ODOVIE SAFETY DATA SHEET

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Product Name: Nonaflate

Chemical Name: ABT-333 Stage 2 Intermediate; ABT-333 Intermediate; Nonaflate Intermediate;

Dasabuvir Intermediate; Dasabuvir Step 2 Intermediate

Reach Registration Number 01-2120015080-79-0001

Drug Code Number: 86597; 20013967; 20027740; 20027840

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

Recommended use: Process Intermediate

Industrial use

Scientific research and development

Reference standard

1.3 Details of the supplier of the safety data sheet

Supplier: AbbVie Inc.

1 North Waukegan Road North Chicago, IL 60064

USA

+1-847-932-7900

Manufacturer European: AbbVie Inc.

via Pontina, km 52

Campoverde - LT 04010

Italia

E-mail Address: AbbVie.SDS@abbvie.com

1.4 Emergency telephone number

Emergency Telephone: CHEMTREC: 1(800) 424-9300 (in USA and Canada)

or +1-703-527-3887 (international)

Section 2. Hazards identification

2.1 Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute oral toxicity Category 4 **Skin corrosion/irritation** Category 2

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Indication of danger: Xi - Irritant

2.2 Label elements



Signal Word: Warning

Hazard Statements: H302 - Harmful if swallowed

H315 - Causes skin irritation H320 - Causes eye irritation

Precautionary Statements P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or

doctor/physician

P501 - Dispose of contents/container to an approved waste disposal plant P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P332 + P313 - If skin irritation occurs: Get medical advice/attention

2.3 Other hazards

Not determined

Section 3. Composition/information on ingredients

Chemical Name	Percent	EINECS/ELINCS Number	EEC Classification	EU - GHS Substance Classification	REACH No.
Nonaflate (CAS No. 1355646-97-7)	90-100	N/A	Xi	Acute Oral 4 (H302); Skin Irrit 2 (H315); Eye Irrit (H320)	No data available

For the full text of the R-phrases mentioned in this Section, see Section 16

For the full text of the H-Statements mentioned in this Section, see Section 16

Section 4. First aid measures

4.1 Description of first aid measures

Eye Contact: Remove from source of exposure. Flush with copious amounts of water. If

irritation persists or signs of toxicity occur, seek medical attention. Provide

symptomatic/supportive care as necessary.

Skin Contact: Remove from source of exposure. Flush with copious amounts of water. If

irritation persists or signs of toxicity occur, seek medical attention. Provide

symptomatic/supportive care as necessary.

Inhalation: Remove from source of exposure. If signs of toxicity occur, seek medical

attention. Provide symptomatic/supportive care as necessary.

Ingestion: Remove from source of exposure. If signs of toxicity occur, seek medical

attention. Provide symptomatic/supportive care as necessary.

Protection of First-aiders: Use personal protective equipment

4.2 Most important symptoms and effects, both acute and delayed

Signs and Symptoms: None known from occupational exposure.

Medical Conditions None known from occupational exposure.

Aggravated by Exposure:

4.3 Indication of any immediate medical attention and special treatment needed

Notes To Physician: Treat symptomatically

Section 5. Firefighting measures

5.1 Extinguishing Media

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire

Unsuitable Extinguishing Media: Not determined

5.2 Special hazards arising from the substance or mixture

Special Exposure Hazards: Not determined

Explosivity: Fine dust clouds may form explosive mixtures with air.

5.3 Advice for firefighters

Protective Equipment and

As in any fire, wear self-contained breathing apparatus and full protective gear

Precautions for Firefighters:

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions: For personal protection see section 8.

6.2. Environmental precautions

Environmental Precautions: Contain material and prevent release to waterways or soil.

6.3. Methods and material for containment and cleaning up

Methods for Cleaning Up: Recover product and place in an appropriate container for disposal.

6.4. Reference to other sections

Refer to Sections 8, 12, and 13 for further information.

Section 7. Handling and storage

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Store according to label instructions.

7.3. Specific end use(s)

Recommended use: Process Intermediate

Industrial use

Scientific research and development

Reference standard

Section 8. Exposure controls/personal protection

8.1. Control parameters

Exposure limits:

Chemical Name	Employee Exposure Limit	Skin Notation
Nonaflate (CAS No. 1355646-97-7)	10 mcg/m ³	None

8.2. Exposure controls

Engineering Controls: Utilize appropriate engineering controls (i.e. hood, glovebox, or process

enclosure) when handling open containers of this compound.

Respiratory Protection: An approved respirator (i.e. NIOSH, EN, etc.) should be worn when exposures are

expected to exceed the applicable limits.

Eyes: Wear eye protection appropriate to handling activities.

Gloves: Impervious gloves.

Other PPE Data: Wear appropriate body coverings if contact may occur.

Environmental Exposure

Controls:

Not determined

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance: White to off-white Powder

Odor: Not determined. **Odor Threshold:** Not determined Not determined. **Boiling Pt.** @ 760 mm Hg (°C): Not determined. **Melting/Freezing Point (°C):** Not determined Flash Point (°C): Not determined. **Evaporation Rate at 20°C:** Not determined. Not determined. Flammability (Solid): **Lower Explosive Limit:** Not determined.

Upper Explosive Limit:
Vapor Pressure (mm Hg):
Vapor Density (Air = 1):
Specific Gravity:
Solubility(ies):
Partition coefficient:
Not determined.
Not determined.
Not determined.
Not determined.
Not determined.

n-octanol/water

Autoignition Temp. (°C): Not determined. **Decomposition temperature** Not determined.

(°C):

Viscosity (centipoise):

Explosion Severity:

Oxidizer Properties:

Not determined.

