthalene (CAS 91-20-3)	4 µmol/mol	1-Hydroxypyrene	Creatinine in urine	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Not available.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

Individual protection measures, such as personal protective equipment

General information Avoid contact with skin. Avoid contact with eyes. Avoid contact with clothing. As a standard hygiene practice, wash hands before eating or smoking.

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection	
- Hand protection	Use protective gloves.
- Other	Apron and long sleeves are recommended.
Respiratory protection	If ventilation is insufficient, suitable respiratory protection must be provided.
Thermal hazards	Not available.
Hygiene measures	Not available.
Environmental exposure controls	Not available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Crystalline.
Physical state	Solid.
Form	Not available.
Colour	White.
Odour	Aromatic.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	80,2 °C (176,36 °F)
Initial boiling point and boiling range	217,9 °C (424,22 °F) 101,325 kPa
Flash point	78,9 °C (174,0 °F) Closed cup 79,0 °C (174,2 °F) Closed cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	0,9 %
Flammability limit - upper (%)	5,9 %
Vapour pressure	0,01 kPa (25 °C (77 °F))
Vapour density	4,42
Relative density	Not available.
Solubility(ies)	
Solubility (water)	0,03 g/l
Partition coefficient (n-octanol/water)	3,3
Auto-ignition temperature	526 °C (978,8 °F)
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information

Density	1,16 g/cm ³ at 20 °C
Dynamic viscosity	0,96 mPa.s (80,3 °C (176,54 °F))
Kinematic viscosity	0,8262 mm ² /s estimated
Molecular formula	C10-H8
Molecular weight	128,17 g/mol
Specific gravity	1,16
Surface tension	31,8 mN/m (100 °C (212 °F))

SECTION 10: Stability and reactivity

10.1. Reactivity	Not available.
10.2. Chemical stability	Not available.
10.3. Possibility of hazardous reactions	Not available.

- 10.4. Conditions to avoid** Heat, sparks, flames.
10.5. Incompatible materials Oxidising materials. Chromic acid.
10.6. Hazardous decomposition products Carbon oxides.

SECTION 11: Toxicological information

General information Not available.

Information on likely routes of exposure

Inhalation Not available.

Skin contact Not available.

Eye contact Not available.

Ingestion Not available.

Symptoms Not available.

11.1. Information on toxicological effects

Acute toxicity

Product	Species	Test Results
Naphthalene (CAS 91-20-3)		
Acute		
Dermal		
LD50	Rabbit	> 2 g/kg
Skin corrosion/irritation	Not available.	
Serious eye damage/eye irritation	Causes eye irritation.	
Respiratory sensitisation	Not available.	
Skin sensitisation	Causes skin irritation.	
Germ cell mutagenicity	Not available.	
Carcinogenicity	Suspected of causing cancer.	
Hungary. 26/2000 Eüm Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)		
Not listed.		
IARC Monographs. Overall Evaluation of Carcinogenicity		
Naphthalene (CAS 91-20-3)	2B Possibly carcinogenic to humans.	
Reproductive toxicity	Not available.	
Specific target organ toxicity - single exposure	Not available.	
Specific target organ toxicity - repeated exposure	Not available.	
Aspiration hazard	Not available.	
Mixture versus substance information	Not available.	
Other information	Not available.	

SECTION 12: Ecological information

12.1. Toxicity

Product	Species	Test Results
Naphthalene (CAS 91-20-3)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna) 1,09 - 3,4 mg/l, 48 hours
Fish	LC50	Pink salmon (Oncorhynchus gorboscha) 1,11 - 1,68 mg/l, 96 hours

12.2. Persistence and degradability Not available.

12.3. Bioaccumulative potential Not available.

Partition coefficient n-octanol/water (log Kow)

3,3

Bioconcentration factor (BCF) Not available.
12.4. Mobility in soil Not available.
12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects Not available.
12.7. Additional information

Estonia Dangerous substances in groundwater Data

Naphthalene (CAS 91-20-3) NAPHTHALENE 1 ug/l
NAPHTHALENE 50 ug/l

Estonia Dangerous substances in soil Data

Naphthalene (CAS 91-20-3) NAPHTHALENE 1 mg/kg
NAPHTHALENE 5 mg/kg
NAPHTHALENE 50 mg/kg

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Not available.
Contaminated packaging Not available.
EU waste code Not available.

SECTION 14: Transport information

ADR

14.1. UN number UN1334
14.2. UN proper shipping name NAPHTHALENE, CRUDE or NAPHTHALENE, REFINED
14.3. Transport hazard class(es)
Class 4.1
Subsidiary risk -
Label(s) 4.1
Hazard No. (ADR) 40
Tunnel restriction code E
14.4. Packing group III
14.5. Environmental hazards No.
14.6. Special precautions for user Not available.

RID

14.1. UN number UN1334
14.2. UN proper shipping name NAPHTHALENE, CRUDE or NAPHTHALENE, REFINED
14.3. Transport hazard class(es)
Class 4.1
Subsidiary risk -
Label(s) 4.1
14.4. Packing group III
14.5. Environmental hazards No.
14.6. Special precautions for user Not available.

ADN

14.1. UN number UN1334
14.2. UN proper shipping name NAPHTHALENE, CRUDE or NAPHTHALENE, REFINED
14.3. Transport hazard class(es)
Class 4.1
Subsidiary risk -
Label(s) 4.1
14.4. Packing group III
14.5. Environmental hazards No.
14.6. Special precautions for user Not available.

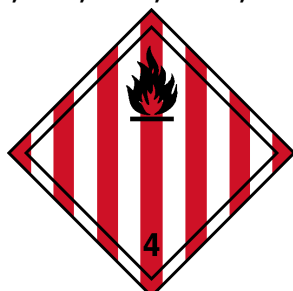
IATA

14.1. UN number	UN1334
14.2. UN proper shipping name	Naphthalene, crude
14.3. Transport hazard class(es)	
Class	4.1
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	No.
ERG Code	3L
14.6. Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

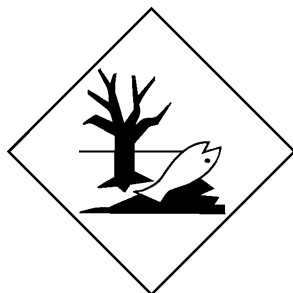
IMDG

14.1. UN number	UN1334
14.2. UN proper shipping name	NAPHTHALENE, CRUDE or NAPHTHALENE, REFINED, MARINE POLLUTANT
14.3. Transport hazard class(es)	
Class	4.1
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-G
14.6. Special precautions for user	Not available.

ADN; ADR; IATA; IMDG; RID



Marine pollutant



SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Naphthalene (CAS 91-20-3)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Naphthalene (CAS 91-20-3)

National regulations Not available.

15.2. Chemical safety assessment Not available.

SECTION 16: Other information

List of abbreviations Not available.

References Not available.

Training information Not available.