Not determined.

Not determined.

9.2. Other information

Not determined

(Bad file name) (Bad file name)

Min. Ignition Energy-Cloud 10-30

(mJ):

Section 10. Stability and reactivity

10.1. Reactivity

Not determined

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous reactions: Not determined.

Self-Heating Tendency: Decomposes exothermically above 260 deg C in DSC testing.

10.4. Conditions to avoid

Not determined.

10.5 Incompatible materials

Not determined

10.6 Hazardous decompostion products

Carbon oxides, Nitrogen oxides (NOx), Hydrogen fluoride, Sulfur oxides

Section 11. Toxicological information

11.1. Information on toxicological effects

Routes of Exposure:

Oral: Unlikely
Dermal: Unlikely
Inhalation: Unlikely

Acute Toxicity - Oral: Data for component (s) given below.

Chemical Name	Acute Test	Value	Units	Species
Nonaflate (CAS No. 1355646-97-7)	LD50 =	430	mg/kg	Rats

Acute Toxicity - Dermal: Not determined.

Acute Toxicity - Inhalation: Not determined.

Other Toxicology Data: Data for component (s) given below:

Chemical Name	Test Type	Value	Units	Species	Comments
`	(- /		8 8, 1 11	Mice Dogs Rabbits	

Corrosivity: Not determined.

Dermal Irritation: Possible skin irritant.

Notes to Toxicologist: Based on structural analogy to 1-(3-tert-butyl-5-iodo-4-methoxyphenyl)pyrimidine-2,4 (1H,3H)-dione, nonaflate is a possible skin irritant.

Eye Irritation: Possible eye irritant

Notes to Toxicologist: Based on structural analogy to 1-(3-tert-butyl-5-iodo-4-methoxyphenyl)pyrimidine-2,4 (1H,3H)-dione, nonaflate is a possible eye irritant.

Sensitization: Not determined.

Toxicokinetics/Metabolism: Not determined.

Target Organ Effects: Not determined.

Reproductive Effects: Not determined.

Carcinogenicity: Not determined.

Mutagenicity: Not determined.

Aspiration hazard: Not determined

Notes:

- 1. ALD: Approximate lethal dosage
- 2. LC50: Concentration in air that produces 50% mortality
- 3. LD50: Oral or dermal dosage that produces 50% mortality

Section 12. Ecological information

12.1. Toxicity

Not determined.

12.2. Persistence and degradability

Not determined.

12.3. Bioaccumulative potential

Not determined

12.4. Mobility in soil

Not determined.

12.5. Results of PBT or vPvB assessment

Chemical safety report is not required for this substance/product.

12.6. Other adverse effects

Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system.

Notes:

- 1. EC50: Concentration in water that produces 50% mortality in Daphnia sp.
- 2. LC50: Concentration in water that produces 50% mortality in fish.
- 3. EbC50/ErC50: Concentration in water that produces 50% inhibition of growth and in algae.

Section 13. Disposal considerations

13.1 Waste treatment methods

Waste Disposal Methods: Disposal should be made in accordance with country, federal, state and local

regulations.

Section 14. Transport information

ADR, DOT, ICAO/IATA, IMDG/IMO

Status: Not regulated

14.1. UN Number: Not applicable
14.2. Proper shipping name: Not applicable
14.3. Hazard class: Not applicable
14.4. Packing group: Not applicable
14.5. Environmental hazard: Not applicable
14.6. Special Provisions: Not applicable
14.7. Transport in bulk

according to Annex II of

MARPOL 73/78 and the IBC

Code:

Section 15. Regulatory Information

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

International Inventories

Chemical Name	EINECS/ ELINCS	TSCA	DSL	NDSL	PICCS
Nonaflate (CAS No. 1355646-97-7)	-	-	-	Not listed.	-
15550.657.77					

Chemical Name	ENCS	ISHL	IECSC	AICS	KECL	New Zealand
Nonaflate (CAS No. 1355646-97-7)	-	-	-	-	-	

Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

ISHL - Japan Industrial Safety and Health Law

IECSC - China Inventory of Existing Chemical Substances

AICS - Australian Inventory of Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

Carcinogenicity Rating:

Chemical Name	Percent	NTP:	IARC:	ACGIH:
Nonaflate (CAS No. 1355646-97-7)	90-100	Not Listed	Not Listed	Not Listed

SARA 313 Information

Chemical Name	Percent	SARA 313 Chemical:	CERCLA RQ/SARA	SARA EHS TPQ	
			EHS RQ (lbs):	(lbs):	
Nonaflate (CAS No. 1355646-97-7)	90-100	No	Not Applicable	Not applicable	

Immediate Health:YesDelayed Health:NoFire:NoSudden Pressure:NoReactivity:No

RCRA Status: Not determined.

Proposition 65 Status:Does not contain chemicals known to the state of California to cause cancer or

reproductive harm.

WHMIS Hazard Class: Not determined.

NFPA Rating:

Health: 1 Fire: 1 Reactivity: 0

Notes:

- 1. SARA = Superfund Amendments and the Reauthorization Act.
- $2.\ CERCLA = Comprehensive\ Environmental\ Response,\ Compensation\ and\ Liability\ Act.$
- 3. FIFRA = Federal Insecticide, Fungicide and Rodenticide Act.
- 4. TSCA = Toxic Substances Control Act.
- 5. EC = European Community.
- 6. WHMIS = Canadian Workplace Hazardous Materials Information System.
- 7. UN GHS = United Nations Globally Harmonized System for Hazard Identification.

15.2. Chemical safety assessment

Chemical safety assessment has not been conducted on the substance/product.

Section 16. Other information

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